WORKSHOPS

Wednesday, 07 September 2011, 13:00 - 16:30

W01
Diagnostic and operative hysteroscopic office surgery
Stefano Angioni

Abstract not available at the time of printing

W02
Female sexual dysfunction: what gynaecologists should know!
Johannes Bitzer

Abstract not available at the time of printing

W03
Obesity and reproduction
Reynir Tomas Geirsson

Abstract not available at the time of printing

W04
Surgery in urogynecology the contemporary view
Pallavi Latthe(1), Gunnar Lose(2), Douglas G Tincello(3), Søren Brostrøm(1), Søren Gräs(1)
(1) Birmingham Women's Hospital, Department of Urogynaecology, Birmingham, UK
(2) Herlev Hospital, Department of Obstetrics and Gynecology. 63 C7F, Herlev, Copenhagen, Denmark
(3) University of Leicester, Department of Obstetrics and Gynaecology, Leicester, UK

Surgery for pelvic floor dysfunction in women have evolved in the last decades, especially since the introduction in the 1990ies of synthetic slings for the treatment of stress urinary incontinence. The retropubic loose mid-urethral macroporous monofilament slings (e.g. TVT) revolutionized the surgical treatment of stress urinary incontinence, and have emerged as the new gold standard. However, copy-cat products and novel approaches (e.g. transobturator and single-incision slings) were rapidly and successively introduced to the market without proper evidence to support their use. Furthermore, due to the marketing success and ease of use of the mid-urehral 'sling kits', the concept of synthetic vaginal implants was expanded to the more problematic area of pelvic organ prolapse. Recently, level 1 evidence have emerged on both new sling-types and vaginal prosthesis, and will be discussed in this workshop. Furthermore, the future role of novel approaches such as robotic surgery and stem cell therapy in urogynecological surgery will be discussed. This will be an interactive and evidence-based workshop, with a clinical and hands-on approach, aiming to provide participants with an updated view on the current state-of-the-art in the field.

W05
Gynecological ultrasound
Nicholas Raine-Fenning

Abstract not available at the time of printing
Within recent decades adverse trends in male reproductive health have become increasingly evident. In many countries the incidence of testicular cancer has been growing along with an apparent increase in incidences of congenital malformations in the male reproductive tract and a decline in sperm quality. It has been hypothesized that these conditions may represent a syndrome of disorders, called testicular dysgenesis syndrome (TDS), which results from a disturbance of the development of the testes during fetal life. A similar female syndrome; Ovarian Dysgenesis Syndrome has been suggested although the evidence is more limited probably because it is more difficult to measure female reproductive health. The etiology of TDS is unclear, but the apparent rapid decline in male reproductive health during a short time span suggests changes in lifestyle and environmental factors rather than genetic factors as likely causes. In particular, there is concern about environmental chemicals with endocrine-disrupting properties, (EDCs) which are suspected of having the ability to disturb the development of reproductive organs during fetal life. EDCs are widely detected as pollutants in food because of contamination of food processing and packaging materials. They include bisphenol which is used in production of polycarbonate plastic and has been found to leak from heated plastic baby bottles into the formula milk and from can lining, phthalates which are widely used as plastic softeners in cosmetics and paint, and perfluorinated chemicals which are used as industrial surfactants in many products eg. non-stick pans and rain clothes.
Human preantral follicles: isolation, characterization and potential future clinical applications

Claus Yding Andersen

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The functional unit of the ovary is the follicle, which consist of an oocyte surrounded by somatic cells - the so called granulosa cells - and a basal membrane. The follicles are formed during fetal life and enter a resting stage as primordial follicles. Once formed follicles are destined to develop to maturity containing a fertilizable oocyte or to degenerate which will happen to the vast majority. However the original pool or store of follicles cannot be replenished later on. So during a woman's entire fertile life she will draw on the pool of follicles created during fetal life. When she reaches menopause the pool will be exhausted and she will no longer be able to become pregnant. The mechanisms that regulate recruitment of follicles from the dormant pool into the active growth phase are just now starting to be elucidated. In addition, to nourish and support the development of a fertile oocyte, the somatic cells of the follicle also undertake a number of hormonal activities to support the reproductive success of the potential embryo resulting from the enclosed oocyte. The follicle secretes oestradiol, one of the main female sex hormones and from the mid-follicular phase of the menstrual cycle more than 90 percent of all the circulating oestradiol derives from the selected follicle that will ovulate. Therefore, a shortage of follicles will lead to cessation of menstrual cycle as observed in connection with menopause. Infertility treatment using assisted reproduction technologies secures the growth of follicles and only shortly prior to ovulation will the fully mature oocyte be retrieved for fertilization in vitro. Due to the long developmental phase from the resting stage to the mature preovulatory follicle lasting several months, it has proven very difficult to culture isolated human follicles for such a long period. Alternatively in vitro maturation of follicles could have been envisioned as a new way of treating infertility. However, new research is now starting to understand the mechanisms that regulate growth of early stage follicles and mechanisms that either accelerate or slow down development has been identified. Substances that release the brake on follicular development have been identified and it is possible to activate the pool of resting follicles by using so-called PTEN inhibitors. This allows the activation of large number of follicles, which in mice have been shown to result in healthy offspring. Furthermore, this may allow an accelerated growth of such follicles in vitro. In our group we perform fertility preservation in women facing gonadotoxic treatment due to a malignant disease by cryopreservation of the ovarian cortical tissue. After treatment women who became menopausal can have their tissue transplanted back and regain ovarian function and fertility. However, the medulla tissue is discharged but do contain a low number of follicles. We have recently developed a technique to isolate human preantral follicles from this tissue. This has allowed us to study the early stages of human foliculogenesis and perform studies on the culture of such follicles. These recent results and the long term perspectives of these new findings also in a clinical setting will be presented.
PLENARY LECTURES

Thursday, 08 September 2011, 17:30 - 18:00

PL01
Cardiovascular disease: Focus on the gender specific difference.
Sven O Skouby
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CVD may differ in men and women with respect to epidemiology, diagnosis, management, and prognosis. Several studies have found that women hospitalised with an acute myocardial infarction (AMI) had higher unadjusted short-term mortality rates than men. Older age more frequent comorbidities and less aggressive management are hypothesized as the major reasons contributing to the poorer prognosis in women. More than twice as many women die from cardiovascular disease as from all forms of cancer combined. Evaluation for suspected coronary disease differs in women because of frequently misleading results provided by treadmill testing without imaging. Gender differences have been observed in treatment practices, but since more is not necessarily better in this setting, the optimal approach for women has yet to be established. Opportunities remain for the physician to work in partnership with the patient for early intervention in women with symptoms of coronary artery disease, including responding to chest pain. Compared with men, premenopausal women are protected from CVD; however, once postmenopausal, women rapidly catch up. Although hormones, or the lack thereof, are an obvious causative factor in postmenopausal women’s CVD disorders, there are interesting variables including blood pressure and lipid changes, that may play a role in these events. Which ever factors are involved, more attention must be paid to postmenopausal women to reduce the impact of their CVD risk factors. Previous understandings of impact Hormonal therapy (HT) after the menopause and derived from observational studies, mechanistic studies of the relationship between hormone replacement therapy and the benefit/risk ratio in prevention of coronary disease in menopausal women have been challenged by the results of randomized trials from the last decade.

PL02
Worldwide IVF on the Net
Zeev Shoham

Abstract not available at the time of printing

PL03
Breast cancer: what future for surgery
Serge Uzan, R Rouzier, JY Seror, M Antoine, N Chabbert-Buffet, C Coutant, C Bezu, E Mathieu
Hôpital TENON - UPMC, Department of Obstétric and Gynécology Oncologic Surgery, Paris, France

Surgery retains an essential place in the treatment of breast cancers. Nevertheless, there have been significant shifts in recent years and these are addressed in this presentation. In some cases, surgery is still radical as with mastectomy for extensive in situ carcinoma or preventive treatment in women with a BRCA 1 or BRCA 2 mutation. Such mastectomy is usually complemented by immediate reconstructive surgery. But in many cases, surgery is less invasive than it used to be-in fact, there is a full-scale 'de-escalation' underway. This is the case with the sentinel node procedure which precludes lymph node dissection in all forms other than those with a high probability of spread: - the main question these days is about the need for dissection if a sentinel lymph node is found to be micro-metastatic-or if it simply contains a few isolated malignant cells. The development of a score indicating the risk of axillary localisation after a sentinel node has found to be positive represents progress in this area. For some indications, it can even be imagined that surgery will be completely replaced by stereotactic interventional imaging with local anaesthesia, an outpatient procedure. We will report the results obtained using the macrobiopsy system, which corresponds to tumour dissection with mammographic or ultrasound guidance. In conclusion, the future is one of ever-less aggressive and ever-more accurately targeted surgery in a context of increasingly specific indications.
Approximately 10-15% of fertile women suffer from heavy menstrual bleeding (HMB) or menorrhagia, defined as a menstrual blood loss of > 80 ml. The prevalence of HMB increases with increasing age and excessive blood loss may lead to iron deficiency anaemia. HMB has also been shown to have a negative influence on health related quality of life and working ability. Annually, millions of women throughout the world undergo hysterectomy for the treatment of HMB. As with all forms of surgery there is the risk of morbidity and even mortality, albeit low with hysterectomy. Several techniques for endometrial destruction or resection have therefore been developed as an alternative to hysterectomy for the treatment of HMB. These techniques are considered to be less invasive than hysterectomy and also have the advantage of shortening the postoperative hospital stay. However, serious complications have even been reported following the use of these techniques and the long-term effect has also been questioned. Since operative treatment carries a not insignificant risk of morbidity and mortality, various forms of medical therapy have been advocated as first-line treatment. Oral contraceptives, intrauterine release of progestogens, antifibrinolytics and prostaglandin synthetase inhibitors have all been evaluated for the treatment of menorrhagia. The levonorgestrel intra-uterine system (LNG-IUS), Mirena® has been evaluated in the treatment of menorrhagia. The LNG-IUS reduced menstrual blood loss (MBL) by 86% and 97%, 3 and 6 months after insertion in women with menorrhagia. The reduction in MBL in women with menorrhagia reported during the use of a LNG-IUS exceeds the reduction generally reported during treatment with prostaglandin synthetase inhibitors (? 25%) and antifibrinolytics (? 45%). Oral contraceptives have also been reported to reduce menstrual blood loss. A recent randomised, placebo-controlled study demonstrated that the oral contraceptive containing a combination of estradiol valerate, E2V/dienogest, DNG (Qlaira®) reduced menstrual blood loss more than placebo (median decrease in MBL 343 ml vs 62 ml, p<0.0001). The decrease in MBL with the oral contraceptive containing a combination of estradiol valerate E2V/dienogest DNG was 76% compared to 16% with placebo. To use medical treatment as the first line of treatment before surgical treatment is considered sound medical practice. Studies have demonstrated that antifibrinolytics reduce MBL by approximately 30-45% while prostaglandin synthetase inhibitors reduce MBL by approximately 25%. A greater reduction in MBL has been reported with the oral contraceptive containing a combination of E2V/DNG (76%) and with the LNG-IUS (? 95%). There is now a trend in several countries towards reducing the number of surgical procedures due to excessive menstrual bleeding. This trend can be explained by an increase in medical treatment. However, despite strong evidence that medical treatment is effective, many hysterectomies and endometrial ablations/resections are still performed annually without first evaluating medical treatment.
Sex steroids play pivotal neuroactive and brain region specific roles on the Central Nervous System (CNS) through genomic and non-genomic mechanisms. Therefore, their protective effects are multifaceted and brain regions dependent. They encompass system that range from chemical to biochemical and genomic mechanisms, protecting against a wide range of neurotoxic insults. Consequently, gonadal steroid withdrawal, during the reproductive senescence, dramatically impacts brain function, affecting negatively mood, anxiety behavior and cognitive vitality. HRT radically affects brain biology, improving climacteric brain symptoms, but there are important differences between HRT preparations with regard to type and dose of estrogen, type of progestin combination and route of administration. Evidences from randomized controlled trials and from cross-sectional and longitudinal studies show that estrogen-replacement therapy preferentially protects against the age-related cognitive impairment in healthy postmenopausal women and decreases the risk of dementia. Although results are not constant across studies, they indicate that treatment with estrogens during the early postmenopausal years might attenuate cognitive aging in women during the latter part of their life. A critical window of time may exist for HRT administration that may delay or decrease cognitive and behavioural changes.
PL06
Cryopreservation
Claus Yding Andersen
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Girls and women suffering from a cancer or another disease that require treatment with gonadotoxic drugs may as a side effect experience a reduction in the number of ovarian follicles. The gonadotoxic effect is dependant on the specific treatment and is influenced by the dose of the therapeutical agent and the possible use of radiotherapy. Especially, alkylating substances and radiation to the abdomen in case of cancer diseases often cause irreversible damage to the ovaries. When the ovaries are depleted of follicles many women experience profound effects on the physical and psychological status. Menstrual cycles ceases and it is not possible to become pregnant. To young girls it may further mean that normal puberty fails. Cryopreservation of ovarian tissue is a new method, which has been developed in an attempt to circumvent the long-term ablative effect on reproductive performance by gonadotoxic treatment. Removing one whole ovary or part of an ovary from women in their reproductive years prior to treatment and cryopreserving the tissue can keep a viable pool of follicles. When the women have been cured and is considered fit, the thawed ovarian tissue may be transplanted to those who entered menopause. In Denmark cryopreservation of ovarian tissue has been organized with one central laboratory that freezes all the tissue in close collaboration with three fertility clinics round the country. Totally more than 500 girls and women have had ovarian tissue cryopreserved in Denmark. The youngest girl was 0,5 years old and the oldest 38 years. We have currently cryopreserved ovarian tissue from around 100 girls younger than 18 years of age. The ovarian tissue is excised at the local hospital and transported on ice to the freezing facility, where cryopreservation and storage is performed. In case of transplantation the frozen tissue will transported to the local hospital for the operation. This transport model has been validated and has now been used for more than 250 cases. In Denmark a total of 18 women have experienced transplantation of frozen/thawed ovarian tissue a total of 25 times (7 women having tissue transplanted twice). All women regained ovarian function and none have experienced relapse as a consequence of the transplantation. Over a period of 20 - 25 weeks levels of FSH gradually return to pre-menopausal levels and menstrual cycles are regained. The longevity of the tissue depends on the age of the woman at tissue retrieval and the amount of tissue transplanted. Most women experience return of ovarian function for some years with just a fraction of tissue from one ovary being replaced. Recently, one child has had ovarian tissue transplanted for natural induction of puberty; this case will be presented in detail. Six women have been pregnant; in most cases following natural conception. Two women have delivered three healthy babies as a result of transplanted frozen/thawed ovarian tissue. In the latter two cases the tissue was transported 4-5 hours prior cryopreservation. The presentation will review our experiences and results with transplantation of cryopreserved ovarian tissue.

PL07
Genetic testing for ovarian & breast cancer
Karen Brøndum-Nielsen

Abstract not available at the time of printing

PL08
Menopause and sexuality: key issues in premature menopause and beyond
Alessandra Graziottin

Abstract not available at the time of printing
Since the birth of Louise Brown more than 4 millions of IVF babies are born. ART has allowed many infertile couples to become happy parents. As laboratory and surgical techniques for IVF and oocyte and ovary cryopreservation continue to improve, modalities considered experimental are becoming part of routine practice for reproductive medicine specialists. The development of these new reproductive techniques raises new ethical questions. Homoparentality, surrogate mother, embryo and oocyte freezing, and oocyte preservation for elective delay of childbearing will be discussed at the time of the revision of the French bioethical law.

Friday, 09 September 2011, 17:30 - 18:00

PL10 Oestrogens should be the first line therapy for many types of depression in women

Pro

John WW Studd

Abstract not available at the time of printing.

Con

Inger Sundström Poromaa

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Estradiol is an important hormone for women with many potential anti-depressant actions in the brain, including positive effects on serotonergic function and hippocampal synaptic plasticity. The use of estradiol as treatment of depression has predominantly been evaluated in peri- and postmenopausal women, although some studies have addressed the potential use in postnatal depression and premenstrual dysphoric disorder as well. It is clear that hormone replacement therapy improves quality of life and depressed mood in healthy postmenopausal women, especially if vasomotor symptoms are present when treatment is initiated. In addition, estrogen mono-therapy shows some promise for treatment of depressive disorders in perimenopausal women. However, the results on estrogen mono-therapy or combined hormone replacement therapy in postmenopausal women are more inconclusive. Numerous issues need to be clarified before estrogen therapy can be advocated as first line therapy for depression. These include the effect of progestagen addition to estrogen therapy in perimenopausal women, and of course, head-to-head comparisons with the serotonin reuptake inhibitors.
From ovarian cortex to isolated follicles - is there a place for an artificial ovary
Jacques Donnez
Université Catholique de Louvain, Institut de Recherche Expérimentale et Clinique, Department of Gynecology, Brussels, Belgium

Transplantation of cryopreserved ovarian tissue has become a routine procedure to preserve fertility in patients after gonadotoxic treatment. However, due to the irregular distribution of preantral follicles and high follicular loss probably caused by massive activation of primordial follicles, the lifespan of ovarian tissue after grafting can be very short. Additionally, because of the risk of transmission of malignant cells, transplantation of ovarian fragments is not recommended for patients with certain types of cancer. A possible alternative to bypass these limitations is grafting of an artificial ovary containing isolated follicles. Apart from potentially restoring fertility in patients who cannot benefit from ovarian tissue transplantation, artificial ovary grafting would offer other advantages: Improvement in follicular survival by shortening the ischemia period - This may be achieved by using a scaffold with a porous structure, loaded with factors to promote angiogenesis, and creating an environment favorable to neovascularization. Control of follicular development - To modulate follicular recruitment and growth, an artificial ovary could contain inhibitory and growth factors implicated in the different stages of follicular development. Control of the number and quality of follicles to be grafted - It would be possible to introduce a high and known number of follicles, as well as the assessment of follicle quality before transplantation. It is important to bear in mind that mimicking the ovary requires input from professionals from different backgrounds and understanding of the mechanisms involved in folliculogenesis, since the goal is to replace the function of lost tissue in order to restore fertility.

HPV vaccines: an overview
Margaret A Stanley
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Viral infections cause at least 15% of all human cancers; one of the most important oncogenic viruses is the human papillomavirus (HPV) a causal agent in 5% of all malignancies. The identification of the major oncogenic HPV’s HPV 16 and HPV 18 by Harald zur Hausen was recognised in 2008 by the award to him of the Nobel Prize in Medicine. The unfolding of the HPV story started in the 1970’s and has resulted in the development of two prophylactic virus like particle (VLP) vaccines using sophisticated recombinant molecular techniques and protein expression. Both vaccines target infection by the oncogenic HPV’s 16 and 18 and one also targets the low risk HPVs 6 and 11. The results from RCTs show that they are remarkably efficacious against infection with vaccine HPVs, generate strong durable immunity and have a good safety profile. These vaccines, licensed world wide, have been incorporated into national immunisation programmes in several countries and evidence for population effectiveness is emerging. These vaccines should reduce the incidence of cervix cancer and other HPV associated cancers significantly in the vaccinated cohort. However the current products provide protection only against the 2 major oncogenic HPVs 16 and 18 that cause 70-80% of cancers. There is evidence for cross protection against non-vaccine types but this is probably of limited duration and in the long term complete protection against HPV caused cervical cancer will require polyvalent vaccines or broadly protective products.
Assisted reproductive treatment
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In the last 30 years assisted reproduction techniques (ART) have led to great changes in reproductive medicine. Their reproducibility and their high degree of effectiveness have made it increasingly easy and speedy for infertile patients to have access to them with better and better results. We are now in a position to identify the factors such as age, the aetiology of the infertility and the ovarian functional reserve that could compromise the treatment results. In a scenario where the outcome is usually very effective it is time for us to look at the safety of ART. We must pay special attention to prevention of OHSS and multiple pregnancies, and I believe that we are in a position to reduce their frequency without compromising the outcome or lowering the livebirth rates. However, in spite of the usually high pregnancy rates that are achieved, we must not forget that overall only one out of every three patients who undergo IVF actually has a child. The group of patients with repeated IVF implantation failures require our special attention to apply more specific diagnostic protocols (HSC, thrombophilia screening etc.) and different therapeutic alternatives (PGS, blastocyst transfer etc.) so as to achieve clinical pregnancy rates that are in line with their age.

Spermatosoa chromatic fragmentation & fertility
Ana Teresa Almeida Santos
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The role of a spermatozoon as a functional gamete is dependent on many factors, such as the integrity of nuclear DNA, which is required for the correct transmission of paternal genetic information. Several studies have indicated a relationship between sperm DNA integrity and fertility outcomes. Although the possible relationship between sperm DNA damage and fertilization rates remains controversial it seems consensual that a negative correlation between sperm DNA fragmentation and pregnancy rates and/or embryo development does exist. Sperm DNA damage has been detected using a variety of assays and attempts have been made towards establishing threshold values for the percentage of sperm with damaged DNA. We have developed a simple, inexpensive and fast method that assesses chromatin status using, in essence, any Diff-Quik-like staining. Furthermore, sperm morphology can also be easily and simultaneously monitored. Our results indicate that there is no correlation between abnormal staining and the fertilization rate. Since the paternal genome is only activated 2 days after fertilization, the status of sperm DNA may not dramatically influence fertilization. However, and confirming previous findings from several other groups, there was an association between the percentage of dark sperm nuclei and the embryo development rate, suggesting that the presence of higher levels of sperm chromatin damage might impair embryo development. We found that good quality embryos are associated with a lower mean percentage of sperm with damaged DNA and that clinical pregnancy was associated with a lower mean percentage of sperm with abnormal dark nuclei.
Medical literature has linked gender to migraine, not only because its preponderance in women from puberty to menopause but also because both neuroendocrine events related to reproductive stages (menarche, pregnancy and menopause) and menstrual cyclicity and the use of exogenous sex hormones, such as hormonal contraception and replacement therapy, may cause significant change in the clinical pattern of migraine itself. The 2nd edition of the International Classification of Headache Disorders (2004) included menstrual migraine in the appendix and defined 2 subcategories in the diagnostic criteria. 'Pure' menstrual migraine (PMM) occurs exclusively on day 1 ± 2 of menstruation in at least 2 out of 3 menstrual cycle and at no other time of the cycle. Menstrually-related migraine (MRM) occurs on day 1 ± 2 of menstruation in at least 2 out of 3 menstrual cycle and additionally at other time of the cycle. The recognition of a 5 days window is based on clinical data and is in line with the hypothesis of estrogen withdrawal as proposed several years ago. After prolonged estradiol elevation pharmacologically induced, migraine attacks were correlated to declining estradiol levels, as it occurs before the onset of menstruation, but were independent from progesterone concentration. A new entity was classified as hormonally associated headaches but serious diagnostic inconsistencies and clinical variability were evident, as a consequence of not well-proven scientific findings. To fulfill the criteria for exogenous hormone-induced headache, criteria require that the headache begins or 'markedly worsen' within 3 months of beginning exogenous hormones and 'revolve or revert to his previous pattern' within 3 months of stopping exogenous hormones and 'revolve or revert to his previous pattern' within 3 months of stopping exogenous hormones. On the other hand, to fulfill the criteria of estrogen-withdrawal headache, headache should develop at least within 5 days of discontinuation of estrogen used for at least 21 days and should resolves within 3 days. Such a temporal association is, however, based on anecdotal and personal beliefs and it does not take into account many variables related to reproductive biology that may be relevant to a better understanding of the role of exogenous hormones in migraine. That being so, the variety of hormonal products and the significant changes over time of the type of molecules most commonly used by women are responsible of the conflicting results regarding hormonal contraception and the course of migraine. Even though headache is of the most common side-effects reported in studies related to hormonal contraception, a clear impact of hormonal contraception on the course of migraine has been reported only in women referring to headache centers, especially when neurological symptoms (i.e. aura) occurred.
PL16
Update of medical abortion
Kristina Gemzell-Danielsson
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Without access to safe abortion services, women risk their health and their lives to obtain clandestine abortions. Globally, approximately 13% of all maternal deaths are due to complications of unsafe abortion. In collaboration with WHO, medical abortion with mifepristone and a prostaglandin analogue was developed into a safe and effective method for induced abortion. Today the prostaglandin analogue of choice is misoprostol and medical abortion is a safe option for termination of pregnancy at all gestational lengths. Possible approaches to increase access to medical abortion worldwide include the option to self administer misoprostol at home. To increase access another possibility is to allow midlevel providers to be more involved with care of healthy women undergoing medical abortion. This would also have major impact to increase access to safe induced abortion in countries were medical resources are scarce. Another and recently described alternative for women living in countries were access to safe abortion is restricted is to use the service by “Women on Web” (WoW). Today Internet is a major source of information for people all over the world. On the WoW website, women can do an interactive web-based medical consultation. Women are closely guided in the process through an email or telephone helpdesk. Counselling is provided in 6 different languages. Our first analysis showed that outcome of care are comparable to other medical abortion services provided in out-patient settings.

PL17
Sex steroids and the CNS
Torbjörn Backström
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That gonadal steroids have actions in the central nervous system (CNS) is well known and accepted. The steroid hormonal receptors are present in several parts of the brain localized to specific regions. What is perhaps not known is that metabolites of two steroid hormones progesterone and testosterone have metabolites that are very potent positive modulators of the GABA-A receptor in CNS. The GABA system is the major inhibitory system in the adult CNS and positive modulators of the GABA-A receptor, benzodiazepines, barbiturates, alcohol, GABA-steroids, are anesthetic, sedative, anticonvulsant, anxiolytic. However, some individuals have adverse effects (seizures, increased pain, anxiety, irritability, aggression) upon exposure. This effect is called a paradoxical effect and some women have strong negative mood symptoms, during the luteal phase of menstrual cycle, caused by progestagens in hormonal contraceptives or HRT. Positive GABA-A receptor modulators induce strong paradoxical effects including negative mood in 3%–8% of those exposed, while up to 25% have moderate symptoms. The effect is biphasic: low concentrations induce adverse effects while higher concentrations show expected inhibitory properties. The prevalence of premenstrual dysphoric disorder (PMDD) is also 3%–8% among women in fertile ages, and 25% have moderate symptoms of premenstrual syndrome (PMS). Patients with PMDD show changes in GABA-A receptor sensitivity and GABA concentrations. Findings suggest that negative mood symptoms in women with PMDD are caused by the paradoxical effect of GABA-steroids mediated via the GABA-A receptor.
PL18
Repeated implantation failure
Nathalie Lédée-Bataille

Abstract not available at the time of printing.

PL19
Menopause and aging in the XXIst century
Michèle Lachowsky
Gynecologist - Consultant in Psychosomatics, Paris Medical University, Paris, France

The menopause, that 'turn of life', seems to be, in our patient's mind, a well-known if troublesome event, where evidence based medicine adds its value to a personal and almost historical knowledge. It is part of an expected program, physiological and biological, a normal if unpleasant part of femininity, as even the Talmud acknowledges it! But it is still considered a difficult and even risky period by most women, paradoxically made sometimes even riskier by medical intervention, but that is another discussion! It has long been a private and intimate moment. To-day it has become a public issue, a red question mark in our patients' minds, exposed and discussed on Internet and other media. Two major reasons, two major trends: Age and ageing, what it means for our present society, and quality of life with/without medical help. A woman's life expectancy means a third of her lifespan will be spent after menopause, so how to get old without getting older, how to advance without age's marks and failings, how to use medicine with no adverse but only positive effects, that is the question! 'Beautiful people', slim, sun-tanned, bearing children whenever they desire, without any financial problems, that is the image our young century wants to promote, rather than that simple reality: we are not equal before health and age. Why not try and help our patients to live their post menopausal time as an Indian summer rather than an icy winter?

PL20
Solid evidence that newer progestogens confer higher risk of venous thrombosis than the older levonorgestrel
Øjvind Lidegaard
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Background. Some still question a differential influence from combined oral contraceptives (COS) with different progestogens on coagulation and risk of venous thromboembolism (VTE). Objectives. To assess the scientific evidence of a differential influence from COS with different progestogens on the risk of VTE. Material. Published studies assessing specifically the risk of VTE in users of COS with 2nd generation progestogens, and in users of 3rd or 4th generation progestogens. Results. Thirteen studies assessed specifically the risk of venous thrombosis in users of COS with the two 3rd generation progestogens desogestrel and gestodene, and compared this risk with the risk in users of COS with the 2nd generation progestogen levonorgestrel. Ten found higher risk of VTE with 3rd than with 2nd generation COS, significantly so in eight of these, while three found no difference. Six studies compared the risk of VTE in users of COS with drospirenone versus the risk in users of COS with levonormegstrel, and four found a significantly higher risk of VTE in users of COS with drospirenone, while two found no difference. The studies demonstrating a difference were methodologically stronger than the studies demonstrating no difference. Conclusion. There is solid evidence that combined pills with the newer progestogens desogestrel, gestodene or drospirenone confer about the double risk of VTE as compared with users of COS with levonorgestrel.
COCs and VTE – insufficient evidence for differential effects of progestogens

Jürgen Dinger
Berlin Center for Epidemiology and Health Research, Berlin, Germany

Background: An increased risk for VTE has been linked to COC use since the 1960s. In particular, risk was thought to be associated with the estrogen dose. In 1995 WHO investigators alerted the public that so-called third-generation COCs – specifically those containing desogestrel and gestodene – carry a higher VTE risk than so-called second-generation COCs (in particular those containing levonorgestrel). Following studies found supportive as well as conflicting results. Thus a heated scientific debate on whether the VTE risk associated with third-generation COCs was real or the result of bias and confounding ensued and was ultimately taken up in several European courts. A similar discussion for COCs containing drospirenone has now also begun. Evidence: In 2002, the Royal Court of Justice in London came to the conclusion that “there is not as a matter of probability any increased relative risk of VTE carried by any of the third generation oral contraceptives”. Studies that adjusted correctly for duration of use and/or matched exactly for year of birth did not show a differential risk between second and third-generation progestogens. Similarly, for drospirenone, studies that used the strictest methodological standards (validated diagnosis only, isochronous cohorts, correct definition of current duration of use, sufficient information on relevant prognostic factors) have not shown differential effects. Conclusion: The most parsimonious explanation of evidence suggests that the increased risk of VTE in COC users is a class effect and that any differential effects of progestogens are below the resolution of the epidemiological microscope.

PMS & PMDD

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Premenstrual dysphoric disorder (PMDD) affects approximately 3 % of women in childbearing ages, and causes significant long-term, but cyclical, impairment in family and social function of affected women. It is typically manifested by symptoms of anger, irritability, anxiety and depressed mood which only occur in the luteal phase of the menstrual cycle, thus distinguishing the syndrome from major depression and anxiety disorders. Because of the temporal relationship with the luteal phase and the ovarian steroids produced by the corpus luteum, PMDD is commonly regarded as a hormonal disorder with psychiatric expression. The latter hypothesis is underscored by the fact that drugs known to inhibit ovulation, such as gonadotropin releasing hormone (GnRH) agonists and combined oral contraceptives, alleviate the symptom expression in the luteal phase. However, PMDD is also a disorder with a clear-cut relation to decreased central serotonergic function, evidenced by the usefulness of serotonin reuptake inhibitors for treatment of the disorder and by recent PET imagining studies suggesting lower 5-HT1A receptor binding potential and lower 5-hydroxytryptophan availability in PMDD women. In addition, several lines of research also implicate a luteal phase deficit in gamma-aminobutyric acid (GABA)-mediated inhibition.

Selective progestin receptor modulator

Philippe H Bouchard

Abstract not available at the time of printing.

Stem cells in ovulation

Mark Brincat

Abstract not available at the time of printing.
Episodic memory and executive functions are cognitive domains affected by ageing. During old age, deficits in these domains increase chances of an Alzheimer's disease diagnosis. In some studies, estrogens have been linked to memory and executive function performance, and sex hormone exposures may influence cognitive function after menopause. In the population-based Melbourne Women's Midlife Health Project cohort, we administered a comprehensive battery of neuropsychological tests to midlife women who had undergone natural menopause and were not using hormone therapy. The battery was given on two occasions two years apart. Serum levels of estrone, free estradiol, and free testosterone were assessed at the time of the first testing. We found no cross-sectional or longitudinal associations between estrone or estradiol and episodic memory or executive functions. However, better semantic memory (naming), was positively associated with estradiol levels and with a lower ratio of testosterone to estradiol. The testosterone to estradiol ratio also showed an inverse trend with verbal episodic memory (i.e., a lower ratio was associated with better memory). Lower testosterone was associated with larger verbal memory improvement two years later. These results are generally consistent with findings of other investigators and point to the complex relation among endogenous sex steroids and cognition. They suggest that estrogen effects on semantic memory should be considered in future studies of midlife women, that testosterone effects on cognition should be similarly examined, and that serum levels of estradiol or testosterone in isolation are less revealing than measures of both hormones taken together.
PL25
What's new in minimal invasive gynecology
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Introduction: Abdominal hysterectomy TAH is the main treatment for enlarged uterus in Denmark. Laparoscopic hysterectomy is performed in 9%, vaginal route is utilized in 30% in the smaller uterus. Introduction of Single port Laparoscopic procedures is positively received among patients. The procedure is highly encouraged due to better cosmetic result. Methods: The introduction of laparoscopic methods and Single site surgery/LESS for symptomatic fibroids, have made it possible to change to day surgery in most case. Even in the presence of very large myomas. At our hospital we have offered TLH, LSH and VH as standard operation to all patients with no exception. Results: Experience of our consecutive series of hysterectomies, myomectomies will be. All patient was discharged within 24 hours. The mean procedure time was with TLH 68 minutes, 20% of the cases, LSH 73 minutes, 70% of the cases, and VH 78 minutes, 10% of the cases. Specimen 35-1700 grams. Returned to regular in activities after 10 days. The initial reaction from the patients were extremely positive to these new possibilities. During this lecture, results of several procedure will be presented, furthermore description of new methods as well as videos of surgical technique. Conclusion: Introduction of an alternative new operating modality like LESS in a country with low tradition of laparoscopic procedures creates both admiration and suspicion among colleagues. However among patients the new routine is highly appreciated.

PL26
New insight in cancer diagnostic
Finn Cilius Nielsen

Abstract not available at the time of printing

PL27
Past, present and future of SERMs in gynaecology
Joaquin Calaf-Alsina

Abstract not available at the time of printing

PL28
Premature ovarain failure
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Premature ovarian failure (POF) can be defined as the triad of amenorrhoea, elevated gonadotrophins and sex steroid deficiency occurring in women less than 40 years of age. POF is often a devastating diagnosis due to its effects on fertility, quality of life and the long-term health consequences of hypo-estrogenism. The majority of POF is idiopathic although iatrogenic POF is becoming increasingly important as survival following treatment for malignant disease improves and women experience the long-term sequelae of chemo- and radiotherapy. Despite this, POF remains a poorly understood condition. There is an urgent need for standardized terminology and long-term outcome data. No evidence-based guidelines for diagnosis or treatment currently exist and management decisions are often based on first principles and practicalities rather than scientific data. Here we discuss the aetiology and management of POF and examine how recent advances in terms of available hormonal and fertility treatments may be of benefit to this population.
Can IVM replace IVF

Bulent Gulekli

Abstract not available at the time of printing
The success of pregnancy depends on a receptive endometrium, a normal blastocyst, a synchronized cross-talk at the maternal-fetal interface at the time of implantation, finally a successful placentation and remodeling of uterine vasculature. In routine, less than 5% of oocytes collected in IVF and only 20 to 25% of embryos transferred lead to a birth. Implantation and placentation processes remain the black box of fertility, involving following steps: fertilization, endometrial receptivity, embryo implantation, trophoblastic differentiation and invasion (Cartwright et al., 2010). At the time of fertilization, a cascade of cytokines mediates the oocyte-sperm dialogue long before embryo implantation in the endometrium. To achieve the fertilization step, a good quality oocyte must to meet a normal sperm with low DNA damages, leading to the development of a functionally normal blastocyst able to dialogue with maternal endometrium. Sperm DNA damages include fragmentation, trouble of condensation and epigenetic modification that could impair implantation process and methylation of imprinted genes (Taverlee et al., 2009, Boitrelle et al. 2011). At the oocyte side, genomic and proteomic profiles of good follicle are under investigation. Markers of oocytes with high subsequent embryo implantation potential are one of the main goals of the actual research. For example, granulocyte colony stimulating factor (G-CSF or CSF-3) in individual follicular fluids (FF) appears to correlate with the birth potential of the corresponding embryo in two opposite models of ovarian monitoring, standard ovarian hyperstimulation and modified natural IVF/ICSI cycles (Ledee et al.2010,-Ledee et al.,2008). Endometrial receptivity is established during a limited period of time called the implantation window. During this 4-days window, endometrium is highly receptive to the different signals and ligands produced by embryo throughout apposition, adhesion and invasion steps of implantation. The complex signaling networks that regulate this tightly coordinated maternal-fetal crosstalk are clearer as studies on endometrial receptivity and early pregnancy are performed. Many target molecules have been identified in receptive endometrium such as specific cytokines equilibrium, growth factors and angiogenic factors but also some specific immunological target cells. The progression of implantation and then pregnancy requires immunological tolerance which allows conceptus survival. It has been proposed that uterine natural killer cells (uNK) could exert, directly or indirectly, either positive or negative control over these early steps. These cells secrete an array of cytokines important for adequate local immune regulation, angiogenesis, placental development, and establishment of pregnancy. Moreover, the specific embryo signal such as hCG (and its hyper glycosylated form H-hCG) is another example of target molecule at this crossroads of immune tolerance, angiogenesis, and invasive process at the maternal-fetal interface. Finally, successful placentation and remodeling of the uterine vasculature is a fundamental step for a healthy pregnancy that requires also a highly orchestrated reciprocal signaling process. Deficiencies in this process are implicated in a number of dangerous pregnancy complications with excess (percreta/accrete placentation) or defective (preeclampsia, intra uterine growth restriction). Implantation failure, recurrent miscarriage and preeclampsia have several recognized causes in common, but in most cases, the precise etiology remains obscure..  In conclusion, a better knowledge of the uterine embryo interaction and of the 'seed and soil' regulations during endometrial implantation is mandatory to increase the efficacy of assisted reproduction technology but also to better evidence and/or prevent impaired placentation process. Adequate
coordination between embryo and mother is indeed crucial. Recent data in reproductive immunology identify the importance of the local immune environment and suggest to the clinician the need to develop tools to explore these endometrial deregulations.

**PS01.2**

**Abnormal ultrasound images and early pregnancy**

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Development of high frequency transvaginal probes enables accurate visualization of the embryo and leads to the development of sonoembryology, increasing our knowledge on anatomy and physiology of the embryo. 3D sonoembryology allows detailed anatomical visualization in vivo and is the basis for the assessment of anomalies as well as human development. This enables to diagnose growth and/or developmental delay earlier and more accurately and is especially important for pregnancies at risk of severe complications, such as recurrent late miscarriage and early growth restriction. Transvaginal 3D provides accurate visualization of embryonic anatomy, embryonic movements, brain vesicle structures, can be very useful for early prenatal diagnosis concerning twin pregnancies and their specific complications, and permits early diagnosis of congenital abnormalities such as early growth retardation, severe brain anomalies, coelosomy, limb defects (some can be diagnosed before 10 weeks of amenorrhea with high frequency transvaginal transducers).

**PS01.3**

**Vascularity flow index dynamics in the pre ovulatory phase of controlled ovarian hyperstimulation, trend and relationship with the conception rate**

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Objectives: Three-dimensional power Doppler angiography (3D-PDA) enables to obtain an angiogram and an ultrasound quantification of flow in a selected tissue volume. Endometrial vascularization, thus, can be measured easily and non-invasively using a vascularization index. In spontaneous cycles, the endometrial- subendometrial vascularization index increase rapidly in the proliferative phase to reach a maximum 2 days before ovulation, decrease to reach a nadir 2 days after ovulation and then rise progressively during the remaining part of the luteal phase. This angiogenesis, being partly due to estrogen production, ovulation induction treatments will most likely disrupt this profile and impair the conception rate. The aim of the study was to verify this hypothesis. Methods: We examined the changes of the subendometrial vascularization in the pre ovulatory phase of COH/IUI cycles within individuals and then we compared the relationship between their profile increasing or decreasing and the conception rate. We thought that angiogenesis in a waning profile an, since it is closer to physiological conditions would facilitate the conception rate. Results: We found that a VFI waning profile as compared with a rising one is less frequent in COH. A waning profile seems to be associated with a higher conception rate within the spontaneous LH surge detection cycles. Conclusion: Should our results be confirmed, the vascularization indices dynamics would be an important parameter of endometrium receptivity and as a consequence would improve the efficacy of COH/IUI in subfertile women.
In Western countries, 15% of the couples have difficulties to conceive a child and a male factor in found in 45% of the cases. More than classical disorders (physiological, organics or life style) contributing to male infertility and ART failure, general survey showed in Somatic Carylotype a higher incidence of chromosomal aberrations in infertile and subfertile men than neonatal population. Cytogenetics studies of infertile male karyotype revealed between 2 to 15% of abnormalities. In azoospermia cases nearly 15% are carrier of unbalanced karyotypes (mainly 47,XXY) but in oligospermia cases only 2 to 5% of chromosomes disorders were observed. More than numerical abnormalities translocations including gonosomes are detected. Also, in the litterature its clearly reported that the male genome abnormalities can be involved in oocyte activation failure, early embryo development blocking, implantation failure and pregnancy loss. In male infertility several Y and autosomal linked genes are involved not only in testicular but also in ovarian development. Others mutations in X chromosome (Kalleman gene, androgen receptor) or autosomal: (mytonic dystrophy, CFTR, 5-alpha-reductase Deficiency) are Known to interfere with normal spermatogenesis. For male patient with abnormal caryotype the assessment of aneuploidy or chromosome segregation in sperm is recommended prior IVF for genetics counselling. During the spermatogenesis meiosis all chromosomes are equally submitted to the nearly 10% of aneuploidy risk. Regarding reciprocal and robertsonian translocation the profile of segregation is variable from one translocation to another and between patients carrying the same translocation. For this reason FISH analysis of sperm in such kind of cases is very informative to set up the strategy of couple management (IVF, ICSI, Blastocyt, PGD). Based on the profile of chromosome disjunction we will get an idea about the risk of embryo blocking, implantation failure and abortion.

Another factor can contribute in ART failure more than chromosome abnormalities is the DNA integrity and compaction of the entire male genome. An abortive spermatogenesis or an oxidative stress can affect the DNA integrity by producing height level of sperm DNA fragmentation. We reported earlier that there is a relation between sperm parameter, the level of DFI and IVF outcomes. During the spermiogenesis and germ cell final maturation, the efficiency of proteins replacement of histones by protamines is important to keep the compaction of the genome and to protect the paternal transcripts which involved in oocyte activation after fertilisation. Any unbalance of proteins replacement and/or between the ration of protamine 1 and 2 can affect the competency of the spermatozoa for oocyte activation, embryo development and implantation. It's now established that mature spermatozoa contain a complex panel of mRNA, studies performed earlier showed that these mRNA have an important role in normal spermatogenesis and early embryo development. From our experience using microarrays we showed that germ cells of oligospermic men have a major alteration of gene expression profile when compared to normospermic individuals. In male to assure the final biological function of the spermatozoa any defect of the spermatogenesis (chromosome non disjunction, apoptosis and DNA fragmentation) and the spermiogenesis (proteins replacement, compaction defect by denaturation, mitochondrial function or transcripts alterations) will play a key role in IVF success mainly at embryo development and implantation failure levels.
PS02 Best clinical practice - Placentation accreta

PS02.1 Pathogenesis and medical condition
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Placenta accreta is one of the major causes of maternal death complicated by peripartum hemorrhage and its increasing incidence (10-fold in the past 50 years) rises the interest to understand its complete pathophysiology. The histological definition is the total or partial absence of the decidua basalis, which cause direct adhesion of the placenta villi on the myometrium. Depending on the depth of infiltration, three sub-types are differentiated: accreta, increta and percreta. In normal pregnancy, decidualized endometrial stroma is the site of placental separation from the uterine wall by shearing action between the contracting myometrium and the non-contracting placenta. In placenta accreta, the absence of decidua prevents separation, thus leading to a clinically adherent placenta and subsequent bleeding. Normal placental delivery after birth is therefore not possible and this explains the main risk of placenta accreta: heavy and even life-threatening bleeding if manual placental delivery is attempted. Risk factors for placenta accreta are mainly previous uterine surgery and here particularly a history of cesarean delivery. Further, it's clearly established that the raising number of cesarean section is responsible for the increased incidence of placenta accreta. Since primary cesareans often lead to repeat cesareans, Solheim recently forecast the effect of cesarean rates on incidence of placenta previa, placenta accreta, and maternal mortality: by 2020 the cesarean delivery rate will be 56.2%, and there will be an additional 6236 placenta praevias, 4504 placenta accretas, and 130 maternal deaths annually (J Matern Fetal Neonatal Med, 2011).

While the exact pathogenesis of placenta accreta is unknown, proposed hypotheses include a primary deficiency of decidua, abnormal maternal vascular remodeling, excessive trophoblastic invasion, or a combination of some of them. A variety of regulatory molecules play functional roles in controlling the process of trophoblast invasion and development during implantation and placentation. These include vasoactive and cell surface proteins, proteases, cytokines, chemokines and growth factors. Since the best outcomes in placenta accreta are in prenatally diagnosed electively delivered cases, ultrasound should be used as screening tool. MRI has to be treated as a second line examination. Management should take place in centers with special expertise. All obstetric units should have an obstetric hemorrhage protocol in place to avoid severe maternal consequences.

PS02.2 Abnormally deep placentation (ADP): imaging diagnostic procedures (MRI, echography, cystoscopy)
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Abnormally deep placentation (ADP) is not only a surgical challenge, but also a diagnostic one. There seems to be an increasing incidence of ADP. One can speculate that this reflects the rising rate of caesarean deliveries. Terminology also remains to be standardized. In a current US American classification, all forms of ADP were summed up as “Placenta accreta”. However, many clinicians consider mere Placenta accreta a clinical diagnosis with little morbidity. Frank invasion, i.e. Placenta increta or even percreta, that necessitates major surgical procedures can often be suspected or even proven using targeted prenatal ultrasound. Yet, no consensus exists about the specificity of the sonographic signs that have been reported. MRI can occasionally be helpful, in particular in poor sonographic visualisation or suspected posterior ADP. However, the role of MRI remains to be determined. Newer MRI approaches promise in better delineation of myometrium, placenta and adjacent structures. Cystoscopy and pre-operative stenting of the ureters may be helpful or required, but can be reserved for the minority of true Placenta percreta.
Objective: To describe a surgical one-step reconstructive treatment for placenta accreta. Material and methods: Between August 1989 and March 2011, 417 cases of placenta accreta or its variants were included. Clinical-surgical and histopathological criteria were applied to define the different types of abnormal placentation. One-step reconstructive surgery was used as first option treatment. The procedure included: 1) ligature of all newly-formed vessels among placenta, uterus, bladder or surrounding tissues, 2) segmental histerotomy according Ward’s technique, 3) after the baby is gently pulled out, the uterus is exteriorized for better handling, 4) all the invaded area is trimmed and taken out with the entire placenta, 5) uterine hemostatic techniques are applied over colpo-uterine anastomotic system and 6) the uterus is closed in two layers. Results: The uterus was preserved in 377 cases and hysterectomy was performed in 40 cases. In 4 cases, inadvertent ligation of the ureters was reported; all of them in patients with placenta percreta and parametrial invasion. Follow-up was performed in 339 cases within 6-12 months after surgery. Seventy-six of them were evaluated by hysteroscopy and the remaining 263, by T2-weighted nuclear magnetic resonance imaging which showed neither adhesions nor irregularities of the endometrial cavity, or uterine morphological alterations. Eighty-two subsequent pregnancies to this type of surgery have been reported, and partial recurrence occurred in only one of the patients. Most placental implantations were fundal and posterior. Conclusions: One-step conservative surgery is a reliable option in patients with placenta accreta and desire of subsequent pregnancy.

PS02.4
Hysteroscopic resection of placenta accreta
Michelle Nisolle

Abstract not available at the time of printing

PS02.5
Conservative treatment of placenta accreta
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The extirpative approach for the treatment of placenta accreta is associated with severe maternal complications because of massive hemorrhage. Therefore cesarean hysterectomy is usually recommended especially when the diagnosis has been performed antenataly. However, cesarean-hysterectomy may not be the easier and safest approach when the placenta is percreta with invasion of the bladder and/or major hypervascularization of the pelvis. Moreover, cesarean hysterectomy has for consequence a definitive infertility, and some patients require a strategy allowing another pregnancy. A recent French national study has shown that the conservative management of placenta accreta is associated with a 22% rate of hysterectomy and 6% rate of severe maternal morbidity. Uterine vacuity was obtained in 75% of all cases within a median period of 13 weeks. Successful conservative treatment for placenta accreta did not compromise the patients' subsequent fertility or obstetrical outcome. Therefore, when the patient requires the possibility for another pregnancy or when the placenta is supposed to be percreta, conservative treatment may be an alternative to cesarean hysterectomy.
Biomarkers and cardiovascular diseases - beyond the mechanistic aspects?

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Cardiovascular diseases at increasing age seems well served with biomarkers of lipid- , carbohydrate metabolism, blood pressure, endothelial function, haemostasis and inflammation. Present use provides a basis of individualised treatment by polypharmacy in the periods of rapid or established changes of these biomarkers. For prevention, algorithms are used to recognise groups of individuals at risk. In such groups, treatments/prevention can be specifically targeted at mechanisms but can also be targeted at the calculated risk. A problem with the present cardiovascular biomarkers is that they may be used to identify individuals at risk, but symptom-treatment based on these markers is not identical to causal treatment, but directed to subsequent damage. The symptom-treatment is only effective for a minority of the individuals, and biomarkers of the subsequent damage are usually rather late markers of organ dysfunction. Causal treatment would be to reduce the effects of environmental/metabolic stress (life/style) on cells, or to increase strength of coping with it by these cells. The cellular stress mechanisms will be discussed as new options for prevention of cardiovascular diseases and that they require new biomarkers.

Biomarkers, female hormones and cardiovascular diseases - a tool for risk stratification?

Jacqueline Conard

Abstract not available at the time of printing
New biomarkers - anything in the pipeline

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Biomarkers are defined as characteristics that are objectively measured and evaluated as indicators of normal biologic processes, pathogenic processes or pharmacologic responses to therapeutic interventions. Therapy related changes in biomarkers are expected to reflect changes in clinically meaningful end points. Imaging technologies and soluble biomarkers are used to evaluate the severity and progress of cardiovascular diseases and the pharmacologic responses to therapeutic interventions such as hormone therapy and use of oral contraceptives. Carotid artery intima-media thickness (IMT) and coronary calcification (CAC) are biomarkers of atherosclerosis. Determination of IMT and CAC are beneficial due to the direct quantification of the atherosclerotic lesion. The slow progress of atherosclerotic processes, however, requires years of therapy before conclusive results are obtained. Recent studies have demonstrated a significant inconsistency between IMT and CAC calling in question the validity of these measures as biomarkers of atherosclerosis. However, new promising techniques may strengthen the validity of imaging technology derived biomarkers. The complex pathophysiology of cardiovascular diseases challenges the validity of soluble biomarkers and future markers should illustrate the complexity of the pathogenic processes involved. The thrombin generation test (TGT) assesses the global efficacy of the coagulation system, whereas factor VII-activating protease (FSAP) is involved in coagulation, fibrinolysis, inflammation and cell proliferation. Since TGT and FSAP are related to cardiovascular diseases and both are affected by female sex hormones they may serve as general biomarkers in future studies related to cardiovascular diseases in women. The physiological and biochemical characteristics of these new biomarkers will be presented and discussed.

Which biomarkers are clinically relevant?

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There is a direct but weak relationship between cholesterol level and coronary heart disease (CHD) risk. The risk is related more closely to LDL cholesterol levels. However, even LDL concentrations (which reflect cholesterol mass) do not accurately predict risk. The LDL carrier protein, apolipoprotein B (which reflects the total number of atherogenic particles), may be a better predictor. Some LDL particles are more atherogenic than others, for example, lipoprotein (a) and small dense LDL. Their measurement may improve risk prediction, but measurement of concentrations does not give any indication of their circulatory residence time, and therapies such as HRT may affect clearance. HDL cholesterol levels are inversely associated with CHD risk, but it is not known if changes in levels bring changes in risk. Again, the major HDL carrier protein, apolipoprotein A-I, may be a better predictor. Raised triglycerides are related to increased CHD risk. Insulin resistance is a key metabolic disturbance that is pivotal to the metabolic syndrome, but it is difficult to assess in practice. Surrogates such as the HOMA or QUICKI indices are more practical options, but much less reliable. Haemostatic CHD risk markers, such as fibrinogen and factor VII that can be measured routinely, are weak predictors of risk, as are inflammatory markers. Patients with cardiac syndrome X have metabolic disturbances typical of CHD patients, but do not have gross coronary atheroma. So metabolic disturbances may only provide the background for atheroma development triggered by other processes, but still remain important for CHD prediction.
Endometriosis is a frequent disease which causes pain and infertility. Links between endometriosis and infertility are unclear, and infertility in endometriosis is probably multifactorial. Implantation of endometrial cells to the peritoneal surface can lead to a spectrum of disease severity with the most severe causing extensive pelvic adhesions and anatomic distortion. Infertility in endometriosis is certainly linked with tubal distortion but also with decrease of ovarian reserve and alteration of oocytes quality and ensuing embryos, and with impairment of implantation. The role of surgical removal of endometriotic lesions in improving chances of natural conception is still debated. In Vitro Fertilization IVF appears to be the best option, however women treated for endometriosis with IVF or intra cytoplasmic sperm injection (ICSI) have an unexplained lower pregnancy rate, compared to women with male infertility, and lower or equal compared to women with tubal infertility. The choice of an hyperstimulation protocol should be driven by 2 aims: adequate stimulation, to face the frequent failure of ovarian reserve, but without inconsidered risk of increasing endometriosis lesions. A recent meta-analysis (Cochrane database, 2010) demonstrates the interest of pre treatment, and the effectiveness of administering GnRH agonists for 3 to 6 months prior to IVF or ICSI. Other kinds of pre treatment blocage have been proposed such as oral contraceptives. In conclusion, IVF or ICSI seems to be the best option, treating infertility caused by endometriosis. A long ovarian blockage before IVF treatment is largely recommended, to improve results and decrease the risk of complications.
In recent years, there has been a significant improvement in the understanding of molecular events and critical pathways involved in breast cancer. It is an alteration of the genome which worsens gradually involving the deregulation of the expression of oncogenes and/or the repression of the expression of genes suppressor of tumors or their inactivation by mutation. They bring a deregulation of the great cellular functions that will induce the tumor growth and the possibility of migrating out it primitive tissue. An increasing genetic instability makes that the tumor becomes polyclonal, each cell having its genome probably modified in a different way. This has led to the identification of novel targets and development of anticancer therapies referred to as targeted therapy. Targeted therapy has high specificity for the molecules involved in key molecular events that are responsible for cancer phenotype such as cell growth, survival, migration, invasion, metastasis, apoptosis, cell-cycle progression, and angiogenesis. They also suppose to be better tolerated. Targeted drug can be: - directed against a mutated, amplified or hyper expressed protein responsible for the deregulation of a metabolic pathway (estrogen receptors, estrogens, HER2, HER 1...); - more consistently directed against the genome of the tumour cells because it aims at the origin of disease (Poly ADP ribose polymerase (PARP) inhibitors, anti polycomb…. ) and will act on all the cells of the tumor. This new concept probably requires a particular therapeutic schedule because the side effects can be considerable; - directed against the tumor neo-angiogenesis with an aim of removing the nutritional contribution of the tumor (ex: anti VEGF); Monoclonal antibodies and small-molecule inhibitors have been developed and tested in clinical trials. Several of these targeted agents significantly improved the survival and outcome of the breast cancer patients. However it is becoming obvious that multiple targets regulating growth of cancer cells may need to be inhibited for optimal efficacy and reduced resistance. The risk should be an increase of the secondary effects inducing a lower tolerance. Significant progress have also be made in antibody drug conjugated (ADC) for selective delivery of cytotoxic drug to the tumor. Another way should be the vaccines against molecules involved in the development of breast cancer.

Mammography density: a challenge for early diagnosis

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Breast cancer is the most common malignancy among women in the western world. Mammographic mass-screening programs are effective to reduce mortality, but since their aim is detection of early tumours they do not influence morbidity. To reduce the incidence of breast cancer there is a need to identify individual women at risk and to intervene before the malignancy has developed. Mammographic breast density and breast cell proliferation could be regarded as surrogate markers for the risk of breast cancer. Density has been identified as a strong and independent risk factor for the development of breast cancer. A woman's individual breast density seems to reflect a net effect of her exposure to endogenous and exogenous hormones and her background genetics on the breast during her life-span. In fact, mammographic breast density may represent an intermediate phenotype for breast cancer. Adding information about the absolute percentage and also of changes in density might improve breast cancer screening. Apart from being a strong risk factor in itself, excessive density by the 'masking' effect may also complicate the detection of small and early tumours. Ultrasound and occasionally MRI are important tools to improve diagnostic accuracy. Agents like raloxifene and tamoxifen are known to reduce density and can be used for prevention in women at high risk for breast cancer. We and others have repeatedly demonstrated an increase in mammographic breast density to occur in some but not all women during hormonal therapy. In fact, change in density seems to follow our current perception of breast cancer risk for different therapies. It is well-known from clinical practice that mastalgia may occur in some women. Data support the notion that symptoms like pain and soreness reflect a stimulatory response in the breast and that they are associated with tissue remodelling and a change in mammographic density. Apparently not all women respond in a similar way to the same hormonal treatment. There is an urgent need to enhance our understanding of the biological basis for the marked individual variation in response and to define treatments that do not promote density.

Radical surgery in metastatic breast cancer: a new challenge

Georges Vlastos

Abstract not available at the time of printing.
Axillary dissection has been for a long time the gold standard of nodal assessment of breast cancer. 15 years ago, the concept of sentinel node biopsy has been developed. Some large trials have now demonstrated that after completion of the learning curve, the detection rate was high, the false negative rate acceptable (5 - 10%), and the functional benefits for the patients were present. However, some indications are still debated: large tumor, neo-adjuvant chemotherapy, history of breast surgery, multifocal disease. The management of patients harboring micrometastases is also controversial. Some studies show a poorer prognosis than pN0 patients, other giving similar results for pN1mi and free nodes. The interest of an axillary clearance in women with positive sentinel nodes is discussed since the publication of a trial without survival benefit in this sub-group of patients. In patients with a limited axillary involvement, the ARM (axillary reverse mapping) technique seems interesting. It allows an axillary dissection with a preservation of the arm lymphatic drainage. A trial is ongoing in France and results will be available within 2 years. The concept of selective axillary dissection is increasing. It is less and less limited to early unicentric invasive tumors. New indications are growing up, also in node positive patients.
PS06 New look at hormone therapy

PS06.1
Is a diagnosis of endometriosis necessary before hormonal therapy?
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The traditional way to take care of patients with pelvic pain suggestive of endometriosis is performing a laparoscopy to verify the diagnosis before treatment. Laparoscopy is considered to be a routine investigation, but serious complications have been reported, and in many countries there is little or no access to such an examination. Many women have probably been effectively treated for endometriosis without ever having had a diagnostic investigation. Laparoscopy with biopsy of suspected foci is 'gold standard' for diagnosis, but the examination could result both in false positive results (presence of endometriotic implants without clinical relevance) and in false negative results (active endometriosis not detected during the exploration). In both cases only response to a trial of hormone therapy could prove the association between pain and endometriosis. Most guidelines on endometriosis support empirical treatment of pain symptoms without a definite diagnosis, and the relevant options are hormonal treatments with oral combined contraceptives, progestins or GnRH-agonists. Experimental treatments should be closely monitored concerning effect and side effects, and the trial should be terminated if it is unsuccessful or if the side effects are considerable. Gynecologists may be pressed to verify the diagnosis laparoscopically as soon as possible as a demand from the patients knowing that the diagnostic delay for endometriosis is up to ten years. Appropriate counseling, information about the treatment strategy and regular follow-up are mandatory in the treatment of women with pelvic pain, either related to endometriosis or not.

PS06.2
Estrogen and osteoimmunology, a new opening in bone research
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The decline of estrogens after menopause determines an increase in bone turnover, which is at the base of postmenopausal osteoporosis. Osteoclasts, the multinuclear cell responsible for bone resorption, are the final step of a differentiation process whose progenitors are located in the bone marrow. Several experimental models and the clinical traits of some immunological diseases confirm a relationship between the adaptive immune system and bone metabolism. Osteoarthritis, periodontal disease, and other autoimmune diseases associate with bone metabolic disorders. The differentiation of osteoclasts from hematologic precursors is mediated by the intervention of the receptor activator of NF-κB ligand (RANKL), a member of the TNF family. RANKL is expressed on osteoblastic stromal cells, and also on cells of the immune system including T cells and dendritic cells. The action of RANKL is modulated by a myriad of cytokines, which may either stimulate or repress RANKL production. The key role of interleukin 17, produced by TH17 T lymphocytes, is confirmed in experiments showing the induction of monocytes to become osteoclasts via RANKL. Knock out mouse models confirm that cytokine production is also at the base of the increase bone resorption observed after menopause. Estrogens inhibit the response of osteoclasts progenitors to RANKL, and have been demonstrated to regulate various types of bone regulatory cytokines. There is controversy, nonetheless, on the effect of estrogen deprivation on T and B cells, whose implication changes in different experimental models. There is also emerging data on the particular effects that different estrogen receptor agonists may have on the immunological regulators of bone turnover.
PS06.3  
Postmenopausal hot flushes, a new marker for cardiovascular effects of estrogen  
*Tomi Mikkola*

Abstract not available at the time of printing

PS06.4  
Hormone therapy and postural balance function  
*Tord Naessen*

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With regard to the risk of peripheral 'osteoporotic' fractures, too much might have been focused on bone mass and options to increase bone mass. Less than 50% of all peripheral fractures have osteoporosis, according to assessment of bone density. Further, hormone therapy (HT) in contrast to bisphosphonates, substantially and rapidly reduces the risk of peripheral fractures, despite similar increase in bone mass. HT rapidly improves postural balance function, especially when initiated soon after menopause and in women with low endogenous serum E2 levels. Further, long-term estrogen therapy seems to preserve an excellent balance function into high age, with values similar to those in young pre-menopausal women. The improved postural balance function after HT is most likely mediated via the brain and not through improved muscle strength. The effect of HT with improved postural balance function might explain the rapid onset of fracture protective effect of HT and the likewise rapid loss of effect after ending HT, that HT reduces peripheral fracture risk more substantially when initiated soon after menopause, compared to initiation at higher age. In fact, soon after menopause bone mass is almost normal. It might also explain the very modest effects of bisphosphonates on peripheral fracture risk compared with the effect of HT. In conclusion, the rapidly reduced risk of peripheral fractures after HT is most likely effects mediated via the brain with improved postural balance function rather than through increased bone mass.
As for me some hot issues in contraception in 2011 could be the following:

1. **Antiretroviral (ARV) Microbicides for the Prevention of HIV Infection in Women**
   - Tenofovir, an nucleotide reverse transcriptase inhibitor, in a 1% vaginal gel formulation, could potentially fill an important HIV prevention gap, especially for women unable to successfully negotiate mutual monogamy or condom use (Abdool Karim et al., Science 2010).
   - Now is it feasible to develop a dual protection (Contraception + HIV prevention) vaginal ring (or vaginal gel) containing an ARV (or several ARV) + hormones?

2. **In the Field of Combined Oral Contraceptives (COCS), a Newcomer, the Natural Estrogens**
   - Two pills containing natural estrogens are already available: Qlaira® (E2V + dienogest) and Zoely® (E2 + nomegestrol acetate). After these two pills, we will probably have the E4 (estetrol) pill (E4 + DSG? Or +DRSP? Or +LNG?). This fetal estrogen seems to have not only a favorable metabolic tolerance but also favorable impact on breast tissue.
   - Further data from clinical and epidemiological studies, mainly large post marketing surveillance studies, are needed before conclusions can be drawn regarding the relative safety of these 'natural' pills particularly with regards to rare clinical events such as venous and arterial thromboembolism.

3. **The World Health Organization Fourth Edition (2009) of 'Medical Eligibility Criteria for Contraceptive Use' is now Published in Several Languages. This New Edition of the WHOMECC, Completed and Actualized, Has Now Two 'Sisters' the UKMEC and the USMEC.**

4. **Another Hot Issue in Contraception May Be the Use of Modern (Mainly Hormonal) Contraception as Treatment or Prevention of Several Gynecological or Non-Gynecological Disorders by Women Without Need of Contraception. As an Example: the LNG-IUS Mirena® as Medical Treatment of Menorrhagia or as Progestogenic Component of HRT or, Potentially, as Treatment of Hyperplasia, Endometriosis, Adenomyosis or Inherited Bleeding Disorders. Other Examples: Certain COCs as Treatment of Acne or PMDD or Dysmenorrhea or, Dysfunctional Uterine Bleeding (DUB), or Hormone Withdrawal Associated Symptoms, Etc.**

5. **I Consider that the Conclusion of the Royal College of General Practitioners Oral Contraception Study Concerning the Mortality Among Contraceptive Pill Users is a Hot Issue in Contraception. According This Prospective Large UK Cohort Study (46 112 Women, 39 Years), Oral Contraception is Not Associated with an Increased Long Term Risk of Death: Indeed, a Net Benefit is Apparent.**

6. **Some Other Hot Issues in Contraception May Be Considered: - Emergency Contraception (EC) with Ulipristal Acetate More Effective than EC with Levonorgestrel - The New Contraceptive Implant Containing Etonogestrel, Nexplanon®, Radiopaque and More Ergonomic Than Implanon® - Female Sterilization (I Like Better the Appellation 'Permanent Contraception', More Appropriate) by Hysteroscopic Methods: Essure® or Adiana® - Etc.**

**Conclusions:** Technology by itself is not enough. We must constantly improve our contraceptive counseling. To improve the science of counseling in contraception may be the principal hot issue in contraception in 2011.
Hormonal contraception and thrombosis risk: what we know in 2011

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In the early 1960s, shortly after the introduction of oral contraceptives (OCs), the first case reports appeared describing venous thrombosis and pulmonary emboli in women using this method of birth control. Later, myocardial infarction and stroke were also found to be associated with the use of OCs. These observations led to numerous epidemiologic and clinical studies of OC use and thrombosis and subsequently to the development of new oral contraceptives with a lower estrogen content. These lower-estrogen contraceptives were considered safer: Changes in hemostatic factors remained small, inconsistent in direction, and mostly within the normal range. Recent studies have challenged the concept that reducing the dose of estrogen in oral contraceptives eliminates the risk of venous thrombosis. These studies have included epidemiologic data suggesting that certain progestins may increase the risk of thrombosis associated with low-estrogen preparations, new findings regarding individual genetic susceptibilities to the thrombogenic effect of OCs and new insights into the hemostatic changes that predispose women to thrombosis. These advances have consequences with respect to the development of new OCs and individualising the prescription of currently available preparations. Arterial thrombosis is also a complication of OCs, but the risk factors for this condition differ from those for venous thrombosis. For example, smoking increases the risk of myocardial infarction associated with the use of OCs, but it has virtually no effect on the risk of venous thrombosis. In contrast, several prothrombotic genetic defects are strong risk factors for venous thrombosis and increase the risk associated with the use of oral contraceptives, but most are likely to be only weak risk factors for myocardial infarction or stroke.

PS07.3
Tomorrow, Estetrol in oral contraception?
Jean-Michel Foidart

Abstract not available at the time of printing

PS07.4
New vision for research in contraception
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Societies in both the developing and developed world suffer from unacceptably high rates of unintended pregnancies, despite the availability of safe and effective contraceptives. Factors that contribute to this problem include misperceptions about safety, knowledge, acceptability of methods, compliance issues, access and cultural factors. Rapid population growth has significant individual, family, societal and environmental effects and contributes to high maternal and infant mortality and morbidity in many developing countries. In addition to understanding why misperceptions of risks/benefits of contraceptive use exist, work is needed to improve safety and acceptability of existing methods. Future research would need to develop approaches to improve adherence, convenience and access to contraceptives; develop ways to increase the use of long-acting, reversible contraceptives (LARC); understand what kind of non-contraceptive health benefits are valued by contraception users, and develop new methods with additional medical benefits. The contraceptive efficacy of the new long-acting methods is the highest among contraceptives as these methods do not rely on daily compliance. While implants and IUD/IUS require a health provider for a proper insertion and removal, vaginal rings and transdermal patches or gels have the advantage for women of being under their own control. A one-year vaginal ring reaching final stages of development has the potential for high compliance as the woman will have her method available for one full year. Research on new steroids closer to natural hormones and new non-oral delivery systems will target a better safety of hormonal methods. In addition, today's research on new contraceptives target not only the prevention of unwanted pregnancies but also additional medical benefits to the users. Dual protection methods are tested in the form of vaginal gels or rings delivering both a contraceptive and an agent active against HIV transmission. In addition, the potential of progesterone receptor modulators to prevent breast cell proliferation or the neuroprotective effects of progesterone and similar molecules are
new areas of research supporting the development of new contraceptives with added health benefits. Successful accomplishment of these research objectives will, increase the safety, efficacy and use of existing contraceptives, expand acceptability of, and access to, contraceptives by the introduction of new methods, and move toward the goal of eliminating unintended pregnancies and improve maternal and child health on a global scale.
PS08 Pregnancy in polycystic ovary syndrome (PCOS) Part I - Infertility & pregnancy complication

PS08.1 Clinical and biochemical changes in pregnant women with PCOS - pregnancy complications and metformin effects in PCOS

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Women with polycystic ovary syndrome (PCOS) have an increased incidence of pregnancy complications compared to control women. Metformin is claimed to have a positive effect on hyperandrogenism, weight development and pregnancy complications. The aim of my presentation is to review

- pregnancy complications and pregnancy outcome reported in PCOS women
- the effect of metformin treatment in PCOS pregnancies
- What is evidence based?
- Weight gain in pregnancy with and without metformin
- Androgen levels in PCOS mothers and their newborns
- Side effects of metformin in pregnancy and placental passage

PS08.2 Oocyte and embryo quality in PCOS

Michelle Plachot

Abstract not available at the time of printing

PS08.3 Endometrial receptivity and placentation in PCO

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Implantation failure remains an unsolved problem in reproductive medicine, and it is considered as a major cause of infertility in otherwise healthy women. The average implantation rate in IVF is around 25%. Inadequate uterine receptivity is responsible for approximately two-thirds of implantation failures, whereas the embryo itself is responsible for only one-third of these failures. In PCOS patients the endometrial receptivity might be affected, and the implantation impaired with a consequential increase in abortion risk. In addition, the abnormalities in endometrial development and blastocyst implantation should be related to significantly higher risk for gestational diabetes mellitus, pregnancy-induced hypertension, preeclampsia, and poor neonatal outcome. Several data show that PCOS patients have alterations of several surrogate endpoints of endometrial receptivity. In particular, PCOS women have endometrial vascularization, pattern, and thickness abnormalities. Experimental data have shown that insulin resistance and hyperinsulinemia could be responsible for the impaired endometrial receptivity in PCOS. An alteration of the expression of various endometrial proteins has also been demonstrated. A better understanding of the mechanisms regulating embryo implantation may improve the ability of clinicians to treat infertility and to prevent miscarriage. This knowledge might enable investigators to improve critical step of implantation in modern reproductive therapies.

PS08.4 Risk of miscarriage in PCOS

Riitta Koivunen

Abstract not available at the time of printing
Prevalence and predictors of vestibulodynia in reproductive-aged women with recent uncomplicated urinary tract infections

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Objectives: Uncomplicated recurrent bacterial cystitis (rUTIs) are very common infections in otherwise healthy, reproductive-aged women, with Escherichia coli (E. coli) as the most frequent uropathogen. Provoked vestibulodynia is the most common cause of sexual pain in premenopausal women. The aim of this study was to determine the prevalence and predictors of vestibulodynia in women with E. coli-associated rUTIs presenting for an urological evaluation. Methods: We evaluated 60 consecutive European Caucasian, heterosexual, sexually-active women (mean age 34 yrs; age range 21-42) seeking medical treatment for rUTIs (defined as ≥4 episodes throughout the last 12 consecutive mo). Patients underwent a comprehensive medical and sexual history [including a number of GAQs, the FSFI, the AUA symptom score addressing urinary symptoms] and a complete physical examination, including a gentle palpation of the vestibule, along with a Visual Analogue Scale (VAS; min 0 - max 10), scoring the real-time intensity of any vestibular pain. As a proxy of general health status, we scored health-significant comorbidities by means of the Charlson Comorbidity Index (CCI). Patients were also investigated with urinalysis and self-collected urine culture. Descriptive statistics and logistic regression models tested rate and predictors of secondary vestibulodynia in women with E. Coli-associated rUTIs. Results: E. Coli-associated rUTIS were diagnosed in 46 out of 60 patients (76.7%). Of these, 32 (69.6%) had a diagnosis of provoked vestibulodynia [mean (SD) VAS: 7.3 (1.4); FSFI-pain: 1.8 (0.4)]. In contrast, provoked vestibulodynia was significantly less frequent in patients with uropathogens other than E. Coli [4 out of 14 (28.6%) (Chi-square: 5.908; p = 0.015)]. In comparison with women reporting non-E. Coli associated rUTIS, the multivariate OR of vestibulodynia was 2.8 (95% CI, 1.3-4.6), for women reporting >6 episodes of E. Coli-associated UTIs during the last 24 mo; 2.1 (95% CI, 1.4-4.7) for women who received more than 3 different antibiotics across the same period; and, in comparison with women reporting their first intercourse at ≥17 years of age, the multivariate OR was 0.5 (95% CI 0.3-0.9) in women aged ≥23 years at first intercourse. No clear association emerged between educational level, CCI, oral contraceptive use, recreational habits, and risk vestibulodynia. Conclusions: A high rate of women with E.Coli associated rUTIs also complain of provoked vestibulodynia. In this context, the higher the prevalence of rUTIs the greater the risk of vestibulodynia. Investigation of sexuality is suggested for these women also in the general urology office.

FSD, HPV and other sexually-transmitted diseases in the lifespan

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Women have biological, physiological and gender-based vulnerabilities to STIs and FSD is a common sequela. HPV is one of the commonest STIs worldwide with over 30 types infecting genital epithelium. Of these a third can produce benign condylomata. Most infected individuals do not develop visible genital warts. Some strains are associated with cervical cancer, but not those responsible for visible genital warts. There is much confusion about these differences and thus genital warts cause considerable psychological distress, related to genital appearance, stigma, risk of transmission to partners, distressing treatments and fear of cancer. Genital herpes, usually caused by Type 2 HSV, but increasingly also by Type1, is also the cause of considerable psychological distress and psychosexual problems. Many patients have frequent recurrences and it is not only the pain which will cause many women to avoid intercourse, but also the constant fear of transmission to partners. Chlamydial and gonococcal infection and associated PID can all lead to anxiety, fear of infecting partners and physical sexual problems due to background pelvic pain and deep dyspareunia. If a woman develops tubal infertility, studies suggest up to one third may report a negative effect on their sexual function. Acquisition and treatment of HIV and effects of advanced disease such as low BMI with reduction in free testosterone can all lead to female sexual dysfunction. Clinicians
working in the field of STIs need to be fully aware of the need to screen for and counsel women re sexual function to improve patients QoL.

**PS09.3**  
**FSD in women after breast and gynecologic cancer**  
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Introduction: Breast cancer and gynecologic malignancies impact female sexuality in many different direct and indirect ways and lead to high reported rate of female sexual dysfunction. Methods: Review of the litterature regarding the rate of FSD in breast and gynecologic cancer survivors. Analysis of mechanisms involved and description of the program of care at the University Hospital Basel. Results: Breast cancer survivors show a high rate of FSD especially HSDD, arousal and pain disorder during primary treatment and during antihormone and chemotherapeutic treatment. The mechanisms are systemic effects on hormone production, toxic effects of chemotherapy, and negative effects on body image. Survivors of gynecologic cancers show various rates of FSD depending on the type of cancer and the type of treatment. Women after surgical treatment of cervical cancer seem to have the lowest rate of FSD. Women after ovarian cancer seem to suffer from severe FSD mainly due to fear of recurrence and hormonal effects. Patients after vulvar cancer have a very high rate of pain disorder. Sexual health care for these patients is based on the following interventions and tools: a) Basic counselling sessions together with the partner b) Educational group interventions with different types of information c) Different hormonal and drug treatment options d) Treatment of psychiatric comorbidity especially depression e) Physiotherapy of the pelvic floor f) Instruction about use of sex toys. g) Relaxation and self hypnosis. Conclusion: Preservation and/or rehabilitation of sexual health in breast and gynecologic cancer survivors is a needed and important task in the framework of comprehensive psychooncologic and sexooncologic care.

**PS09.4**  
**FSD in Premature ovarian insufficiency and iatrogenic early menopause**  
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Young women with premature ovarian insufficiency (POI) are at increased risk for FSD, even though they are treated with physiologic estradiol replacement therapy. Underlying causes are complex: On one hand psychosocial factors, such as mood, self-image and feelings for the partner may play a role, on the other hand biomedical factors and the hormonal changes associated with early menopause may contribute to the development of low sexual function. This is particularly relevant in women with surgical menopause. Oophorectomy leads to a sudden drop in circulating testosterone levels. Thus, surgically menopausal women are not only in an estradiol deficient state, but they have also lost an important source of androgen production. Studies suggest that women with POI may also have significantly reduced serum free and total testosterone levels as compared to control women. Androgens are significant independent factors affecting sexual desire, sexual activity and satisfaction, as well as other components of women's health including mood and energy. Today, there is substantial evidence from randomized placebo-controlled trials showing that low-dose testosterone treatment has beneficial effects on many facets of sexuality, including desire, arousal, orgasm, and responsiveness, as well as frequency and satisfaction in surgically and naturally menopausal women. The multifactorial aetiology of FSD in women with POI requires a detailed assessment. The therapeutic approach may include non-hormonal and hormonal strategies. Testosterone treatment should be taken into account in women with premature ovarian insufficiency and female sexual dysfunction in addition to conventional hormonal therapy.
PS10.1
Drugs, diabetes and pregnancy
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Diabetes in pregnant women occurs in around 7% cases and is currently increasing because of the recent, HAPO-derived screening protocol, and because of the progression of overweight and obesity. Among these patients approximately 10% will not reach normal glycemia in spite of an appropriate diet. In most countries insulin then remains the only authorized treatment, resulting in disagreement for the patient and elevated costs. However different studies and trials have evaluated the possibility to use oral glucose lowering drugs during pregnancy. The different available oral lowering drugs will be discussed in terms of mechanisms of action, with special emphasis on biguanides and sulfamides. Efficacy and safety of oral glucose lowering agents will be discussed in pregnant and lactating women. In addition, the use of sweeteners during pregnancy has been questioned recently and will be discussed.

PS10.2
Nutrition and the diabetic pregnancy
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A direct relationship between maternal blood glucose concentrations and adverse pregnancy outcomes has been observed in the HAPO (Hyperglycemia and Adverse Pregnancy Outcomes) study. This large cohort including more than 23000 pregnant women reported strong associations between increasing levels of maternal fasting, 1-h and 2-h plasma glucose after a 75 g oral glucose tolerance test (24-32 weeks of gestation) and infant weight above the 90th percentile and cord blood serum C-peptide levels. Positive associations were also observed between maternal plasma glucose levels and primary cesarean delivery, clinical neonatal hypoglycemia, pre-eclampsia, birth injury or shoulder dystocia, premature delivery, hyperbilirubinemia (HAPO study, 2008). A relation between the 1-h postprandial blood glucose levels and fetal adiposity (abdominal circumference) has been shown even for values considerably lower than current thresholds for good glucose control (mean post prandial glucose level: 108mg/l) (Parretti, 2001). The postprandial glucose peak depends on the maternal diet and predominantly on the amount and the type of carbohydrates (CHO) and on insulin resistance. From the eighties the concept of glycemic index (GI) emerges (Jenkins, 1981). It is defined as the incremental area under the blood glucose response curve of a test food containing 50 g available CHO expressed as a percentage of the response to the same amount of available CHO from a reference food (common standards: glucose or white bread). Low GI foods are digested and absorbed slowly and help regulate blood glucose concentrations. The amount of CHO influences also the postprandial glucose increase. The concept of glycemic load (GL) is useful in predicting the acute impact on blood glucose responses within the context of mixed meals and gives a better reflection of food's glycemic peak than the GI. The GL is GI/100 X amount of available CHO (Salmeron, 1997; Atkinson, 2008). High-GI diet is associated with higher postprandial glucose responses and large for gestational age infants. Women consuming low-GI diet gained significantly less weight during pregnancy than women with the high-GI diet (Clapp, 1998; Moses, 2006). The amount of fibre in the diet influences the GI of foods and can help to blunt pregnancy-related insulin resistance (Fraser, 1988). Patients should be counseled regarding adequate weight gain in pregnancy. Gestational weight gain recommendations should be individualized especially for diabetic or obese women (Artal, 2010).
PS10.3
Aggressive antihypertensive treatment in diabetic pregnancy

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Diabetic women with diabetic nephropathy are at particular risk of poor pregnancy outcome. Diabetic nephropathy is associated with a high risk of hypertension, preeclampsia and preterm delivery. Pathophysiological consideration in relation to development of hypertension and preeclampsia in women with diabetes will be covered. To prevent development of hypertension and proteinuria, inhibition of the renin-angiotensin system has been documented to be effective outside pregnancy. However, blocking of the renin-angiotensin system in early pregnancy has been associated with congenital malformations and is not recommended to use in pregnancy. Blocking of the renin-angiotensin system therefore should be discontinued before conception or as soon as pregnancy is confirmed. In diabetic women with diabetic nephropathy, the effect of early and aggressive antihypertensive therapy on progression of hypertension and proteinuria during pregnancy seems promising when using antihypertensive drugs considered safe during pregnancy. Onset of preeclampsia and early preterm delivery might be prevented using this strategy.

PS10.4
Diagnosis and classification of hyperglycemia in pregnancy

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Diabetes in Pregnancy occurs as known pre-existing (Type 1, Type 2 and other causes) and gestational diabetes mellitus (GDM). The diagnosis of GDM is fraught because of (i) its heterogeneity (previously undiagnosed pre-existing diabetes, different degrees of insulin secretory insufficiency and glucose sensing mutations) (ii) the non-pathognomonic nature of the association between the immediate and long term harm to both the mother and baby (iii) the relationship between hyperglycaemia is generally part of a continuum of risk rather than associated with a threshold or binary effect (iv) the increased risk of harm associated with obesity, a frequent co-morbidity and contributor to diabetes and (v) symptoms are either absent at the lesser levels of hyperglycaemia, or are similar to pregnancy symptoms (e.g., tiredness, nocturia). The HAPO (Hyperglycaemia and Adverse Pregnancy Outcomes) study with 23,316 women after a 75g oral glucose tolerance test has given sufficient data to relate the fasting, 1 hour and 2 hour glucose with different adverse pregnancy outcomes. The level of risk worthy of intervention was decided by consensus with a 75% excess risk considered too high leading to GDM criteria of 5.1, 10.0 and 8.5 mmol/l. These are substantially different to the current WHO criteria which have higher fasting but lower 2 hour criteria now exposed as having inconsistent risks between these 2 cut offs. Existing criteria for diabetes in non-pregnant individuals (fasting 7+ mmol/l, random 11.1+ mmol/l, HbA1c 6.5% on 2 tests) were accepted to diagnose “overt diabetes in pregnancy” (mainly pre-existing diabetes).
PS11.1
Osteoarthris: bone and cartilage interactions - dual intervention strategies

Morten A Karsdal

Abstract not available at the time of printing

PS11.2
Genes implicated in osteoarthritis and their function: lessons from the TREAT-OA consortium

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Osteoarthritis (OA) is the most common form of arthritis in the elderly, it is extremely common among post-menopausal women, and its prevalence is expected to climb as the age of the population and the prevalence of obesity increase. Severe OA is the cause of huge economic and personal burden and is the main cause of the increasing need for joint replacements. Current pharmacological approaches to deal with OA are largely insufficient to prevent initiation and progression of disease or do safely and efficaciously with the pain and disability it causes. OA has an important genetic component. Genetic studies in humans have identified molecules involved in signaling cascades that are important for the development of the pathology. The pathways in which some of these genes are involved are related to cartilage and cartilage metabolism (e.g. the growth differentiation factor 5), others are unknown and others are related to pain sensitivity. The recent progress in the genetics of OA is discussed along with future directions for this field.

PS11.3
Metabolic osteoarthritis - what are the evidences?

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Osteoarthritis (OA) is a common degenerative disease affecting the whole joint causing pain and disability in the elderly. At the molecular level OA is characterized by degeneration of the articular cartilage and formation of bony edges called osteophytes. These changes are the result of an altered metabolism of the respective cells (chondrocytes, osteoblasts and osteoclasts). Obesity is considered an important risk factor for OA together with age, gender and genetic background. Intuitively overweight may induce focal cartilage damage and susceptibility to OA via increased mechanical stresses. However it has been shown by various studies, that a positive association exists between body mass index (BMI) and hand OA, indicating that metabolic changes as a result of obesity may have an additional etiological influence. Starting at the other end, the metabolic syndrome is known to affect the metabolism of a range of tissues due to a dys-regulation of cytokines, adipokines and other hormones. Notably these factors have a pleiotrophic negatively effect also on cartilage and/or bone homeostasis. A metabolic imbalance may thus have a direct and indirect influence on the integrity of cartilage and bone homeostasis making these tissues prone to OA (progression). I will focus on the effect of metabolic imbalances to cartilage and bone homeostasis and ask whether we may define a type of OA referred to as: metabolic OA.

PS11.4
Biological determinants of longevity - the role of bone and cartilage

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Osteoarthritis (OA) is the most prevalent musculoskeletal disorder and is associated with gross functional impairment and disability among the elderly. Risk factors for OA are age, body mass index and genetic predisposition which may act interactively. Up until now there are no reliable clinical biochemical markers to monitor disease activity over time or to assess quantitative joint tissue remodeling and/or
inflammatory processes monitoring or prognosis of the disease process. Research that aims towards identification of molecular markers that enable better prognoses and monitoring of OA may directly improve the disease management. Better insight into the pathogenic process may eventually lead to new intervention strategies. Moreover, most investigations focus on finding pathways that determine risk for OA, however, insight is lacking on factors that protect people from OA development and how biomarkers for OA relate to age and overall metabolic health. We established a multidisciplinary research line which is applied to characterize diverse human populations for the presence of OA and aging biomarkers. In the GARP study we included sibling pairs with symptomatic and radiographic OA in two or more joint sites of the hand, spine (cervical or lumbar), knee or hip. Radiographic OA was assessed according to the Kellgren/Lawrence (0-4) method, while symptomatic OA of knee, hip and hands was defined according to the American College of Rheumatology (ACR) recommendations. Since this population has OA data on most prevalent joint locations, biomarker levels are not likely to be confounded by OA at joint locations for which data is lacking. As a counterpart we included a second study, the Leiden Longevity Study (LLS) in which we established whether metabolic health and longevity associate to healthy locomotor functions. The LLS study consists of long-lived Caucasian siblings, their offspring and the partners thereof. The survival benefit of these families is marked by a 30 % excess survival observed in successive generations. We have established that though BMI does not differ between longevity family members and unrelated partners, various aspects of metabolic health do. In this population we have now studied the presence of OA, OA biomarkers and the relation of OA susceptibility and metabolic health. Analysis of UCTX-II and serum COMP in the Leiden Longevity study suggests that familial longevity is associated with a favorable maintenance of the cartilage integrity with age.
Ageing is not genetically programmed. The most popular hypothesis states that it is a result of a life-long accumulation of stochastic damage to the genomic DNA. The rate of ageing, however, depends on many genetic factors (variants of FOXO1A, FOXO3A, IGF1R, INSR, APOE, PON1, WRN, XPD, etc.), but their influence on longevity is moderate (25-30%) and does not rise until the 9th decade of life. Therefore, standard ageing is affected mostly by non-genomic, predominantly environmental factors that contribute both to the molecular damage and to the regulation of gene expression via modulation of epigenome. Ageing leads to the gradual decrease of function of all organs. An exception to this rule is ageing of the female reproduction system culminating in menopause: it occurs rather abruptly, within a similar age range in various ethnic groups living in various environmental settings and is probably genetically programmed. It is still not known, though, what initiates this process, and the ageing of the central nervous system and of ovaries might be a trigger or, at least, a contributor to this process. It is estimated that the age of menopause depends on genetic factors in 31-87%. The candidate gene approach revealed the potential contribution to this phenomenon of genes involved in steroid pathways (CYP1B1, CYP19A1, ESR1, ESR2), vascular-related genes (APOE, F VII, F V Leiden) and of other genes (HDC). Results of the only two published genome-wide association studies consistently suggest the role for 20p12.3, 19q13.4 loci in modulation of the age of natural menopause.
women leading to impairment of cardiac function, some metabolic processes demonstrate more abrupt alterations around the age of menopause and are more gender-specific. The well-documented beneficial effects of estrogen replacement therapy on atherosclerosis and its metabolic risk factors serve as another proof for the detrimental consequences of menopause and associated sex hormone deficiency on the cardiovascular system.

**PS13.4**
The impact of menopause on bone ageing
*Serge Rozenberg*

Abstract not available at the time of printing
PS14 Hormones & cancer

PS14.1
Underlying mechanisms of cancer risk modulation by hormones
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The World Health Organization (WHO) has classified estrogens and combined estrogen-progestogen preparations used in hormonal contraception and menopausal therapy as 'carcinogenic in humans'! By two main pathways hormones may induce new cancer cells 1) Estrogens can increase breast epithelial cell proliferation which might lead to mutations due to mistakes during DNA-replication, and/or 2) certain estrogen metabolites may have direct carcinogenic potency by oxidative processes leading to DNA strand breaks. Progestogens may further increase the risk by 1) increasing the proliferation mechanisms, and/or 2) by negative influence of the pattern of estrogen metabolism. Via pathway 1) the actions of estrogens are mediated via two different receptor subtypes, i.e. ER-alpha and ER-beta. Ligand-bound ERs can work in the classical genomic pathway which includes binding to the DNA estrogen responsive element and activation of the transcription machinery. The non-genomic pathway includes cross-reactions of the ER with intracellular signal molecules such as the tyrosine kinase domain of growth factor receptors or directly with the mitogenic kinase PI3K. Via pathway 2) especially the 4-quinones are supposed to play an important role. However, their toxic effects need special oxidative cell stress, which can be prevented by various cellular defence mechanisms. We have been able to assess the potency of various metabolites and to demonstrate that estrogen metabolism can be influenced by administration route and the added progestogen. Currently research focuses on differences between progestogens and to develop strategies to screen for patients on increased risk e.g. by assessing genetic polymorphisms and potential genotoxic metabolites.

PS14.2
Female hormones and breast cancer risk: an update
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Several hormone-related factors have been associated to breast cancer risk. These include early menarche (relative risk, RR 1.5 for <13 vs 15+ years), late menopause (RR 2 for > 55 vs <45 years), late first birth (RR 2 for >30 vs <30 years), nulliparity (RR 0.6 for 4+ vs 0 children) and long breastfeeding (RR 0.7 for >24 months vs none). These factors are however hardly modifiable. Hormone-related factor which can be modified to reduce breast cancer risk include exogenous hormones, i.e. oral contraceptives (OC) and hormone replacement therapy (HRT) in menopause. However, OC increase breast cancer risk in current users only, and the risk becomes similar to that of never users a few years after cessation of use. Since the incidence of breast cancer is very low below age 35, when most OCs are used, the impact of OCs on breast cancer risk is negligible. HRT, and particularly combined estrogen-progestin HRT, also increase breast cancer risk for current and recent users, but since breast cancer incidence is considerably greater around and after menopause, their role on breast cancer risk is appreciable. Indeed, the reduced use of HRT over recent years, following the Women's Health Initiative study report, may at least in part explain the falls in breast cancer incidence in several high income populations. Overweight and obesity in post menopause and lack of physical activity are other recognized risk factors for breast cancer, which may act through hormone-related mechanisms. Control of overweight and increased physical activity may reduce breast cancer incidence, up to 15-20% in post-menopausal women from high income countries. Chemoprevention of breast cancer can be obtained through selective estrogen-receptor modulators (SERM) as well as aromatase inhibitors, but their side effects limit utilization to high risk women.
Most women are exposed to exogenous reproductive hormones through their use of combined oral contraceptives. Current users of this popular contraceptive method appear to have a greater risk of being diagnosed with breast, cervical or hepatocellular cancer than non-users. The higher breast and cervical cancer risks disappear soon after oral contraception is stopped, before the age when these cancers become common. On the other hand, combined oral contraceptive users have a reduced risk of endometrial, ovarian and colorectal cancer. The ovarian and endometrial cancer benefits persist for many years after stopping oral contraception, well into the age when these cancers become more frequent. In the long-term the cancer benefits among oral contraceptive users may outweigh any risks, to produce important public health benefits. Indeed, recent results from the now 43 year-old longitudinal Royal College of General Practitioners’ Oral Contraception Study, showed that, compared with never users, ever users of combined oral contraception had a statistically significant: 12% reduced risk of any incident cancer, 15% reduced risk of any cancer death, and 12% reduced risk of all cause mortality. In the similarly long Oxford/Family Planning Association Contraceptive Study, ever users of oral contraceptives had a borderline significant 10% reduced risk of all cancer mortality when compared with never users. Exogenous reproductive hormones used later in life as hormonal therapy during the menopause are mostly associated with an increased risk of breast, ovarian and endometrial cancer. Preparations combining oestrogens with a progestogen are the exception, providing important protection against endometrial cancer.

Objective: To review the safety of hormonal contraceptive use in women treated for cancer in childhood and adolescence and the use of HRT after treatment of genital- and breast cancer. Results: The majority of females surviving childhood cancer obtains ovulatory cycles but are at increased risk of premature ovarian failure, making planning of reproduction essential. With few exceptions hormonal contraceptives and can be used as in the general population. Breast-cancer survivors less than 40 y. are likely to maintain ovarian function even after adjuvant chemotherapy and hormonal contraceptives (progestogen-only as well as combined methods) are considered contraindicated although follow-up studies are lacking. HRT is not associated with the development of ovarian cancer or squamous cervical cancer and there is no evidence that the use of HRT after treatment increase the risk of relapse. HRT has generally been discouraged after treatment of endometrial adenocarcinoma but newer randomized studies have not been able to prove an increased risk of recurrence in women with low-stage disease treated with HRT. Retrospective studies do not suggest that HRT increase the risk of breast cancer recurrence but data are limited and the studies are heterogeneous and have methodological limitation. The few prospective studies are conflicting which may be due to differences in patient population and HRT regimen. Conclusion: Hormonal contraception seems to be safe in survivors of most childhood cancers but is discouraged in breast cancer patient. HRT in women with endometrial and breast cancer is still controversial but may be an option in selected cases.
Type 2 diabetes mellitus in polycystic ovarian syndrome
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The Rotterdam criteria are currently debated, because the patients fulfilling the Rotterdam criteria are not a homogenous group i.e. the metabolic disturbances of PCOS are more pronounced in hyperandrogen patients compared to patients with no hyperandrogen-aemia. The majority of patients with PCOS are insulin resistant and PCOS is characterized by an increased inflammatory state with abdominal obesity and altered secretion of interleukins, chemokines, and adipokines. PCOS is therefore associated with an increased risk of type 2 diabetes (T2D). The link between PCOS and insulin resistance was first described in 1980 and has later on been confirmed in numerous studies. The exact mechanism for insulin resistance in PCOS is, however, still unknown. Low circulating levels of adiponectin have been linked to increased risk of insulin resistance and T2D. Adiponectin levels are decreased in patients with PCOS compared to weight matched controls and inversely correlate with fasting insulin independent of BMI. Data suggest that adiponectin may improve insulin sensitivity by increasing insulin-stimulated glucose uptake and by stimulating the glycogen synthesis pathway in skeletal muscles. Adiponectin levels increase during metformin and peroxisome proliferator-activated receptor (PPAR) \( \gamma \) agonist treatment (fx pioglitazone). Following pioglitazone treatment, increased adiponectin levels were associated with increased insulin-stimulated glucose metabolism and decreased lipid oxidation, further supporting the close associations between adiponectin and glucose and lipid metabolism in PCOS. In patients with PCOS some of the clinical challenges are:
1) How to diagnose T2D?
2) The endocrinological follow-up of the patients?
3) Is the risk of T2D influenced by therapy?

Metabolic aspects of polycystic ovarian syndrome
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Polycystic Ovarian Syndrome is a very common endocrine disorder affecting 5-10% of women in the reproductive age group. The key features are chronic anovulation, polycystic ovaries, decreased fertility and hyperandrogenism. The aetiology of PCOS remains obscure however there may be evidence for a genetic basis as evidenced by increased family occurrence and twin studies, however environmental factors and lifestyle are also influential. The ovary appears to be the primary source of hyperandrogenism through increased activity of the follicular cell steroid production pathway. The associated hyperinsulinaemia synergises with LH to stimulate thecal cell steroid production and inhibits production of SHBG. Therefore in PCOS there is a raised LH, testosterone, and estradiol and decreased SHBG. The reproductive function in women with PCOS is strongly dependent on body weight and metabolic status. The insulin resistance in PCOS has been linked to developing impaired glucose tolerance and type 2 diabetes. The development of PCOS is often preceded by weight gain and reduction in weight is associated with improvement of symptoms. Lifestyle changes are the mainstay of treatment focusing on weight reduction and exercise. Insulin sensitising agents can be used, and bariatric surgery appears to be effective for patients with severe obesity. Clomiphene citrate is more effective than metformin for the induction of ovulation and pregnancy. With the global epidemic of obesity we must focus our efforts on successful programmes of lifestyle modification with the aim of improving the reproductive and metabolic health in these women.
The prevalence of polycystic ovary syndrome (PCOS) is estimated to be nearly 10% among reproductive age women. PCOS may represent the largest underappreciated segment of the female population at risk of cardiovascular disease. Clinicians providing care to women of childbearing age must recognize the presenting clues, including irregular menses, hirsutism, alopecia, hyperandrogenemia, and obesity. The pathophysiology of PCOS is complex, involving the hypothalamus-pituitary-ovarian axis, ovarian theca cell hyperplasia, hyperinsulinemia, and a multitude of other cytokine- and adipocyte-driven factors. Cardiac risk factors associated with PCOS have public health implications and should drive early screening and intervention measures. There are no consensus guidelines regarding screening for cardiovascular disease in patients with PCOS. Fasting lipid profiles and glucose examinations should be performed regularly. Carotid intimal medial thickness examinations should begin at age 30 years, and coronary calcium screening should begin at age 45 years. Treatment of the associated cardiovascular risk factors, including insulin resistance, hypertension, and dyslipidemia, should be incorporated into the routine PCOS patient wellness care program.

The polycystic ovary syndrome (PCOS) is the most common endocrine disturbance to affect women and the metabolic derangements associated with this condition predispose to a range of diseases including endometrial cancer. Chronic anovulation, obesity and hyperinsulinaemia are all associated with PCOS as well as with endometrial cancer. Prolonged unopposed oestrogen stimulation of the endometrium is a common cause of endometrial hyperplasia and if untreated this may progress to carcinoma even in premenopausal women. Strategies to reduce this risk include the use of oral contraception, ovulation induction and progestogen therapy as well as lifestyle advice particularly concerning diet, exercise and weight reduction. The conservative management of atypical hyperplasia or early carcinoma in young women prior to completion of their family can be problematic. An association of PCOS with ovarian cancer has been implicated in those who have received chronic ovulation induction therapy, but there are no studies to confirm this risk and modern better control to minimise the incidence of multiple ovulations should reduce this potential risk. Studies examining the relationship between PCOS and breast cancer have been inconclusive, though obesity, hyperandrogenism and infertility are common features of both conditions.
Chemotherapy treatments in young female cancer patients can often result in ovarian damage leading to premature ovarian failure and subsequent infertility. The extent of damage and future outcome are related to patient's age at the time of chemotherapy administration and previous exposure to chemotherapy protocols—both representing ovarian reserve at treatment. The acute damage caused by chemotherapy is related to the family of drugs administrated, drug doses and protocol of administration. In many occasions ovarian damage post treatment is partial as indicated by low ovarian reserve and high risk of premature menopause. The precise mechanism of ovarian damage is multifactorial, however in many cases a loss of the primordial follicle population has been implicated. This loss of follicular stockpiles has been shown to occur through several mechanisms, including: follicular apoptosis, blood vessel damage, and increased follicle activation that may result in the "burn-out" of primordial follicle reserves. In addition growing follicles are more susceptible to the damaging effects of chemotherapy. In order to develop effective fertility preservation strategies it is essential be familiar with the effects of chemotherapy on the ovary and to identify the exact mechanisms of chemotherapy-induced ovarian injury. This can enable judicious decision which fertility preservation method is preferable and possibly enable the development of novel protective agents that could avoid this loss of primordial follicles.

Abstract not available at the time of printing

Abstract not available at the time of printing

Previously, we showed that female survivors with regular cycles after antineoplastic treatment in childhood had signs of a diminished ovarian reserve. Thus, we hypothesized that cessation of fertility could happen early in life (Larsen EC). The aim of the present study is to evaluate the reproductive function in the same group of survivors 10 years after the initial study using ultrasound and hormone level analysis to test the hypothesis above. Ten years ago 70 survivors with regular cycles participated. In the present study 53 of the 70 survivors (80.3%) were included. Presently, median age was 35 years (28-47). From another study 203 women served as control group. Thirty survivors still had regular cycles. Three had entered menopause. Twenty survivors used hormonal contraception, had irregular cycles or
were pregnant. When the 30 survivors were compared with controls we found a statistically significant difference in antral follicle count. There was a trend towards lower AMH in the survivors but it was not statistically significant. Until 2010 46 of the 70 survivors included in 2001 have been pregnant resulting in 91 pregnancies and 67 live births. In the present study we have found that women with preserved menstrual cycles have discrete signs of a diminished ovarian reserve. However, the majority, who had regular cycles 10 years ago, have conceived and delivered. Thus, if the ovarian function in childhood cancer survivors is preserved in the early to mid-twenties, it is likely to persist until the mid-thirties giving a good chance of childbearing. Larsen EC, Muller J, Schmiegelow K, Rechnitzer C, and Andersen AN (2003) Reduced ovarian function in long-term survivors of radiation- and chemotherapy-treated childhood cancer. J Clin Endocrinol Metab, 88, 5307-53
Friday, 09 September 2011, 14:00 - 17:30

PS17 Video session - Laparoscopy, hysteroscopy and robotic surgery: comparative strategies from the North to the South of Europe

PS17.1
Conservative surgical treatment of ovarian endometriosis how to preserve the ovarian follicles reserve

Jacques Dequesne

Abstract not available at the time of printing

PS17.2
The advantages of robotic surgery for the removal of deep infiltrating endometriotic nodules

Michelle Nisolle

Abstract not available at the time of printing

PS17.3
Single port laparoscopic hysterectomy. A new minimally invasive approach

Stefano Angioni

Abstract not available at the time of printing

PS17.4
How to limit the bleeding during difficult laparoscopic myomectomy and hysterectomy

Jean-Bernard Dubuisson, J Dubuisson
Hôpitaux Universitaires de Genève, Département de Gynécologie et d'Obstétrique, Genève, Switzerland

The video presents how to manage a polmyomectomy to treat conservatively leiomyomas by laparoscopy without a risk of perioperative hemorrhage and during a minimum of time. In the second part of the video we show tricks that are interesting during the management of laparoscopic hysterectomy for very large uterus.

PS17.5
Laparoscopic treatment of genital prolapse: lateral suspension or Richter spinofixation?

Jean-Bernard Dubuisson, J Dubuisson
Hôpitaux Universitaires de Genève, Département de Gynécologie et d'Obstétrique, Genève, Switzerland

The video presents two techniques of laparoscopic treatment of genital prolapse. The indications and the technique for Richter spinofixation are discussed. The video presents also the new technique of laparoscopic lateral suspension using meshes to treat genital prolapse. Many tricks are shown: the safer technique for cleavages, the use of a new mesh, its fixation to the fascias using absorbable tackers, the quickest technique of associated subtotal hysterectomy and the reperitonealization with new sutures.

PS17.6
Laparoscopic management of adnexal masses: where is the limit?

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Ovarian neoplasm is a common clinical problem affecting women, which may occur in all stages of a woman’s life. It has been estimated that approximately 5–10% of women in Western countries will undergo a surgical procedure for a suspected ovarian neoplasm during their lifetime. Despite the magnitude of the problem, controversy still exists about the safety and efficacy of this procedure. The majority of adnexal masses are benign and the primary goal of diagnostic evaluation is the exclusion of malignancy. The advance in diagnostic evaluation and minimally invasive surgery make it necessary to
review our practice. The aim of this update will be to discuss the benefit and limits of the laparoscopic approach.
Background: Ovarian hyperstimulation syndrome (OHSS) typically occurs when ovaries are primed with FSH/LH and subsequently exposed to hCG during controlled ovarian stimulation protocols for infertility treatment. The ultimate pathophysiological step underlying this clinical picture is increased vascular permeability (VP). Methods: A search of the literature was carried out using PubMed and the authors' files. Results: In rodents and humans, the expression of vascular endothelial growth factor (VEGF) and VEGF receptor 2 (VEGFR-2) mRNA increases during ovarian stimulation. With the administration of hCG, the expression of each rises to a maximum. Expression of VEGF/VEGFR-2 mRNAs correlates with enhanced VP, with both peaking 48 h following an injection of hCG. Immunohistochemistry shows the presence of VEGF and VEGFR-2 proteins in the granulosa-lutein of the entire corpus luteum. These findings suggest that the syndrome can be prevented by interfering with the VEGF/VEGFR2 signalling and expression. In this regard, inducing ovulation with LH or GnRH analogues has been shown to prevent OHSS by inhibiting VEGF overexpression in rodents. Administration of different dopamine receptor 2 agonists inhibit increased VP in OHSS rat models by decreasing VEGFR2 activation. In addition, in-vitro studies have recently shown that dopamine agonist also inhibit VEGF secretion by granulosa lutein cells cultured in the presence of hCG. Conclusions: The pathophysiological mechanisms involved in OHSS show that targeting VEGF/VEGFR2 is an effective preventive approach to treat the syndrome.

Methods for OHSS prevention in ART
Peter Humaidan
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All ovarian stimulation protocols result in some degree of hyperstimulation, usually with no adverse consequences to the patient. In contrast, OHSS is an iatrogenic complication of ovulation induction (OI) and ovarian stimulation for assisted reproductive technology (ART), characterized by cystic enlargement of the ovaries and rapid fluid shifts from the intravascular compartment to the third space. It is a potentially life threatening condition in its severe form, resulting in hospitalization in 1.9% of cases and hCG, either exogenous or endogenous, is the triggering factor of the syndrome. Two main clinical forms of OHSS are described in the literature, early OHSS and late OHSS, distinguished by their time of onset. Early OHSS is correlated to ovarian response to stimulation and is an acute effect of exogenous human chorionic gonadotropin (hCG) administration, usually occurring within 9 days after oocyte retrieval. In contrast, late OHSS occurs after the initial 10-day period and is only poorly correlated to the ovarian response, but rather to the endogenous hCG produced by an implanting embryo or to the administration of hCG for luteal phase support. Predicting patients at risk of developing OHSS is essential to avoid this condition. During this lecture, a division between primary and secondary prevention will be presented. Primary prevention includes the pre-stimulation evaluation and choice of stimulation regimen for the patient whereas secondary prevention aims at reducing the risk of OHSS in the patient at the time of inducing ovulation. Means to prevent or reduce the occurrence of OHSS related to either primary or secondary prevention will be discussed, including choice of GnRH analogue, FSH dose and exposure time, mild stimulation, dopamine receptor agonist GnRHa triggering and single embryo transfer. Complete prevention of OHSS in cycles with “fresh” transfer is still not possible, but identifying patients at risk prior to stimulation allows the clinician to take appropriate measures and thus either prevent or significantly reduce the chance of developing OHSS.
Ovarian hyperstimulation syndrome (OHSS) has been one of the most concerning complications derived from controlled ovarian hyperstimulation (COH) from the beginning of assisted reproductive techniques (ART). The early OHSS is associated to a high ovarian response whereas late OHSS has more correlation with the presence of pregnancy. Therefore, for the early syndrome, high responders to gonadotrophins and polycystic ovarian syndrome (PCOS) are the group of patients with more risk to develop the OHSS. Nowadays we have an increasing number of tools to prevent the appearance of the syndrome, such as mild or moderate stimulation, GnRH antagonist protocols, the use of GnRH analogues instead of hCG to trigger ovulation, cryopreservation of oocytes or embryos to postpone the pregnancy and some others, well summarized in the guidance published by Humaidan et al in 2010. One of the strategies that has demonstrated efficacy in this approach to prevent OHSS is the use of Dopamine receptor 2 agonists. This is due to the relevance of the role of vascular endothelial growth factor (VEGF) as the main angiogenic factor responsible for increased vascular permeability mediated by the administration of hCG. This concept was initially tested in OHSS animal model experiments performed by Gomez et al demonstrating a strong correlation between ovarian mRNA VEGF expression and vascular permeability (also proving the ovarian origin of VEGF). There is an increase of VEGF receptor-2 (VEGFR-2) expression in the ovaries coincidental in time with maximal vascular permeability, demonstrating the involvement of VEGF-VEGFR-2 system in OHSS. The dopamine agonist cabergoline can reverse hCG action on vascular permeability. The concept has been tested in humans by Alvarez et al and it was observed that cabergoline can significantly reduce the incidence of moderate OHSS as well as pelvic fluid accumulation and hemoconcentration when compared with placebo in oocyte donors at risk of OHSS. Cabergoline, however, has been associated with valvular heart disease when administered chronically in patients with Parkinson's disease. The use of quinagolide, has demonstrated to be a good alternative to prevent the OHSS in patients at risk without affecting IVF results in terms of pregnancy rate. This effectiveness has lower results when the patient achieves pregnancy in that same cycle. Recently, in 2011, a decreased dopaminergic tone as well as deregulated Drd2 signaling have been postulated by Gomez et al to explain the higher VEGF and vascularization that leads to an increased ovarian hyperstimulation syndrome risk in PCOS. In conclusion, the use of Dopamine receptor 2 agonists therapy in the prevention of OHSS is an effective method for oocyte donors and for patients specially if they don't get pregnant in the same cycle of COH. This is related to the patophysiology and the role of VEGF in the increased permeability of these cases. But it is only one more of a series of tools available nowadays such as moderate doses of gonadotrophins, use of GnRH analogues instead of hCG to trigger ovulation, cryopreservation of oocytes or embryos and others that must lead us to avoid this important complication and, hopefully to consider it something of the past.
PS19 Reproductive & post-reproductive health care

PS19.1 Hypertension and its management under contraception and menopausal hormone therapy
Peter Collins

Abstract not available at the time of printing

PS19.2 Excess weight, consequences and management at the postmenopause
André J Scheen
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Women are particularly prone to obesity, and approaches that address life transitions across the life span suggest that at menopause a number of factors may converge that contribute to weight gain. Postmenopausal status is associated with higher prevalence of obesity, as 44% of postmenopausal women are overweight, among whom 23% are obese. Menopausal transition is associated with significant weight gain (2 to 2.5 kg over 3 years on average). Body weight increases because the decline in energy expenditure (physical activity) during the perimenopause is greater than the concomitant decline in energy intake. Although the weight gain that commonly occurs during the menopausal transition is largely attributable to aging, changes in body composition have been independently associated with menopausal status. Increases in both abdominal adiposity and insulin resistance may explain the higher risk of metabolic syndrome, proatherogenic dyslipidaemia, hypertension and diabetes. Whether or not menopause has a causative contribution to the deteriorating metabolic profile, which is independent of chronological aging, remains controversial. Because of the segregation of metabolic risk factors, overweight postmenopausal women are at a higher risk of cardiovascular disease as compared with their premenopausal counterparts. Lifestyle changes including moderately decreased caloric intake and aerobic exercise could prevent weight gain and proatherogenic changes observed in postmenopausal women. Hormone therapy seems to have neutral or beneficial effects on the adverse changes in body composition and risk profile associated with menopause. Some women are likely to benefit from intensive management of metabolic risk factors, by using specific pharmacological interventions.

PS19.3 Management of osteoporosis: can we reconcile the prescribers and the payers?
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Osteoporosis is now considered as a major public health issue in most developed countries. The burden of osteoporotic fractures, including but not exhaustively spinal, forearm and hip fractures is more and more important, mainly through the increase in life expectancy, both in males and females. During the last three decades, many treatments were developed, showing an unequivocal ability to reduce fractures at most skeletal sites. However, in a cost-conscious perspective, it is of prime importance to confirm that results obtained in clinical trials can be extrapolated to the general population. It is well accepted that adherence to medications, in most silent chronic disorders, is poor, hence decreasing the efficacy of drugs. In order to assess efficiently of anti-osteoporosis medications, pharmaco-economic models were developed, using, for most of them, Markov methodology. However, Markov methodology is linked to uncertainties and weaknesses, yielding the development of micro-simulation Monte-Carlo modeling. With these technologies, it is now possible to assess the cost-efficacy and cost-utility of screening strategies, pharmacological prevention and treatment of osteoporosis, comparing new chemical entities to branded and generic marketed drugs. It is also possible to evaluate to which extend poor adherence to treatment impacts on the health economic assessment of new technologies. Health Technology Assessment (HTA)
will now be a prerequisite, before considering a new chemical entity, even if granted a marketing authorization, for reimbursement, in most European countries.
Hormonal therapy in gynecology is commonly used to treat benign and endocrine dependent diseases. Resistance to endocrine therapy is a limiting factor in the use of these modalities mainly in potentially chronic diseases such as endometriosis and breast cancer. Endocrine receptors are generally the target in hormonal therapy. Long-term therapy using anti-hormonal agents (i.e., tamoxifen) has led to numerous studies to understand de novo or acquired resistance to these agents. In preclinical models the different steps of these mechanisms have been investigated. One of the most common disorders in human reproductive phase is endometriosis. Medical therapy is mainly related to agents interfering with cellular endocrine responses. Steroid receptors appear to play an important role in the development of resistance to hormonal agents in endometriosis. One hypothesis suggests, that ER-α deficiency in endometriosis could cause failure of estradiol to induce progesterone receptor (PR) expression and thereby contributing to secondary PR deficiency and PR resistance in women with endometriosis. The increase of Erβ-to-ERα ratio is responsible for decreased PR expression in endometriosis. This hypothetical mechanism may be an answer for the important clinical question of resistance to steroids. In addition to receptor concentrations the balance of co-activator and co-repressor proteins in a cell is relevant to the response of ER to its ligand. Resistance to endocrine therapy may be due to non-genomic mechanisms. The interaction of membrane ER with peptide growth factor signalling can result in the stimulation of tumor growth in receptor positive breast cancer. Estrogen suppression by aromatase inhibition results in long-term low-estrogen environment which can result in enhanced sensitivity to estrogen. Cellular adaptation to this low-estrogen condition can cause the activation of alternate signalling pathways. Inhibition of these alternative growth factor signalling may restore sensitivity to endocrine therapy. Resistance to endocrine therapy is a major clinical problem which should be addressed to provide strategies to restore hormonal sensitivity.
PS21 Infertility & ART - Part II

PS21.1
Fertility preservation for oncology patients: is it time to consider seriously?
Murat Sönmezer

Abstract not available at the time of printing

PS21.2
Controlled ovarian stimulation for ART: what is enough?
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After the initial years of IVF, profound ovarian stimulation became the rule. The stimulation of growth of large numbers of follicles and the retrieval of many oocytes was viewed as an acceptable marker of successful IVF treatment. Medication regimens to achieve profound ovarian stimulation are extremely complex and expensive, take many weeks of frequent injections, and require intense monitoring. Moreover, patient discomfort and chances for serious side effects and complications are considerable. In addition, this profound stimulation gives rise to greatly abnormal luteal phase endocrinology, and is likely to impact on endometrial receptivity and therefore IVF success. Attitudes toward profound ovarian stimulation are changing, particularly given the growing tendency to transfer a reduced number of embryos, and there is a clear trend toward the use of lower doses of gonadotropins in conventional stimulation protocols. A recent meta-analysis of studies comparing starting doses in IVF confirmed the benefit of this approach, showing a starting dose of 150 IU FSH to provide the optimal balance between providing sufficient number of high quality oocytes while minimising burden and risk of treatment. The combination of milder protocols with single embryo transfer has been shown to lead to an equal chance of live birth one year after starting treatment as high burden long protocols combined with the transfer of two embryos, while reducing patients' discomfort, multiple pregnancies, and costs. Apart from clinical efficacy and costs, emotional stress should be considered an important negative side effect associated with IVF treatment. Following milder stimulation protocols, patients report fewer side effects and stress related to hormone treatment and cycle cancellation compared with conventional stimulation. Treatment-related stress has been found to be the most important reason why patients drop out of IVF treatment. The early drop-out of treatment deprives the couple of an optimal cumulative chance of achieving pregnancy, and therefore also impacts on the success of the respective IVF program. Beyond the hype, milder stimulation regimens are being introduced increasingly into routine practice. However, the so called minimal regimens, in which no gonadotropins or very few, low doses are used, are still finding their place in clinical practice. Fewer eggs after minimal stimulation IVF may have advantages, but as long as the success in IVF is defined in terms of pregnancy rates per cycle, it will be difficult for these regimens to get beyond the hype and enter orthodox clinical practice.

Further reading
Ovulation stimulation in poor responders: does FFSH, ESR1,2 polymorphisms make any impact for the successful outcome?

Dimitris Loutradis

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The standard goal of all fertility treatments is the improvement in pregnancy rates in patients with infertility problems. Within the past years, ovulation induction has contributed to the success of assisted reproduction techniques, in vitro fertilization (IVF) and embryo-transfer (ET). The efficacy of these techniques depends on a personalized protocol of controlled ovarian hyperstimulation (COH) and an adequate oocytes recruitment. The response of several patients to ovarian stimulation protocols used as a routine is not always as expected. A failure to respond adequately to standard protocols and to recruit an adequate number of follicles is called 'poor response'. The lack of clear, uniform definition concerning the poor responders and the lack of large-scale randomized studies make data interpretation very difficult for precise conclusions. Molecular biology tools such as the single nucleotide polymorphisms (SNPs), have also been considered to assist the management of this group of patients. The clinical implications of SNPs (FSHR, ESR1, ESR2) are highly important and the ultimate goal is the application of genetic markers as routine diagnostic tests before ovarian stimulation, in order to predict the ovarian response. The frequency distribution of the Ser680Asn polymorphism of the FSHR, in patients with ovarian dysfunction (OD defined as FSH>10 mIU/mL) and in 'poor responders' (PR) demonstrates that in OD patients the FSHR Ser/Ser variant was more prevalent (45.5%), while the Asn/Ser variant is correlated with more follicles and oocytes. We also analyse three different loci -polymorphisms in ESR1 Pvu II, ESR2 Rsa I and Ser680Asn FSH receptor gene- in a Greek population and their involvement in stimulation outcome and pregnancy rates. Each locus was studied alone, and in combination with the others. We performed both restriction fragment length polymorphism analysis and real-time polymerase chain reaction. A total of 109 normally ovulating female patients underwent IVF or ICSI. Studying each locus alone, no significant results were drawn for ESR1 and ESR2 genes. Concerning the FSHR polymorphism, the women carrying the AA variant presented higher total amount of gonadotrophins used (P=0,048) and tended to have higher number of stimulation days (P=0,057). Considering the ESR1 and FSHR gene polymorphisms in combination, the TC/SA combination presents the highest number of pregnancies in poor responders group (3/4 pregnancies carried this genotype), in good responders group (4/12 pregnancies carried this genotype) and in the total population (10/26 pregnancies carried this genotype). Except the CC/AA combination, all other genotype combinations presented incidence of pregnancy, with TC/SA having the highest incidence. The CC/AA genotype presents the worst profile of ovulation induction, confirming a poor responder profile: the total amount of gonadotrophins used was highest in CC/AA group (P<0,05). The peak E2, the number of follicles and of retrieved oocytes and the pregnancy rate were significantly lower (P<0,05). This genotype combination seems to be over-presented in the poor responders group in a statistically significant way (P=0,038). Women with CC/AA combination have 1.5-2.4 times more risk to be poor responders in comparison with women that do not carry that combination. Conclusion: This study supports the hypothesis that a multigenic model, including the well studied ESR1 and FSHR genes is involved in the controlled ovarian stimulation outcome indicating that the CC/AA genotype presents the worst ovulation induction profile, while the TC/SA genotype presents the higher number of pregnancies in our population.

References

Cryopreservation of embryos at different stages of development is an indispensable part of assisted reproductive techniques. However, legal issues and moral concerns may restrict the application of embryo cryopreservation. Additionally, due to the lack of a partner it cannot be applied in many cases of fertility preservation with medical or social indications, and may create controversial issues in case of divorce or separation of partners. The most feasible solution for these problems is oocyte cryopreservation. Unfortunately, in spite of the relative early successes, widespread application of oocyte cryopreservation was hampered for a long time by inconsistent efficiency of the available cryopreservation methods. Stepwise adjustments of traditional slow freezing protocols as well as optimization of minimum volume vitrification methods have resulted in breakthroughs in this field. To test the laboratory efficacy of oocyte vitrification as a routine application for the standard infertile population we have performed a prospective non-inferiority trial. We have found that oocyte vitrification procedure followed by ICSI is not inferior to the fresh insemination procedure, with regard to fertilization and embryo developmental rates. We have then also estimated the cumulative reproductive outcome of a cohort of infertile couples undergoing ICSI and oocyte vitrification in restrictive legal conditions. We can conclude that high cumulative ongoing pregnancy rates can be obtained with transfers of embryos derived from fresh and cryopreserved oocytes in a typical infertile population. We believe that cryopreservation of oocytes offers new perspectives in ART.
Endometriosis is an estrogen-dependent inflammatory disease that affects about 5 to 10% of women during their reproductive age. The main presenting symptoms are chronic pelvic pain, dysmenorrhoea and dyspareunia, that significantly reducing women quality of life. Recent molecular and pathological studies suggest that endometriosis is a monoclonal, neoplastic disease which serves as a precursor of ovarian cancer (endometriosis-associated ovarian cancer; EAOC), especially of the endometrioid and clear cell subtypes. However, its precise carcinogenic mechanism remains still poorly understood. At the same time endometriosis related to malignancies have a favourable prognosis; the patients show long latency intervals before developing ovarian cancer. As the best-known tumour marker for ovarian carcinoma, CA125 has also been commonly used to monitor patients with common benign gynaecologic diseases such as endometriosis. In patients with EAOC, benign-appearing ovarian masses and elevated CA 125 level are typically present several years before the diagnosis of the cancer; but the CA125 elevation is not absolutely an useful discriminatory sign of malignant transformation, as normal marker levels could not exclude EAOC, particularly at the early stages. In case of serous-type ovarian cancer, a rapid progression through de-novo carcinogenesis is possible. The research goal is understanding the mechanisms of the development of endometriosis, elucidating its pathogenesis and pathophysiology in order to prevent endometriosis-associated ovarian cancer and consequently finding the effective therapies.
PS23 Steroid receptors and implications for clinical practice - Part I

PS23.1
Structure-function relationship of estrogen receptors in the cardiovascular system
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The ancestral status of estrogen receptor (ER) in the family of the steroid receptors has probably contributed to the pleiotropic actions of estrogens, and in particular of 17 beta-estradiol (E2). Indeed, in addition to their well described role in sexual development and reproduction, they influence most of the physiological processes. The pathophysiological counterpart of these actions includes prevention of osteoporosis, atheroma and type 2 diabetes,… but also promotion of uterus and breast cancer growth. Thus, the major challenge consists in uncoupling some beneficial actions from other deleterious ones, i.e. selective ER modulation. Tamoxifen and raloxifen are already used as they prevent the recurrence of breast cancer, and mimic estrogen action mainly on bone. Both E2 and tamoxifen exhibit a proliferative and thus protumoral action on the endometrium. Activation of ER alpha (ERalpha) and beta (ERbeta) regulates target gene transcription (genomic action) through two independent activation functions AF-1 and AF-2, but can also elicit rapid membrane initiated steroid signals. The talk will attempt to summarize recent advances provided by the in vivo molecular 'dissection' of ERalpha, allowing the uncoupling of some of its actions, and potentially paving the way to optimized selective ER modulators.

PS23.2
Estrogen receptor alpha and beta and vascular structure in women: relevance for hormone therapies
Karolina Kublickiene
Karolinska Institute, Institute for Clinical Science, Intervention & Technology (CLINTEC), Department of Obstetrics & Gynecology, Stockholm, Sweden

The understanding of the basis of sex/gender differences in vascular function is of critical importance to establish targeted interventions in cardiovascular medicine. Small arteries are directly involved in the regulation of peripheral resistance, and, as such, are ideally suited for blood pressure control. In this presentation we will concentrate on the central role of the endothelium in respect to sex/gender differences in cardiovascular physiology and pathophysiology. The role of estrogen and its receptors will be introduced not only as key players in sex-related differences in incidence of cardiovascular abnormalities, but also in endothelium-dependent maintenance of vascular tone via release of endothelium-derived vasodilators and vasoconstrictors. An improved understanding of the distinct processes that confer vascular maintenance in women and men may help to develop new treatment alternatives and improve the use of existing drugs.

PS23.3
Implications of steroid receptor signaling for cancer progression
Tommaso Simoncini
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Estrogen and progesterone play a role in breast and endometrial cancer. However, the role plaid on cancer metastasis is unclear. We studied the effects of 17beta-estradiol and progesterone on cell movement and invasion via actin regulatory proteins and adhesion structures. Estradiol and progesterone are associated with rapid and dynamic actin cytoskeleton remodeling and with the formation of focal adhesion complexes. These phenomena are linked to ER+/PR+ breast and endometrial cancer cell movement and invasion of three-dimensional matrices. Signaling involved is based on rapid activation of signaling pathways within the cell membrane. For instance, the activation of the actin-regulatory protein moesin depends on the interaction of cell membrane-ERalpha or PRA with Galpha13, which results in the recruitment of Rho-A and Rho-associated kinase (ROCK)-dependent moesin phosphorylation. Similar rapid actions are found which target focal adhesion kinase (FAK). Interestingly, SERMs like tamoxifen or
raloxifene have distinct actions on these targets in breast and endometrial cancer cells. Studies on human breast cancers indicate that some of these original molecular signaling of sex steroids may be relevant in the clinical setting. In fact, moesin seems to be over-expressed and activated in cancers with higher metastasizing potential. In conclusion, sex steroids enhance breast and endometrial cancer cell movement and invasion by targeting the actin cytoskeleton and the formation of adhesion structures. These results provide new evidence on the molecular signaling of estrogen and progesterone related to breast or endometrial cancer metastasis and the pathways described might represent therapeutical targets to interfere with steroid-dependent cancer metastasis.

**PS23.4**

**Extranuclear steroid actions in the breast: diagnostic and clinical perspectives**

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In recent years, in addition to the classical (nuclear) steroid actions, an increasing body of evidence suggests an additional mode of action, initiated at the membrane level. These steroid effects, named “extranuclear” steroid actions, are initiated in minutes or seconds and involve ion movements, cytoskeletal modification and specific signaling events, orienting cell fate towards survival, proliferation or apoptosis, through the modification of specific genes. Extranuclear actions have been detected for all known steroid families and additionally for thyroid hormones and vitamin D. Although the exact nature of receptors involved is not unanimously accepted, evidence suggest that extranuclear actions could be mediated through classical receptors anchored at the plasma membrane, alternatively spliced steroid receptors, or novel molecules acting as steroid receptors. Interestingly, cellular and molecular events, initiated by nuclear and extranuclear steroid receptors are usually different and are not modified by the same molecules (for example steroid antagonists). Finally, extranuclear steroid actions bridge the gap between steroids and growth factors interactions. Under this scope, the presence, physiology and clinical perspectives of extranuclear estrogen and androgen actions in the breast will be discussed, providing hints about a re-orientation of the clinical perspective of diagnosis and therapy of the disease.
Sexual development brings along dreams and wishes of a new kind of relationship. A maturing young person is in many aspects lonely and uncertain, and thus sensitive and vulnerable. During a few years, an adolescent is going through enormous changes. Body reshapes itself; new hormones emerge and cause turbulence. The psychological tasks of adolescence include adjustment to the new adult body, separation from the parents, individualization and acceptance of new psychosocial and sexual image. In most developed countries, the differences in timing of e.g. first intercourse are rather small, but the consequences of sexual behavior compared to developing countries are huge. The age at first intercourse has in a longer perspective decreased in parallel with age at menarche. In the Nordic countries, the changes in both have been rather small during the last 30 years. In Finland, the median age for first intercourse is 16.8 for girls and 17.4 for boys based on data from 2008-2009. By age 20, 20% of girls have not yet had intercourse, and at the same age, about 20% have already had more than 5 sex partners.

Sexual health for adolescents is based on three fundamental components: recognizing sexual rights, sexuality education and counselling, and confidential high quality services. Supporting the self esteem of the young person together with adequate and sufficient sexuality education helps her to make choices to maintain and protect her sexual health. The closer sexuality education programs and sexual health services work together, the better are the results.
patient's postoperative ability to have healthy sexual relations and achieve successful reproductive outcomes.

PS24.4
New emergency contraceptive methods
Patricia Lohr
British Pregnancy Advisory Service (BPAS), Clinical Department, Stratford upon Avon, UK

Emergency contraception (EC) is birth control used after vaginal intercourse to prevent pregnancy. EC availability is important for women of any age who do not want to become pregnant after unprotected sex. Options for EC include emergency contraceptive pills (ECP) and the copper T intrauterine device. This talk will review the safety and effectiveness of existing methods of emergency contraception as well as the newest ECP, Ulipristal acetate. Issues of particular concern when providing EC to young people, such as over the counter availability and the impact of EC on sexual risk taking, will also be discussed.
**PS25 High-risk obstetrics**

**PS25.1**

**Placenta percreta**  
**José M Palacios-Jaraquemada**  
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Objective: To propose a treatment guide for cases of anterior placenta percreta according to image analysis and surgical findings. Material and methods: 107 cases of anterior placenta percreta were included. Three anatomical and surgical features were analyzed: 1) myometrial-vesical interface thickness, 2) neovascularization among uterus, placenta, bladder and surrounding organs, and 3) specific difficulty to dissect invaded tissues (bladder-parametrium). Results: Three types of anterior placenta percreta were identified: type 1: the anterior segment is noticeably thinner and the placenta reaches the serous surface; no placental-vesical neoformation vessels or vesicouterine vessels are identified, and there is a lax dividing plane between the posterior bladder wall and the anterior surface of the uterine segment (16/107). Type 2: thinner uterine segment, vesical wall of variable thickness and presence of placental-vesical and vesicouterine neovascular circulation; lax vesicouterine plane without fibrous adherence (84/107). Type 3: both the uterine segment and the vesical posterior wall are noticeably thinner, there is no lax plane between both organs and there is a fibrous scar that connects them; no placental-vesical or vesicouterine neoformation vessels are evident (5/107). Parametrial invasion has not specific association with any particular type of percreta and it was seen in 17/107 cases. Types 1 and 2 were easily treated by one step reconstructive surgery or hysterectomy; in contrast, types 3 and 4 needed complex surgeries and specialized assistance to solve them. Conclusions: Anatomical and surgical features in anterior placenta percreta are related with surgical complexity and provide a better indication of the treatment to follow.

**PS25.2**

**Blood transfusion and mode of delivery**  
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Objective: To examine the association between intended mode of delivery and severe post partum haemorrhage. Methods: A retrospective cohort study of Danish women giving birth in 2001-2008 and receiving red blood cell transfusion. We compared intended mode of delivery in the total population (n=382,266), in low risk primipara (n=147,132), and in women with a previous cesarean delivery (n=25,156). Results: In the total population the crude transfusion rates for women with planned caesarean delivery and intended vaginal delivery were 2.24% and 1.75%. After adjustment for maternal age, BMI, birth weight, smoking, parity, number of infants and previous caesarean delivery, the risk of red blood cell transfusion was significantly lower in women with planned caesarean delivery (OR 0.83 (0.74-0.93) P< 0.01). In low risk primipara and in women with a previous caesarean delivery the transfusion rates were lower for planned caesarean delivery. Conclusion: Compared to intended vaginal delivery, planned caesarean delivery is associated with a reduced risk of severe post partum haemorrhage indicated by use of red blood cell transfusion.
PS25.3
Uterine rupture: a population-based study
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Objective: To study the characteristics and outcome of uterine ruptures in Norway in 1967-2008. Population: 261 cases of uterine ruptures identified from 24 units out of total of 46 units in last 40 years, through both Medical Birth Registry of Norway and Local hospitals registries. Methods: Frequency, cross tabulations and Logistic regressions. Results: There were 141 total ruptures and 120 dehesicences. Previous cesarean section (CS) was present in 78%, while other uterine scars were in 4.2%. Ruptures and dehesicences included 9 at elective CS, 42 at emergency CS before labour start, 136 after spontaneous labour, and 74 after induction of labour. Compared with ruptures at prelabour CS, induction of labour carried highest risk for severe haemorrhage (OR: 2.9; 95% CI: 1.3-6.0) and hysterectomy (OR: 11.6; 95% CI: 1.5-91.8). Fetal heart abnormalities, abdominal pain, vaginal bleeding, and signs of shock/preshock were present in 52%, 58%, 17%, and 18% respectively. Among total ruptures, serious perinatal outcome (severe asphyxia, intrapartum and neonatal deaths), severe haemorrhage and hysterectomy occurred in 54%, 65.2% and 20.6% respectively. There were only 45 total ruptures in 1967-1989, and 96 total ruptures in 1990-2008. However, the risk for serious perinatal outcome, severe haemorrhage and hysterectomy was less than halved after ruptures in the latter period (OR: 0.4; 95% CI: 0.2-0.8). Conclusion: Total uterine ruptures are more frequent from 1990 vs 1967-1989, indicating the increased use of CS recently. However better management might be back the significantly reduced post rupture complications for both mother and child.

PS25.4
Excessive bleeding and substitution strategies
Anne Wikkelso
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What are the challenges of excessive bleeding? Undoubtedly many!... my presentation will cover those of haemostasis aiming to review aspects of massive bleeding associated with coagulopathy and treatment options. Dilutional and consumptive coagulopathy may develop in relation to excessive obstetric bleeding especially when blood loss exceeds one blood volume(1). However, hypofibrinogenaemia seems to evolve earlier in postpartum haemorrhage and result in a severe course of bleeding(2). Additionally recent studies suggest a direct impact of shock and catecholamines on the development of coagulopathy and hyperfibrinolysis in the context of massive blood loss(3,4). The rapid formation of a strong and lasting blood clot is the ultimate goal of substitution treatment strategies during massive transfusion. Freshly frozen plasma, cryoprecipitate, Tranexamic acid or concentrates of activated factor VIIa, fibrinogen and prothrombin complex concentrate as well as pooled platelets are our treatment options. What is current evidence? When do we give what? Special emphasis will be on fibrinogen substitution in the treatment of postpartum haemorrhage.

New data collection activities on severe maternal morbidity
Kathrine Birch Petersen(1) & Marian Knight(2)
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(2) Oxford University, National Perinatal Epidemiology Unit, Oxford, UK

Many serious disorders in pregnancy are uncommon and therefore difficult to study. Hence they are under-researched, our understanding of them is poor and management is rarely based on robust evidence. Comprehensive studies of uncommon obstetric conditions require large collaborations to identify relatively small numbers of women. Routine reporting systems, such as the Nordic Obstetric Surveillance Study (NOSS) and the UK Obstetric Surveillance System (UKOSS), avoid these problems and have the benefit of allowing the range of conditions under study to change over time. Similar systems have also been launched in Germany, Austria, Australia and New Zealand and are under development in a number of other countries. These new data collection systems generate information which can be used for a wide variety of purposes, including:

- Estimating disease incidence and prevalence
- Undertaking audit of national guidelines or changes in practice
- Quantifying risk and prognostic factors
- Comparing management techniques
- Informing the public health response to emerging diseases
- Describing outcomes

These groups have been recently brought together to work collaboratively as the International Network of Obstetric Survey Systems (INOSS). This network enhances the benefits of national studies through the use of common definitions and data collection instruments, facilitating multinational comparative and collaborative studies. This will provide for the first time a rigorous evidence base on which to base the management of rare and serious conditions in pregnancy.
PS26 Screening in gynecological cancer

PS26.1
Screening for ovarian and endometrial cancer
_Usha Menon_

Abstract not available at the time of printing

PS26.2
Cervical cancer screening: a well established service about to embark on a new technology
_Elsebeth Lynge_

Abstract not available at the time of printing

PS26.3
Recommendations for cervical cancer screening in Denmark
Beth Bjerregaard

Abstract not available at the time of printing
PS27 Modern treatment of uterine fibroids

PS27.1 How to prevent complications during laparoscopic myomectomy?
Jean-Bernard Dubuisson
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Complications during laparoscopic myomectomy are rare if we follow some rules of management and operative techniques. The first prevention is to select the patients that can benefit from operative laparoscopy: few myomas with a 'major' myoma of less than 10cm. The second concerns the prevention of bleeding with preventive uterine artery occlusion and good suturing of the hysterotomy. The third point concerns uterine rupture during a future pregnancy. It seems that the best prevention is to limit the postcoagulation necrosis of the edges of the hysterotomy.

PS27.2 Magnetic resonance guided focussed ultrasound for uterine fibroids
Stephen Quinn, L Regan
Imperial College at St Mary's Campus, Department of Gynaecology & Obstetrics, London, UK

Uterine fibroids are the most common benign tumour of the uterus, affecting approximately 30% of women over 35 years of age. In recent years the emergence of non-invasive treatments for uterine fibroids such as uterine artery embolism (UAE) and MRI-guided focused ultrasound therapy (MRgFUS) have provided women with a greater choice in their management. MRgFUS is a non-invasive thermo-ablative technology for the treatment of various benign and malignant soft tissue tumours. MRgFUS has been used at St. Mary’s Hospital and over 85 centres worldwide as a fertility-sparing treatment for women with symptomatic uterine fibroids. MRgFUS has been proven to be a safe, cost-effective treatment option for uterine fibroids. Low complication-rate and outpatient care have made this a popular treatment option at St. Mary’s hospital, London, with referrals from all over the United Kingdom. Recent developments in focused ultrasound technology have increased the volume of fibroid tissue that can now be safely treated. Ongoing studies into cytokine and growth factor production following MRgFUS and UAE may lead to the development of new strategies for improving long term results. Results of a new multicentre randomised control trial may lead to this new technology becoming more widely adopted.

PS27.3 Pregnancy following robot-assisted laparoscopic myomectomy in women with deep intramural myomas
Celine Lönnerfors, J Persson
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Objective: To describe fecundity after robot-assisted laparoscopic myomectomy for deep intramural myomas. Methods: Expanding on a previous prospective feasibility study 31 consecutive women in whom a robot-assisted laparoscopic myomectomy was performed between April 2006 and July 2010 were included. The women, of which 14 had known infertility, were selected for having symptomatic, deep intramural myomas with a possible impact on fertility. Using a prospective protocol, relevant peri-operative and follow up data were retrieved. Results: The 31 women included had a median age of 35 years (range 28-42 years) and median Body Mass Index of 22.0 kg/m2 (range 20.1-24.7 kg/m2). 15 of the 22 (68%) women with an active wish of conceiving have become pregnant at a median time of 10 months after surgery. A total of 18 pregnancies occurred resulting in three miscarriages, two terminated pregnancies, ten successful term deliveries and three ongoing pregnancies. The subgroup of 14 women with a known but otherwise unexplained infertility had a similar pregnancy rate (69%) and of those, (55%) conceived naturally. The women who conceived naturally were on average eight years younger than the women becoming pregnant after IVF and all miscarriages occurred in an IVF pregnancy. Conclusion: In women with symptomatic, deep intramural myomas and either otherwise unexplained
infertility or myomas with possible effect on conception the pregnancy rate following robot-assisted laparoscopic myomectomy was 68%.

PS27.4
Uterine artery embolization of symptomatic uterine fibroids - long term results
Torben Munk
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Uterine artery embolization is part of the established treatment options for symptomatic uterine leiomyomas. UAE has a proven effect on size of leiomyomas and provides short-term relief of symptoms. We conducted a historical cohort study of 96 patients. The patients were treated to a median age of 43 years. The median size of the largest myoma was 69 mm. By use of a postal questionnaire response rate (86%) and the audit on patient-files we found that 53% reported full recovery of symptoms and 36% some effect on symptoms after a median of 8.9 years. In all 25% of the patients reported a need for further treatment. The rate of eventual hysterectomy was 22%. Uterine myomas is a frequent contributing factor to infertility. Indication of operation or uterine artery embolization in infertile patients with myomas is not yet fully illuminated. Possible treatment approaches will be discussed.
PS28 The breast challenge - Part II Updates - New Insights

PS28.1
To screen or not to screen?
Mette Kalager

Abstract not available at the time of printing

PS28.2
Breast cancer incidence in young women
Florence Molinié(1), L Daubisse-Marliac(2), P Delafosse(3), B Tretarre(4)
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(2) Registre des Tumeurs du Tarn, France
(3) Registre des Cancers de l’Isère, France
(4) Registre des Cancers de l’Hérault, France

Breast cancer is the most common cancer among women worldwide. In industrialized countries, about 2% and 6% of all cases are diagnosed in women under 35 and 40 years respectively. These young women account for up to 10% and 20% of all cases in other parts of the world. Standardised annual rate of incidence is comprised between 1 and 6 per 100 000 women less than 35 years old. Since young women are less concerned by breast cancer screening, trends in incidence might better reflect changes in risk factors. However, changes in incidence among young women have been little studied, and results are heterogeneous. In fact, most studies that found no change in incidence in younger women, were aimed at studying the evolution of incidence among women older than 50 years and have included women up to 50 years old in the “younger age” group. Some recent studies among women less than 40 or 45 years old, showed a significant increase in incidence in different countries. In France, an analysis by the Francim registry network showed a moderate but linear increase (+0.65% per year) in the age group 15-39 years from 1983-1987 to 1998-2002. Changes in prevalence of risk factors might partly explain trends in incidence, but linking these evolutions remains difficult.

PS28.3
Hormone dependency of BRCA1/2 mutated breast tissue
Anne Gompel

Abstract not available at the time of printing

PS28.4
Treatment of bone metastases in breast cancer patients
Harald Meden

Abstract not available at the time of printing
Mixed urinary incontinence is defined by the ICS and IUGA by purely symptomatic criteria, as the complaint of involuntary leakage associated with urgency and also with exertion, effort, sneezing or coughing. In large epidemiological studies as well as published clinical series of urinary incontinent women there seems to be an overrepresentation of mixed urinary incontinence. Treatment-seekers may be more likely to present mixed symptoms, as mixed urinary incontinent women generally have more severe complaints. However, it may also be that severity confounds diagnosis, as mixed symptoms (not mixed condition) is associated with severity. The occasional leakage is more easily discriminated by both patient and caregiver; if you leak all the time it may be difficult to elucidate factors associated with leaks. It may also be that one symptom drives the other, as stress urinary incontinent women adapt by frequency-urgency behavior. This is supported by the finding of reduced urgency-frequency after surgery in patients with symptomatic mixed urinary incontinence and urodynamic stress incontinence with a stable bladder. Behavioral therapies such as pelvic floor muscle training has been shown to be effective, but the evidence is poor. Midurethral slings are more effective than drugs, but there is a risk of de-novo urgency. The clinician should consider the benefits of preoperative urodynamic studies in such cases. Duloxetin is effective in both stress- and urge-predominant conditions, but there are some safety concerns with this drug. Antimuscarinics reduce urgency leakages, but their clinical benefit is small, side effects frequent and long-term persistence poor.

PS30.2
Mid-urethral slings for mixed urinary incontinence? What to expect?
*Dudley Robinson*

Abstract not available at the time of printing

PS30.3
Drugs or surgery? A clinical algorithm
*Gunnar Lose*

Abstract not available at the time of printing
According to the most recent figures of the United Nations, 72.9% of women in the reproductive age in Northern America and 58.7% in Europe, ranging from 46.3% in Southern Europe to 77.2% in Northern Europe rely on any modern method of contraception. (Ref: United Nations, Department of Economic and Social Affairs, Population Division (2011). World Contraceptive Use 2010 (POP/DB/CP/Rev2010). Sterilisation including female sterilisation and women who rely on sterilisation of their partner is the most commonly used modern method in the USA and Canada. In Europe, there is a great variety in sterilisation prevalence between countries. In most countries, hormonal contraceptives and LARC’s are used more frequently than sterilisation. During the last decade, a remarkable decline in female sterilisation up to nearly 50% was seen in European countries compared to a steady remaining incidence of male sterilisation. A similar phenomenon was noticed in Canada where the percentage of sterilised women dropped from 16% in 1993 to 7% in 2002. On the contrary, no changes in the use of female sterilisation were seen in the USA. There was even a small increase from 21.7% in 2002 to 23.6% in 2008. Discussion. The rising availability of LARC’s being at least as effective as female sterilization leads to a decline in female sterilisation in most developed countries except the USA. Is it the counseling or play economic factors a role? The costs of contraceptives in the USA are 3 to 6 times higher than in Europe compared to about similar prices for sterilisation.

The lecture will cover aspects of female sterilisation during the postpartum period, post abortal and interval periods using Filshie clip, fallope ring and ESSURE hysteroscopic sterilisation.

Abstract not available at the time of printing

‘Coerced sterilisation’ entails that a person is sterilised without having given informed consent. This includes emotionally coerced sterilisation, in which health personnel pressure a patient into consenting to being sterilised. Between 1935 and 1976, more than 60 000 people were submitted in Sweden to enforced sterilisation for behavioural problems, or eugenic or economic reasons. In Pennsylvania, certain people were sterilised against their will from 1904 onwards; four decennia later compulsory sterilisation had become legal in 30 American states. More than 60 000 people underwent an enforced sterilisation in the USA between 1930 and 1960. These procedures were also performed in Denmark (from 1929 onwards), Finland (1939), France, Norway (1934), Switzerland (1925), and Japan. In Germany, in accordance with a law promulgated shortly before the nazis took power, 360 000 people were sterilised on the same grounds as in Sweden and the USA, between 1933 and 1945. These facts illustrate that authoritarian patterns of thought and the resulting transgressions of basic human rights were standard practice during the first half of the 20th century in many more countries than those under fascist rule.
acting contraception (e.g., Norplant®), albeit reversible and less aggressive than sterilisation, has been used in a legal but highly questionable social context in the USA. People living in certain Eastern European countries (e.g., Roma), Chile and Namibia (e.g., HIV-positive women) have not long ago been submitted to coercive sterilisation practices.
In parallel with the change in the progestin content of novel contraceptives, the estrogen have also been shifted recently to more natural compounds such as 17beta-estradiol (E2) and estradiol valerate (E2V). Further research is ongoing to assess the efficacy of a fetal estrogen Estetrol (E4) in combination with a progestin to ensure ovulation suppression and also for use in hormonal replacement therapy (HRT). Ethinyl-estradiol (EE) is much more active than the natural estrogens, because its 17alpha-ethinyl group slows the metabolism of the steroid. After oral administration, the pharmacokinetics of estradiol differ from that of other estrogen. While the serum concentrations of EE and estriol show a rapid rise up to a maximum after 1-3 h followed by a rapid decline, the levels of estradiol remain elevated for up to 12 h and decrease slowly. This result is due to the metabolism of E2 which is rapidly and extensively transformed in the intestinal tract and liver to estrone (E1) and estrone sulphate (E1S)and then reconverted. When E2 is administered transdermally, its effect on estrogen-dependent liver proteins is less pronounced than during oral treatment. Combined hormonal contraceptives also affect a variety of hemostatic variables and estrogen-sensitive liver proteins, and these effects are also modulated by the progestin. The relationship between such changes and venous thrombo-embolism (VTE) risk has not yet been established, and there is currently no agreed biomarker for VTE risk that could predict the clinical outcomes.
PS33 Best clinical practice: Polycystic ovary syndrome (PCOS) - Part III - diagnosing and monitoring

PS33.1 Monitoring PCOS: which biomarkers?

Jørgen Rungby
Aarhus University Hospital, Department of Endocrinology and Pharmacology, Aarhus, Denmark

The polycystic ovary syndrome is accompanied by a complex pattern of hormonal and metabolic changes. These are reflected in changes in a variety of biomarkers. The biomarkers include classical steroid endocrine markers, notably androgens and estrone, and polypeptide hormones such as LH and, more recently, anti-Müllerian hormone. Further, biomarkers related to low-grade inflammation, classically hs-CRP, are elevated in PCOS. Finally, biomarkers relating to long-term cardiovascular outcome, glucose, lipids and urine albumin excretion, may be applied in PCOS. The recent introduction of protein-bioinformatics has added haptoglobin and complement factors as possible new markers. The diagnosis of PCOS may include the use of biomarkers indicative of hyperandrogenism, but is largely independent on other biochemical measurements. The monitoring of treatment, be it for hirsutism, infertility or ovulatory disturbances, may be aided by biomarkers, but none have proven efficacious in determining outcome with the possible exception of markers used during fertility treatment. Monitoring metabolic markers, notably those related to blood-pressure, lipidaemia or glycaemia, may be of value for the early identification of long-term complications. For these complications there is substantial evidence that early identification and intervention improves outcome.

PS33.2 Clinical and endocrine characteristics of the main polycystic ovary syndrome phenotypes

Enrico Carmina
University of Palermo, Department of Medical & Biological Sciences, Palermo, Italy

Polycystic Ovary Syndrome is a very heterogeneous disorder that may include different phenotypes. In past, there has been a disagreement between experts whether to be more or less inclusive in the diagnosis of the syndrome. According to Rotterdam criteria, the diagnosis of PCOS should be performed in patients presenting four different phenotypes: 1. Hyperandrogenism, chronic anovulation and polycystic ovaries (Classic PCOS type 1); 2. Hyperandrogenism and chronic anovulation but normal ovaries (Classic PCOS type 2); 3. Hyperandrogenism and polycystic ovaries but ovulatory cycles (Ovulatory PCOS); 4. Chronic anovulation and polycystic ovaries but no clinical or biochemical hyperandrogenism (Normoandrogenic PCOS). Androgen Excess & PCOS Society (AEPCOS) has suggested including only the first three phenotypes excluding the fourth from the PCOS spectrum. Finally, some experts have preferred to follow the original NIH diagnostic guidelines (only patients with hyperandrogenism and chronic anovulation). Analysis of clinical and endocrine data has shown that the four Rotterdam phenotypes present many similarities. The two classic phenotypes have similar clinical, endocrine and metabolic characteristics and seem to be differentiated only by LH and LH/FSH ratio values. Ovulatory PCOS probably represents a mild form of Classic PCOS because presents metabolic and endocrine characters similar to Classic PCOS but with less severe alterations. Normoandrogenic phenotype is characterized by mild or absent metabolic alterations and may result from a different pathogenetic pathway.

PS33.3 3-D ultrasound in PCOS diagnostics

Judith Hamilton

Abstract not available at the time of printing
Very few studies assessing the long-term reproductive and metabolic consequences in older women with previously confirmed polycystic ovary syndrome (PCOS) have been conducted. In this long-term follow-up of women with PCOS, 84 women with a diagnosis of PCOS between 1987 and 1995 and age at the follow-up > 35 years and an age-matched population-based group of control women participated. According to our results most women with PCOS had given birth and the rate of spontaneous pregnancies was relatively high. The rate of miscarriages was not increased in PCOS patients and the ultrasound findings together with increased levels of anti-müllerian hormone suggested that their ovarian reserve is superior to women of similar age. Impaired glucose tolerance and type 2 diabetes occurred more often in PCOS women. Free androgen levels and beta-cell function decreased over time whereas insulin sensitivity remained unchanged. However, independent of PCOS phenotype at the index assessment and persistence of PCOS symptoms at the follow-up investigation, premenopausal women with PCOS had lower insulin sensitivity and increased beta cell function in comparison with control subjects.
PS34 Future strategies in cancer vaccinations

PS34.1 Overview of the possibilities in immunotherapy
Inge Marie Svane
Herlev Hospital, Center for Cancer Immunotherapy - CCIT, Department of Oncology & Haematology, Herlev, Copenhagen, Denmark

Although no immunotherapeutic treatment is yet standard care for treatment of gynaecological cancers promising results from clinical trials suggest that several immunotherapeutic strategies may prove efficacious and applicable to this group of patients. The use of immune therapy to induce a therapeutic host anti-tumour immune response has huge potential to complement traditional cancer therapies in a non-overlapping way. Immunotherapy is designed to re-calibrate the existing host-tumour interaction, tipping the balance from tumour acceptance towards tumour control to the benefit of the cancer patient. An overview of the most interesting strategies investigated so far will be given; including antigen-defined vaccination, cellular immunotherapy, and immunomodulatory antibodies. Future treatment options as well as the possibility of combining existing therapies will be discussed along with the challenges presented by tumour escape mechanisms.

PS34.2 Success and failure in the therapeutic vaccination of high grade VIN
Sjoerd H van der Burg
Leiden University Medical Center, Department of Clinical Oncology, Leiden, The Netherlands

Vulvar intraepithelial neoplasia (VIN) is predominantly caused by human papillomavirus (HPV) type 16, through the expression of the viral oncoproteins E6 and E7. Spontaneous regression occurs in <1.5% of patients. Virus-specific interferon gamma (IFNα)-producing T cells are essential to control chronic viral infections. In VIN patients these T cells were not demonstrable or existed at low numbers. Vaccination might overcome this inertia of the immune system. We investigated the immunogenicity and efficacy of a synthetic long peptide vaccine in women with HPV16+ high-grade VIN. Twenty women were vaccinated 3-4 times with a mix of HPV16 E6 and E7 long peptides in Montanide ISA-51 adjuvant. Most common adverse events were local swelling and fever (100 and 64% of subjects respectively), none exceeding CTCAE grade 2. At 12 months follow up, objective clinical responses were observed in 15 women with a CR in 9 of 19 women. HPV16-specific immunity was analyzed at different time points by complementary immunological assays. The group of patients with a complete clinical response displayed stronger and broader vaccine-promoted HP16-specific proliferative responses with higher IFNα (p=0.0003) and IL-5 (p<0.0001) levels than patients with no or non-complete responses. In contrast, the latter patient group mounted higher frequencies of HPV16-specific CD4+CD25+Foxp3-positive T cells (p=0.005). In conclusion, clinical responses in women with HPV16+ VIN3 can be achieved by vaccination with a HPV16 E6 and E7 synthetic long peptide vaccine and clinical success or failure is associated with vaccine-induced HPV16-specific immunity.

PS34.3 Immunotherapy of cancer targeting MUC1 glycopeptide epitopes
Hans H Wandall
Copenhagen University Faculty of Health Sciences, Department of Cellular and Molecular Medicine, Copenhagen, Denmark

MUC1 is a membrane glycoprotein highly expressed in epithelial malignancies including breast and ovarian cancer, and has generated considerable interest as a tumor marker and target for tumor killing. Almost all MUC1 vaccines to date target non-glycosylated MUC1 peptide epitopes within the highly immunogenic tandem-repeat-array of the extracellular domain. Protein glycosylation often changes during cancer development, resulting in the aberrant expression of cancer-associated carbohydrate antigens. In particular mucins, such as MUC1 are subject to changes in O-linked glycosylation inducing novel cancer associated epitopes that can be exploited to raise cancer specific humoral and CD8+T-cell
responses. The talk will review recent advances in development of vaccines targeting MUC1 with and without cancer associated glycans for treatment of ovarian and breast cancer.
SA01.1
Strategies for increasing access to contraception to reduce maternal and newborn mortality
Ian D Askew
Population Council, Department of Reproductive Health, Nairobi, Kenya

More than 200 million women worldwide have an unmet need for contraception, which not only reduces their ability to achieve their fertility preferences but also places them at risk of maternal mortality and morbidities. The majority of people living in developing countries continue to live in rural areas, where there is limited access to health facilities and consequently availability of contraceptive services from medical providers can also be difficult. This presentation will first provide a brief overview of experiences with a range of non-clinic-based approaches that are used to increase access to contraceptive services; the available evidence describing the effectiveness of strategies of community-based distribution, outreach and social marketing will be presented. These approaches have limitations, however, in that they are generally restricted to the delivery of contraceptives that do not require a medically-qualified provider or can be resupplied by non-medical personnel. In recent years, efforts to increase access to contraceptive services have focused on two additional approaches: i) task-shifting or sharing between cadres of medically-qualified personnel so that lower-qualified staff are able to offer contraceptive services currently provided by higher-qualified personnel; and ii) integration of contraceptive services into other health care services received by women who may also have an unmet need for contraception. Examples of both approaches will be presented, followed by a discussion of the opportunities they offer for increasing access to rural, poor and vulnerable populations, as well as the challenges faced by their introduction in developing country health systems and policies.

SA01.2
Contraceptive research: meeting the unmet needs for the future
Regine Sitruk-Ware
Population Council, New York, NY, USA

Although a steady increase in contraceptive use has been observed both in developed and less-developed countries over the past decades, the contraceptive needs of a significant percent of couples have not yet been met, with an increase in unplanned pregnancies. New methods have been developed to meet the objectives of expanding contraceptive choices for both women and men. The contraceptive efficacy of the new long-acting methods such as implants, rings and transdermal patches is the highest among contraceptives as these methods do not rely on daily compliance. The single implant Implanon® had a rate of 100% efficacy in well-controlled trials and Nuvaring®, the monthly contraceptive ring showed a low failure rate of 1-2 per 100 women-years of use and the transdermal patch Evra® has an overall annual probability of pregnancy of 0.7-0.8%. While implants require a health provider for a proper insertion and removal, vaginal rings and patches have the advantage for women of being under their own control. A one-year vaginal ring delivering nestorone, a non-androgenic progestin and ethinyl-estradiol should also ensure better compliance as the woman will have her prescription for a full year. Today, research on new contraceptives target not only the prevention of unwanted pregnancies but also additional medical benefits to the users. Dual protection methods are also tested as vaginal gels or rings delivering both a contraceptive and an agent active against HIV transmission. In addition, the potential of progesterone receptor modulators to prevent breast cell proliferation or the neuroprotective effects of progesterone and similar molecules are new areas of research supporting the development of new contraceptives with added health benefits. As far as methods for men are concerned, development of highly effective, practical, and acceptable non-traditional male contraceptives has proven to be a daunting challenge for more than three decades. Simplicity, reversibility, and effectiveness are the desired features
of a male contraceptive. New tissue-selective androgen without action on the prostate delivered from a one-year implant are developed in that direction. Further research is needed to design acceptable methods for men and women, with additional medical benefits, in order to meet their needs at the different times of their reproductive life.

SA01.3
Emergency contraception options
Kristina Gemzell-Danielsson, L Kumar
Karolinska University Hospital/ Karolinska Institutet, Department of Women’s and Children’s Health, Division of Obstetrics & Gynecology, Stockholm, Sweden

A single dose of 30mg ulipristal acetate (UPA) has recently been approved for emergency contraception (EC) up to 120 hours after unprotected intercourse. A meta-analysis of clinical trials comparing UPA with a single dose of 1.5 mg levonorgestrel (LNG) for EC demonstrated that UPA has higher efficacy. Both treatments have similar side effects. However the mechanism(s) of action of these methods when used for EC remains a matter of concern. We therefore evaluated the effect of doses effective for EC, on ovulation as well as endometrial development and function. Treatment with 1.5 mg LNG in the late follicular phase inhibited or postponed the LH surge in all subjects. No effect on endometrial development could be found either following preovulatory or postovulatory LNG treatment. LNG was shown to have no effect on endometrial progesterone receptor expression or other suggested markers of endometrial receptivity which remained essentially unchanged. The effect of LNG was further studies in an in vitro implantation model. Taken together available data suggest that the mechanism of action of both LNG and UPA for EC is delaying or inhibiting ovulation but does not prevent fertilization or implantation. However, UPA appears to have a direct inhibitory effect on follicular rupture that allows it to be effective even when administered shortly before ovulation, a time period when LNG is no longer effective. Increased knowledge on mechanism of action could hopefully increase the acceptability and thus availability of EC, to offer women a chance to prevent an unwanted pregnancy.
SA02.4
Male contraception: meeting men's unmet needs
Eberhard Nieschlag
University of Münster, Centre for Reproductive Medicine and Andrology, Münster, Germany

While contraception for women means personally avoiding pregnancy with all its medical, social and economic implications, contraception for men is more an intellectual issue regarding respect for the partner and avoiding financial, social and legal obligations of fatherhood. This dichotomous perception of contraception may be the deep-rooted reason why research has resulted in a number of sophisticated female contraceptive methods while male developments lag behind. In comparison to female methods, the two existing male methods appear primitive and are accepted only to variable degrees. Vasectomy, for practical reasons, has to be considered irreversible, although with modern, but not universally accessible assisted reproduction techniques half of those men wishing to become fathers again may be successful. Worldwide 3% of males with females of reproductive age are vasectomized, whereby these figures go up to 20% in the UK, New Zealand and Singapore, but may be as low as 3% in Germany and below 1% in Africa. Condoms are used worldwide by 6% of men with wives of reproductive age with over 20% usage in Singapore, 5% in China, 2% in Germany and below 1% in Africa. However, condom use among young people is increasing worldwide. Meanwhile, research has established the principle of hormonal male contraception as a pharmacological approach. However, its final development is being left to academic and philanthropic institutions, while the pharmacological industry, without whose input hardly any medication can reach the market, remains abstinent from a commitment to male contraception.

SA02.1
Curriculae of training throughout Europe
Karen Rose
Saint Mary's Hospital, Manchester, UK & President of European Network of Trainees in Obstetrics and Gynaecology

Over the last 2 decades, the European Network of Trainees in Obstetrics and Gynaecology (ENTOG) has focused together with the European Board and College of Obstetricians and Gynaecologists (EBCOG) on harmonising Obstetrics and Gynaecology training throughout Europe. The ENTOG working conditions survey published in 1997 revealed the heterogeneous nature of European training. The introduction of training programmes, tutor systems and EBCOG logbooks has provided tools to develop standardised high-quality curriculae throughout Europe. A larger re-audit of the ENTOG survey in 2007 demonstrated that steps towards harmonisation were being made, however, large discrepancies between postgraduate training programmes and assessments remained. A re-audit assessing current training and working conditions is being undertaken.

SA02.2
Visiting and accreditation in Europe
Juriy Wladimiroff(1), R Kirschner(2), T Mahmood(3), E Werner(4), J Feyereisl(5), I Messinis(6), P Pärgmäe(7), A Aabakke(8)
(1) Erasmus University Medical School, Department of Obstetrics & Gynaecology, Rotterdam, The Netherlands
(2) University of Oslo, Department of Obstetrics & Gynaecology, Oslo, Norway
(3) Member: EBCOG Council & Chair of EBCOG Working Party on Standards of Care, Chair- Heavy Menstrual Bleeding National Audit Project, Office of Research & Clinical Audit- Lindsay Stewart R&D Centre, Royal College of Obstetricians & Gynaecologists, London
(4) Haukeland University Hospital, Department of Obstetrics & Gynaecology, Bergen, Norway
(5) Institute for the Care of Mother & Child, Prague, Czech Republic
The objectives of Auditing/Visiting are to improve, assure and assess the quality of specialist training in teaching hospitals throughout Europe. It should be emphasized that EBCOG auditing is a voluntary process. Auditing of training programmes should lead to benefits such as harmonization of training, improvement of both structure and process of training, identification of areas of possible improvement as well as strong points of training and accreditation to successful institutions. The outcome of the EBCOG Standards of Care Committee should further strengthen this process. The audit is conducted by two senior gynaecologists appointed by the Chair of the EBCOG Training Recognition Committee and a trainee appointed by ENTOG. EBCOG has audited and accredited (A&A) training programmes in more than 100 departments. As a result a number of countries has introduced its own national A&A system. EBCOG is currently developing a programme to assist those countries which are in the process of setting up their own A&A system or would like to introduce such a system in the near future. A Visitors pool has been created to deal with an increasing amount of auditing requests. ‘Training the Visitors’ days will be organized to familiarize colleagues with the practical aspects of auditing. EBCOG in close association with the four European scientific subspecialist organizations EAPM, ESGO, ESHRE and EUGA has started conducting audits of subspeciality training programmes as well. Over 50 subspecialty training programmes have been accredited so far.

SA02.4
Moving towards European standards for educational recognition
Tahir Mahmood
Member: EBCOG Council & Chair of EBCOG Working Party on Standards of Care, Chair- Heavy Menstrual Bleeding National AuditProject, Office of Research & Clinical Audit- Lindsay Stewart R&D Centre, Royal College of Obstetricians & Gynaecologists, London

The European Board and College of Obstetrics and Gynaecology (EBCOG) acts as an umbrella body of 27 countries of the EU and is committed to develop unified standards for education, training and clinical care through the EU. There is considerable diversity which exists across the member nations on how Specialist medical education is organised, delivered, and quality assured through the formative years of doctors in training. Furthermore, standards of care vary across the European states. Review of evidence suggests that there is considerable variation in how clinical services are delivered and how outcome measures are analysed in various member states. The EBCOG is taking necessary steps to respond to these challenges. We have developed a training manual which embodies the key requirements for unified training structure for specialists in obstetrics and gynaecology and subspecialty areas and had also promoted a voluntary hospital accreditation system. So far around 100 units have been visited and accredited. These two activities would help to streamline process of delivering postgraduate education and training. This would now be complemented by developing a unified set of standards for clinical services across member nations of Europe where minimum standards will be set, and supported by a menu of outcome indicators. We would encourage the individual units to quality assure their clinical services against these standards. We are also engaging with EU officials to investigate various ways for developing an EU wide approach to develop quality assurance processes in individual countries against these standards. This presentation will largely focus on our on going project for developing unified standards of clinical care. These we believe will not only improve care of women across all the member states but would also harmonise the process of training within member states as we expect that all the training units will do their best to meet standards of care for women.
Thursday, 08 September 2011, 16:00 - 17:30

SA03 Debate: Mild stimulation for IVF or IVM: what direction is preferable?  
*Arranged by Controversies in Obstetrics, Gynecology and Infertility (COGI)*

**SA03.1**

Pro: Mild stimulation in PCOS patients will decrease OHSS without compromising the result of treatment  
*Salim Daya*

Abstract not available at the time of printing

**SA03.2**

Con: IVM provides a safer and less expensive alternative  
*Pedro N Barri, F Martinez, B Coroleu, R Tur, G Arroyo*  
Institut Universitari Dexeus, Service of Reproductive Medicine, Department of Obstetrics, Gynecology and Reproduction, Barcelona, Spain

A decade has passed since the publication of the first pregnancies following IVF of immature oocytes later matured in the laboratory (IVM). The perspective looking back over those years allows us to say that the technique is effective and that in the case of patients with PCOS, pregnancies can be achieved with a low risk of OHSS. However, the fact is that the technique has not become any more simple, the cost has not been reduced (the culture media used in these cases are expensive), and the time for culture remains long. Moreover, the pregnancy rates are lower than those obtained with conventional IVF and the miscarriage rates are higher. For these reasons IVM has not replaced conventional IVF as first line treatment for PCOS patients who need to undergo IVF. We will present our experience of IVM in various indications and the results obtained with pregnancy rates per embryo transfer of more than 30% but with miscarriage rates that reach 35%. There is no doubt that indications for IVM as a complement to the usual technique in certain cases of over-response to stimulation, converting them into cases of IVM, makes it possible to rescue them and avoid cancelling them. Nor can we overlook the potential use of IVM in preserving fertility in oncologic patients who are unable to receive ovulation-inducing drugs.
The elaboration of guidelines is of particular importance for the management of cardiovascular disease during pregnancy, which is a rare but not exceptional circumstance (0.2 to 4% of pregnancies in Western countries) and covers heterogeneous situations as regards maternal and foetal prognosis. Pregnancy-related cardiac complications are triggered by the marked and sustained haemodynamic changes occurring during pregnancy, in particular the increase in blood volume and cardiac output, which may be poorly tolerated in women with underlying heart disease. Heart disease is seldom a direct consequence of pregnancy, such as with peri-partum cardiomyopathy or coronary dissection. Heart diseases reviewed in the ESC guidelines are: - Congenital heart disease, now the most frequent structural cardiovascular disease during pregnancy in Western countries, is characterised by a particular heterogeneity of cardiac risk during pregnancy. - Valvular heart disease, in which the risk of complications is highest with mitral stenosis, which may require medical and/or interventional therapy during pregnancy. - Coronary heart disease, which requires aggressive management when unstable. - Cardiomyopathies, either pre-existing or induced by pregnancy. - Arrhythmias. - Hypertensive disorders, which are the most frequent cardiovascular events during pregnancy. - Venous thromboembolism. - Specificities of drug therapy during pregnancy. The ESC guidelines emphasise that counselling and management of women of childbearing age with suspected cardiac disease should start before pregnancy occurs. Their management should be performed by multidisciplinary teams and in specialised centres for high-risk patients. The approach should be individualised and adapted to the type of heart disease and its tolerance.

Identification and management of high risk patients
Angela Maas
Isala Klinieken, Department of Cardiology, Zwolle, The Netherlands

This is part of pre-arranged Symposium on the new ESC guidelines on CVD during pregnancy.

Management of maternal rhythm disorders
Carina Blomström Lundqvist

Abstract not available at the time of printing

Anticoagulation in pregnancy
Petronella G Pieper
University Hospital Groningen & Member of Task Force 17 of the ESC, Groningen, The Netherlands

Anticoagulation therapy can be indicated in pregnant women with various cardiovascular diseases: pulmonary hypertension, Fontan circulation, atrial fibrillation, ischemic heart disease, mechanical prosthetic valve and increased risk for or established venous thrombo-embolism. In the new guidelines for the management of cardiovascular diseases during pregnancy that are constructed by Task Force 17 of the European Society of Cardiology, the indications for anticoagulation are reviewed and discussed and recommendations for appropriate anticoagulation in these different patient groups are given. These recommendations will be discussed in this presentation, with special emphasis on the choices that have
been made by the task force regarding the controversial issue of anticoagulation in pregnant women with prosthetic heart valves.
Bilateral oophorectomy is a relatively widely practiced procedure in the surgical management of benign gynaecological disorders. When performed pre-menopausally, surgical castration, adversely impacts women’s sense of well being and predisposes them to a number of cardiovascular disorders and result in symptoms that compromise their quality of life due the sudden withdrawal of gonadal steroids. The adverse effects of oophorectomy may, in the majority of instances be ameliorated by long term oestrogen replacement therapy. Male and female behaviour has its roots in the exposure to various ratios of oestrogen and testosterone in-utero and soon after birth. Gonadal steroids influence adult’s behaviour and interaction with the environment through regulation of regional release of neuro-transmitters, modulation of neuro-plasticity as well as patterns of data storage and retrieval. Ata on the degree of cognitive impairment and risk of dementia as a result of early natural menopause are inconsistent but increasing body of data suggests that pre-menopausal oophorectomy is associated with decline in cognitive function. The data are less consistent largely due to different study paradigms. Alteration in structure (dendritic and synaptic rearrangement) and function of hippocampal neurones concerned with learning, memory, mood as well those neurones that modulate visuo-spatial orientation have been well documented in rodents and primates following bilateral oophorectomy. Clinical experience suggests, however, that timely and adequate oestrogen replacement of sufficient duration, with or without testosterone, is successful in ameliorating most of the symptoms of surgical menopause, maintains neurogenesis in the adult and may reduce the risk of cognitive impairment.

In aging women and man, cardiovascular diseases (CVD) are the more frequent cause of mortality. Obesity, fat distribution, total cholesterol, HDL & LDL cholesterol, triglycerides (TG) and fasting glucose (FG) are standard CVD predictors, but the role of SHBG and sex hormones are still not clear. On the basis of POLSENIOR Study we have a look how the SHBG and Index of Free Estradiol (FEI) and Androgens (FAI) in 1971 women and 2087 man from 51-100 yrs old correlated with CVD predictors. In women and man SHBG levels were significant positively correlated with HDL, but negatively with BMI , waist circumference (WC) , TG, FG and HOMA . FEI in women were significantly positive correlated with BMI, WC, insulin, FG, HOMA , TG and negatively with HDL. FEI levels in man were correlated significantly positively with BMI, WC,TG , FG and negative with HDL. Total estradiol levels were significantly positive correlated with BMI, WC, insulin and HOMA in women, but in man didn’t. In women FAI were correlated significantly negative with HDL and positively with insulin, BMI, WC, FG, HOMA, TG. In man FAI were correlated significantly positive with BMI , WC, TG and FG. Total testosterone in man correlated significantly positive with HDL and negative with BMI, WC and FG, TG but in women didn’t. Our results created SHBG as CVD predictor more specific for women.
SA05.3
Ovarian function, reproduction and gynecological oncology, including breast cancer
Adolf E Schindler
Institute for Medical Research and Education, Essen, Germany

The aim of the presentation is twofold: 1. To indicate the possible risks and benefits of ovarian function and reproduction for cancer development. 2. To indicate the possible risk and benefits of ovarian function and reproduction for cancer prevention. Three cancers will be considered: 1. Ovarian cancer, 2. Endometrial cancer, 3. Breast cancer. In ovarian cancer FSH, LH, estrogens and androgens have stimulatory effects, while progestogens and GnRH-analogues have inhibitory effects. There are a number of reproductive factors, which increase the risk of ovarian cancer such as nulliparity and late menopause, while others act protective such as parity, early age at menopause and hormonal contraceptives. Risk reduction of up to 50% can be obtained and like with oral hormonal contraceptives risk reduction was shown to be long-lasting up to 30 years after discontinuation of the hormonal contraceptives. Regarding endometrial cancer long-lasting dominant ovarian estrogen stimulation such as corpus luteum insufficiency or anovulation, early menarche and late menopause are risk factors for the development of endometrial cancer, while a full-term pregnancy acts protective. This is also true for hormonal contraceptives. Ovarian function and reproduction also play a crucial role in risk reduction or risk increase for breast cancer. Early and late menarche or early and late menopause, number of full-term pregnancies as well as age at first birth are protective or increase the risk of breast cancer. Surgical or medical castration reduces breast cancer risk. Ovarian volume is related to breast cancer, endometrial cancer and colon cancer risk. Indeed, beginning, type and end of ovarian function as well as factors of reproduction such as pregnancy and procedures like hormonal contraceptives modify cancer risk, while changes of ovarian function can cause on the one hand cancer risk increase and on the other hand ovarian, endometrial, breast and colon cancer risk decrease.

SA05.4
From menopause to aging: endocrine and neuroendocrine biological changes
Alessandro D Genazzani, F Ricchieri, A Prati, A Campedelli, E Rattighieri, E Chierchia, S Santagni
University of Modena, Department of Obstetrics and Gynecology, Gynecological Endocrinology Center, Modena, Italy

The menopausal transition represents an important moment of women life. It typically occurs in between 45-52 years of age and it is determined by a great variety of biological events that are tightly related to the incoming hypoestrogenic condition for the progressive ovarian failure. In the same of span of time also aging takes place. It is well known that ageing starts around 35-40 years but it becomes evident during the perimenopausal-menopausal transition. Ageing and the endocrine/neuroendocrine changes induced by menopausal transition are at the basis of the many symptoms that occur together with the onset of many of the climateric symptoms. Tipically the hypoestrogenic condition that appears to be relatively evident during premenopase, worsens within few months/years and the hypoestrogenic condition becomes a constant endocrine feature due to the ovarian failure of menopause. The lack of estrogens amplifies the progression of all age-related decaying processes and definitively induces the so called 'frailty syndrome' of older age. This syndrome is the combination of the hypofunction of many omeostatic systems and organs such as the metabolic system, the cardiovascular system, CNS, endocrine system, and the neuroendocrine systems. The result of this is a perfect mixture of subnormal functions that induce a specific decay of many biological and vital function exposing the human being to a lot of potential risks such as cardiovascular risks, osteopenia/osteoporosis, depression, anxiety, cognitive problems and more. Since the hormone replacement treatment (HRT) has been demonstrated to reduce or eliminate most if not all the climateric symptoms, an adequate choice of HRT has to be proposed to patients passing through the menopausal. In some cases also an integrative approach, such as Algae Klamath extracts, could be proposed before or together with HRT.
Friday, 09 September 2011, 16:00 - 17:30

SA06  Society Symposium

Arranged by European Society of Human Reproduction and Embryology (ESHRE)

SA06.1

Assisted reproductive technology in Europe

Anders Nyboe Andersen

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Introduction: Treatments with Assisted Reproductive Technology (ART) in Europe has been monitored and published annually for the last 12 years by ESHRE, through a European collaboration: the European IVF Monitoring (EIM). Methods: From 2008 national data were available from 36 countries where 1069 fertility clinics reported 528 000 treatment cycles. This represents a 7% increase compared to the previous year, and almost 3 times more than 10 years ago. Results: The treatments were: IVF 124 431, ICSI 186 735, frozen embryo replacement (FER), 97 633, egg donation (ED), 12 541), pre-implantation genetic diagnosis/screening (PGD/PGS, 2859), in-vitro maturation (IVM, 1062) and frozen oocytes replacements (FOR, 3735). For IVF and ICSI the clinical pregnancy rates (PR) per transfer were 32%. For FER and ED the PR were 21 and 41%, respectively. The proportions of singleton, twin and triplet deliveries after IVF and ICSI was 77.7%, 21.1%, and 1.1%, respectively. The rate of multiple deliveries gradually decline in Europe. Huge differences in the use of ART per capita were seen within Europe. Denmark and Belgium are among the countries with the highest use of ART. The proportion of single embryo transfers varied from 3.0% in Lithuania to 70% in Sweden, and the rates of multiple deliveries differed markedly

Conclusions: The use of ART in Europe continues to increase and pregnancy rates increase marginally, whereas the number of embryos transferred and multiple births decrease. Huge differences in the approach to ART exist across Europe.

SA06.2

Reproduction and society

Lone Schmidt

University of Copenhagen, Faculty of Health Sciences, Department of Public Health, Copenhagen, Denmark

Across European countries people are postponing parenthood and in all countries total fertility rates are below the replacement rate of 2.1 children per woman. Postponing childbearing increases the risk of infertility and spontaneous abortions, and an increasing proportion of couples will remain involuntary childless or achieve fewer children than they wished for. Even in countries with sufficient and easy access to high-quality assisted reproduction treatment, fertility treatment cannot fully overcome the age-related decline in fecundity. Many people are not aware of the substantial age-related decline in fecundity or sufficiently aware of other important risk factors for infertility (e.g. smoking, overweight, sexually transmitted diseases). It is of importance for societies both to prevent infertility and to provide easy, equal, and sufficient access to high-quality assisted reproduction. Prevention of infertility should be based on a mix of several strategies for 1) increasing the populations’ awareness of risk factors for infertility; 2) establishing societies for dual-bread winner families with access to affordable day child care, accommodations, a flexible labour market; 3) national health strategies for protecting the populations’ fecundity.

SA06.3

Impact of hormonal stimulation on embryo quality

Nick S Macklon

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The use of assisted reproductive technologies (ART) has been increasing over the past three decades, and, in developed countries, ART account for 2–6% of annual births. In an attempt to compensate for inefficiencies in IVF procedures, patients undergo ovarian stimulation using high doses of exogenous
gonadotrophins to allow retrieval of multiple oocytes in a single cycle. Although ovarian stimulation has an important role in ART, it may also have detrimental effects on oogenesis, embryo quality, endometrial receptivity and perinatal outcomes. The detrimental effects of exogenous gonadotrophins on embryo development have been best characterised in rodent models. In vitro studies showed that ovarian stimulation disrupts and delays the development of one- or two-cell mouse embryos into blastocysts. Likewise, embryos from superovulated hamsters had significantly reduced mean cell numbers than the controls. In vivo studies are concordant, indicating that ovarian stimulation delays embryo development. Furthermore, analysis of the surface architecture of mouse embryos showed a reduction in the number of cells and of microvilli on blastocysts from gonadotrophin-treated females, compared to those from spontaneously ovulating females. However, the results of human studies assessing possible effects of ovarian stimulation protocols on embryo development are inconsistent with mouse studies. A number of studies have reported particularly high rates of chromosomal aneuploidy and mosaicism in early human IVF embryos. Recently, post-zygotic chromosome instability has been observed to be a common feature of early human embryogenesis, leading to chromosomal disorders such as mosaicism and uniparental disomies in the majority of cleavage-stage embryos. Although the mechanisms underlying aneuploidy are still poorly understood, it has been hypothesised that increased rates of embryo aneuploidy could also result from the interference of ovarian stimulation with the natural selection of good-quality oocytes or from exposure of growing follicles to detrimental effects of hyperstimulation on oocyte maturation. New advances in molecular biology (genomics, epigenetics, proteomics and pharmacogenomics) will contribute to increase our knowledge on ovarian and endometrial physiology and the impact of stimulation regimens at the molecular level, which is still poorly understood. With this knowledge, milder ovarian stimulation regimens can be designed, which reduce the potentially adverse effects on embryo development. Further reading: Santos MA, Kuijk EW, Macklon NS. The impact of ovarian stimulation for IVF on the developing embryo. Reproduction. 2010 Jan;139(1):23-34.

Evidence-based clinical guidelines for assisted reproduction

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In 2004 The Danish Fertility Society decided to draw up a number of clinical guidelines for the examination and treatment of infertile couples. The aim of the guidelines was to achieve the greatest possible efficiency (i.e. birth of the largest number of healthy babies) and the fewest possible serious side-effects nation-wide. The formulation of the guidelines was stringent and included evidence-based recommendations. In 2010, the Danish guidelines on fertility treatment were translated into English and they became Nordic. Thus, the 26 guidelines were allocated with a certain number to each of the five Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden) and it was decided that the National Fertility Societies were responsible for recruiting updaters and reviewers. It is tempting to do a SWOT analysis when introducing new procedures. As such it could be stated that the Strengths of evidence-based clinical guidelines are that they bridge the gap between scientific evidence from literature and actual clinical practice. Further, they decrease practice variation and thus improve quality of treatment. The biggest Weakness is that they may not be read or used by the fertility experts. The Opportunities are that guidelines should be viewed as the best recommendation available at the time of writing. Finally, a major Threat is that the guidelines are not updated and revised on a regular basis. Indeed outdated guidelines are of no value and the users will lose interest. At the meeting our experience will be presented.
The biological importance of the metabolic transformation of progesterone in hormone-dependent cancer

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In the human breast and endometrium it is well established that progesterone and estradiol are the main hormones which control normal development, as well as the different pathological conditions. The biological response of progesterone and other progestogens is function of various factors, including their affinity to progesterone or other receptors, their structure, the target tissues considered, biological response, experimental conditions, dose, method of administration and metabolic transformations. The latter is of huge importance because in various biological processes the metabolic product(s) not only controls the activity of the maternal hormone but also has an important activity of its own. In normal human breast tissues, progesterone is mainly converted to 4-ene derivatives, whereas in breast tumor tissue it is converted mostly to 5-pregnane derivatives. 20-Dihydroprogesterone is found mainly in the normal breast tissue and possesses antiproliferative properties as well as the ability to act as an anti-aromatase. Consequently, this progesterone metabolite could be involved in the control of estradiol production in the normal breast cell and might therefore be one of the multifactorial elements involved in breast carcinogenesis. In patients with endometrial diseases the balance of estradiol and progesterone biosynthetic and metabolizing enzymes is disturbed (decreased 17ß-hydroxysteroid dehydrogenase type 2, unchanged SULT and increased aromatase and 17ß-hydroxysteroid dehydrogenase type 1 activities) with the equilibrium being shifted towards an estradiol-enriched milieu. In conclusion, the enzymatic control of progesterone transformation attracts perspectives to protect the endocrine organ from possible pathological alterations.

Prevention of tumors by hormonal manipulations

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Sex hormones (estrogens) are thought to be involved in stimulation of breast and endometrial cancers in women. Therefore hormonal manipulations have been considered as possibilities to inhibit growth. In the secondary prevention of breast cancers anti-estrogenic therapies, by anti-estrogens or by aromatase inhibitors, clearly have demonstrated efficacy in slowing down the growth of existing tumours. The main issue is which one of the available therapies should be chosen in an individual patient. For endometrial cancers mainly progestins have shown activity in slowing down growth of these tumours. Additionally local intra-uterine application of progestins is protective against the development of the malignancy. Primary prevention of breast cancer is more difficult but exemestane reduced breast cancers in postmenopausal women who were at moderately increased risk. Many of the risk factors for this cancer cannot be influenced as they are determined by genetics or by events taking place early in life. Living in western countries hardly is a factor that can be changed. Nutrition must play a role, changes in dietary habits have failed to demonstrate changes in cancer risk. A risk factor for breast cancer is the time-interval between proliferation of the breast during pubertal development and the differentiation that takes place during the last part of pregnancy. Not much attention has been given to the possibility to accelerate the protective differentiation of the glands. Our knowledge on factors that cause this final differentiation is largely lacking. It may be of great importance to gain more insight in this process.
SA07.3
Low and high dose dienogest and endometriosis

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Dienogest is a 19-nortestosterone derivative that has no ethinyl group, but possesses additional properties characteristic of progesterone derivatives. Dienogest is a highly selective progesterone receptor agonist with pronounced effect on endometrial and endometriotic tissue. Dienogest has no estrogenic, antiestrogenic, androgenic or glucocorticoid activities, but antiandrogenic activity. With an evidence-based approach the efficacy of dienogest for medical treatment of endometriosis has been demonstrated. In a randomized, prospective study over 24 weeks it was shown, that 2 mg dienogest daily is as effective as 4 mg on endometriotic lesions, but 1 mg dienogest was not satisfactory. This was found for the r-ASRM scores and pain symptoms as well. In addition, treatment with 2 mg dienogest daily had a significant better effect on pain symptoms (p< 0.0001) compared with placebo. Studies up 52 weeks demonstrated continuous reduction of pain symptoms and decrease of bleeding disturbances over this time period. Comparing the effect of dienogest versus GnRH-agonists, reduction of pain occurred in a similar way and to a similar extend. It was also found that the effect of 2 mg dienogest daily is comparable with the effect of 30 mg medroxyprogesterone acetate or 10 mg noretisterone daily. A pilot study with 20 mg dienogest p.o. daily which is equivalent to 100 mg medroxyprogesterone acetate demonstrated high effectiveness on endometriotic lesions and endometriosis induced pain with regression of estradiol, endometrial thickness and glandular breast tissue. There were no measurable negative changes during the 24 weeks treatment on hemostasis, lipids and carbohydrate metabolism. This supports the safety of 2 mg dienogest p.o. in long-term therapy.

SA07.4
Selective progestogen receptor modifiers (SPRMs) pharmacodynamics and new clinical developments

Philippe H Bouchard

Abstract not available at the time of printing
The purpose of our research was to study the surgeon's motives for resorting to CS. Research included a systematic review and survey among 300 obstetricians. According to a recent WHO-report (2010), the Caesarean-section (CS) rate exceeded the upper limit (15%) recommended by the WHO (1985) in 69 countries. Once a lifesaving necessity for both mother and baby, the CS rate now peaks at 50%, turning it into a routine delivery procedure. This elevated CS rate (>15%) however, does not go hand in hand with improved perinatal outcome. For the past two decades, the CS rate in most countries has been presenting as a growth curve whereas in the Russian Federation it has been constantly rising to reach 7% in 1995 and 21% in 2010. In most cases, posterior pregnancies require repeated CS, entraining women into a spiraling vortex. Edwin Cragin's 100-year-old prophetic phrase 'Once a Caesarean, always a Caesarean', has become a reality. According to our survey, the motive to resort to Cesarean section can be traced back to routine indications and both surgical and nonsurgical aspects. The CS technique has been simplified and improved and its complications limited, therefore obstetricians are more prone to mastering it. Aggressive obstetric management has been introduced in order to improve perinatal outcome; the former turning inefficient if the CS rate in a population is high. In order to fulfill both legal and training demands, obstetricians have to meet annual CS quota. In critical situations, when faced with a choice between a CS or a vaginal birth (VB), obstetricians usually opt for a CS. In some cases, their motives are based on nonsurgical reasons: obstetricians wish to uphold their own reputation and competencies. Moreover, CS's are more profitable for the surgeon than a routine VB. In conclusion: the growing CS rate can be led back to the simplification and improvement of CS techniques, the reduction in complications, a change in delivery management mentality, the obstetric-surgeon's career advancement and reputation and financial considerations. Team members: Manukhin IB, Mynbaev OA, (Moscow State University of Medicine & Dentistry), Eliseeva MYu, (The Institute of Advanced Training of the Federal Medical-Biological Agency of Russia), Konstantinova OD (Orenburg State Medical Academy), Zilber M Yu (Ural State Medical Academy), Lobach IYu, Papikova KA, Ryzhkov VV (Stavropol State Medical Academy), Sakhautdinova IV (Bashkir State Medical University), Russia; Kosmas IP (Ioanna University), Greece; Khan VE & Makhanova GT (Kzyl Orda Regional Medical Center), Kokenova MU (The South Kazakhstan Healthcare Department), Malgazhdarova BS (South-Kazakhstan State Medical Academy), The Republic of Kazakhstan; Medvedev MV (Dnepropetrovsk State Medical Academy), Pirogova VI (Lviv National Medical University), Savka RV (Volynsky Regional Healthcare Department), Chernov AV (The city of Kiev reproductive health center), Ukraine.
SA08.3
Optimized C-section technique for premature and multiple pregnancies
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One of the most important reasons of high rates of neonatal morbidity and mortality in premature birth and multiple pregnancies is a birth trauma. One of the ways to improve the state of newborns is a specific technique of fetus extraction in the amniotic sac during cesarean section. Methods: 80 premature singleton and 64 twin pregnancies delivered by cesarean section were included in this study. 40 of singletons were extracted in amniotic sac and 40 – in a classic way. In multiple pregnancies the technique of fetus extraction in the amniotic sac was successful for 19 newborns. Results: The fetuses’ condition severity is explained by the degree of immaturity and the respiratory distress syndrome. The fetuses extracted in the amniotic sac needed less resuscitation and artificial lung ventilation duration than the compared ones. According to catamnesis the morbidity rate is 1.9 fold better, the incidence of perinatal lesion of central nervous system, periventricular leukomalacia, the respiratory support duration and length of hospital stay was significantly lower. Conclusion: The fetus extraction in the amniotic sac reduces resuscitation intensity and influence of intraoperative and intrapartum negative factors because of hydraulic protection of the fetus being extracted.

SA08.4
Uterine reconstructive surgery of Cesarean scars
Anton A Fedorov

Abstract not available at the time of printing

SA08.5
Post-Cesarean section hormonal contraception
Marina Yu Eliseeva, IP Kosmas, OA Mynbaev,
The Institute of Postgraduate Education of the Russian Federal Medical & Biological Agency, Moscow, Russian Federation

Postpartum contraception - is a conditional definition, include period of time after birth, when women use contraception: breast feeding period; time span till 18-24 months when women will recover fully after birth. Worldwide prevalence of undesirable pregnancies is high, particularly following childbirth. In Russia every 1/4 women induce abortion during 1 year after delivery. Healthcare services have been applying forces to introduce suitable postpartum contraception methods. Therefore the purpose of our research was to evaluate physicians' decisions to control undesirable pregnancies after cesarean sections. Our survey included 200 obstetrician-gynecologists in outpatient clinics from different regions of Russian Federation. Physicians have used different modalities of postpartum contraception, including lactational amenorrhea method for breastfeeding women, and mostly condoms, intrauterine devices and hormonal pills (progesterone only). Occasionally physicians recommend surgical sterilization if there are indications for. In Russian regions most used oral contraceptives are pills containing desogestrel. In conclusion, according to our questionnaire, physicians are intending to use contraceptive pills after Cesarean section, but intrauterine devices and condoms are remaining as traditionally called-for by population in many Russian regions.
SA09  Endoscopy today

*Arranged by European Society of Gynecological Endoscopy (ESGE)*

SA09.1
Single port laparoscopy. indications and limits
Stefano Angioni

Abstract not available at the time of printing

SA09.2
Laparoscopic hysterectomy: the very large uterus
Horace Roman
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Total and supracervical laparoscopic hysterectomy may be safely performed in very large benign uterus, weighting more than 1,500 g. The keys to a successful total hysterectomy are: the upward trocar sites which depend solely on uterus size, the complete devascularization of the uterus before any other surgical procedure is performed on the uterus, and its appropriate fragmentation which allows sectioning of the uterine pedicles close to the uterus and bladder dissection. To these could be added the previous free-residue diet that further guarantees safety and peroperative convenience and the strong mobilization of the uterus by use of a uterine manipulator. The first stage, performed at the onset of the surgical procedure, is complete uterus devascularization, by coagulating both uterine arteries at the artery origin and infundibulo-pelvic ligaments or utero-ovarian vessels. The second stage of the total laparoscopic hysterectomy involves reducing the volume of the uterus mainly by uterine morcellation, then following stages are similar to those described in the classical procedure. When supracervical hysterectomy is performed, the devascularized uterine isthmus can be safely sectioned using monopolar current endoloop, followed by the morcellation of the uterus. Primary devascularisation of enlarged uterus is a smart technique which prevents unexpected peroperative hemorrhage requiring conversion to the abdominal route and provides optimal protection for the ureter.

SA09.3
Role of laparoscopy in gynecological oncology
Michel D Müller

Abstract not available at the time of printing

SA09.4
Robotics in gynaecology
Vito Cela

Abstract not available at the time of printing
SA10  Society Symposium
   Arranged by World Health Organisation

SA10.1
Women wellbeing, health and weight
Joao Breda

Abstract not available at the time of printing

SA10.2
WHO 'Beyond The Numbers' framework and approaches to improve quality of care in the WHO European Region
Alberta Bacci
WHO Regional Office for Europe, Copenhagen, Denmark

Every year, many women suffer pregnancy-related complications and some die. Knowing the rates of maternal mortality is not enough; understanding the underlying factors that led to the deaths is essential, so that lessons can be learnt to help avoid such outcomes. There is a story behind every maternal death or life-threatening complication. World Health Organization 'Beyond the numbers' (BTN) provides guidance to case reviews of maternal deaths and complications, to gain the evidence on where the main problems lie and what can be done in future. Case reviews can help to identify opportunities to improve existing systems without emphasizing blame or punishment: they can be used to develop recommendations based on evidence and confidentiality. The purpose is to translate the findings of case reviews into action and interventions to improve quality of care. These findings are a powerful advocacy tool that Ministers of Health and decision-makers can use to raise awareness and mobilize national and donor resources. WHO/Europe has introduced BTN in 14 countries, and piloted and rolled it out in 8, with the assistance of development partners including the UNFPA, UNICEF, and USAID. Two approaches were selected by these countries: Confidential Enquiries into Maternal Deaths at national level, and Near Miss case reviews at maternity hospital level. From a rigid system in which audits were aimed at punishing culprits, BTN released a surge of intensified teamwork, improved the quality of care and increased professional pride among health care providers.

SA10.3
Updated WHO guidance on prevention and management of unintended pregnancy
Gunta Lazdane
WHO Regional Office for Europe, Copenhagen, Denmark

Updated WHO evidence-based guidance on the medical eligibility criteria (MEC) for use of contraception includes information on the safe use of different methods for women with specific characteristics or known medical conditions. “Selected practice recommendations for contraceptive use” accompanies MEC and provides answers for health care providers who face difficulties in counselling their clients on contraceptive use. The MEC wheel is a handy job aid that can easily be used by primary health care providers (http://www.who.int/topics/family_planning/en/). The updated version includes no restrictions for several hepatic diseases. Contraceptive prevalence in the countries of the WHO European Region varies. The prevalence of any modern contraceptive method is as low as 10% in several countries compared to 80% in others. WHO Member States have confirmed that the prevention of unsafe abortion is crucial for improving sexual and reproductive health. Nevertheless, many unsafe methods are still used for termination of unintended pregnancy. The updated “WHO Safe Abortion Guidance: Evidence- and Rights-Based Recommendations to Strengthen Access and Quality of Care” is expected in 2011.
Contraceptive use among adolescents is influenced by many factors, like biology/genetics, developmental stage, demographic background and socioeconomic status, family characteristics, peer influences, and various psychosocial variables. However, the skills and knowledge related to safe sexual behavior and recognition of personal responsibility with respect to sexual and reproductive decisions making process appear to be essential for healthy and satisfying sexual life of youngsters. In spite of the increased sexual activity among adolescents in Serbia, which is especially observed in the females, sex education is not included in school curricula. Therefore, main sources of getting relevant information are media, internet and peers. The promising action is development of youth advisory services within primary health care institutions in larger Serbian municipalities. In these services young people are offered comprehensive sex education, contraceptive counselling and prevention and treatment of sexually transmitted infections. However, these services are attended by a small percentage of adolescents. With the aim to spread information about benefits of modern contraception use to the larger proportion of young people, peer education in schools and media campaigns have been started ten years ago. Unfortunately, according to current data, less than a half of sexually active youth use efficacious methods to prevent pregnancy. To improve this unfavourable situation and increase the capacity of teenagers to enjoy in their sexuality, it is necessary to establish age appropriate and comprehensive sex education from the early age, as well as to include all relevant educators, particularly parents, teachers and health care workers.

The impact of the new abortion law in Portugal
Teresa Bombas
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In 2007, abortion at woman’s request up until 10 weeks gestation was legalized in Portugal. Legalization was meant to make abortion safe and also to improve family planning. Before 2007, the exact dimension of illegal abortion was unknown, being estimated that there should be around 20000 cases per year. After legalization 18000 to 20000 cases have been recorded yearly. Portugal has one of the lowest rates of abortion in the EU: 199/1000 live births in 2009, only Finland (175) and The Netherlands (154) having lower rates. Over the last 3 years there has been a clear reduction of recorded cases of serious complications after illegal terminations of pregnancy: from 2001 to 2007 there were 14 maternal death related to abortion; only one has occurred since then. Within the National Health System contraceptive methods are free of charge. The Portuguese legislation includes provisions to guarantee contraceptive counseling to every woman that requests abortion and in fact 94 to 97% of them initiates a contraceptive method afterwards. Some health professionals and significant segments of the community feared that the new legislation might increase the abortion rate, turning it into a “form of contraception”: that has not been the case, since the abortion rate has stayed stable and for the great majority of women it stands as a first event. Keeping a low rate of abortion and improving accessibility and effectiveness of contraceptive counseling are the main objectives of the Health Professionals in Portugal, today and for the years to come.
What do women want in contraception
Inaki Lete Lasa
Hospital Santiago, Vitoria, Spain

If you want to know what women want, don't assume, ask them. When thinking about contraception women want affordable, safe, effective and convenient methods as concluded in several surveys. As physicians we can consider the most important request for a contraceptive method is its efficacy. In this regard we know the differences between perfect and typical use of contraceptive methods and it should be reasonable to expect the most selected and used methods were those having the highest Pearl Index (Implants, Levonorgestrel releasing IUD). But when analyzing the use of contraceptive methods in Europe, we find the most used method is the contraceptive pill and the second one the condom. These data probably mean the efficacy is not the only request and women want other things besides the efficacy. One of the most important concerns before to choose a contraceptive method is its safety profile specially the side effects profile. We know since Rosemberg's studies the risk of pill discontinuation is side effect related and to experience intermenstrual bleeding increases two fold the possibility of discontinuation. It has been published to experience side effects leads to dissatisfaction and dissatisfaction leads to discontinuation. Women want to be satisfied with their contraceptive method because satisfaction is the most important factor for continuation. Asking about the preferred regimen women prefer a monthly regimen more than a daily regimen. These results are concordant with the preferences in the Hormonal Replacement Therapy field, were the most preferred regimen was a monthly one. The most important reasons to choose a non daily method were the convenience and the fact that a monthly treatment fits better women's lifestyle. Finally there are some studies demonstrating women consider other factors before choosing a contraceptive method. As found in a Spanish study carried out among women wishing to use a combined hormonal contraceptive method, compliance is an important concern they consider and think about. Women want information about the different possibilities and efficacy, ease of use and compliance are main concerns in contraceptive selection. Physicians should include these aspects during contraceptive counseling. Probably women want to have the choice to choose.

Contraception and women's health
Johannes Bitzer
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Introduction: The relationship between contraception and women's health is two fold. Contraception helps to avoid the health consequences of unplanned pregnancies and contraceptive methods impact on women's health through possible health risks and side effects. Methods: Review of the litterature regarding the health consequences of unplanned pregnancies and the health outcomes of different contraceptive methods. Results: Unplanned pregnancies have a negative impact on womens health on several levels: Increased pregnancy and perinatal complications, morbidity of abortion, negative psychosocial consequences regarding education, autonomy and professional development of women. Contraceptive methods have various health risks depending on the nature of the method. Hormonal contraceptives have mainly cardiovascular risks, barrier methods including Copper IUDs may increase PID and pose a threat to fertility.. The impact of the methods on quality of life depends on their side effect profile. These rate of these events can be influenced by good counselling and clinical care. Conclusion: In a global level effective contraception has the potential to contribute to large extent to women's health especially regarding mother and child health and mental health of women. On the individual level negative health consequences of contraceptive methods can be kept to a minimum by good professional care.
The breast cancer (BC) incidence is 124 cases per 100 000 women per year. Life-time risk for BC is 1 in 8 women (12.5%). On the other hand, death rate from BC is very low; age-adjusted death rate is 24.0 cases per 100 000 women per year. BC has relatively highest survival rate among women. Therefore, the identification of risk factors for early detection of BC is important issue among women. Different institutions and authors have proposed different risk factors for prevention from BC and suggested risk assessment models for early detection of BC. All risk factors have different impact on BC. Certain risk factors are accepted by all authors, such as; certain age, certain inherited genetic mutations for BC, family history of BC, high breast tissue density, biopsy-confirmed atypical hyperplasia, exposure to high dose radiation, early menarche, late menopause, late age first full-term pregnancy or no full-term pregnancy, obesity, alcohol consumption vs. In addition to these risk factors, multi gene expression arrays are currently being developed and can be useful for the diagnosis and treatment of early breast cancer. All these methods for identification of risk factors for BC are helpful for selecting the women for MHT. On the other hand, use of MHT has a special consideration as a risk factor for BC after WHI study. However, re-analysis of WHI study and some other prospective cohort studies showed us the importance of certain characteristics of MHT such as; the age of initiation of MHT, gap years from menopause to MHT, duration of use, estrogen only versus combined estrogen plus progestin therapy, continuous versus sequential MHT, oral versus transdermal MHT, dose of MHT, and finally type of estrogens and progestins.
Menopause is an individual experience deriving from a complex interplay of biological, psychological and socio-relational factors which collectively impact on physical, mental and sexual well-being in many women. Sexual symptoms display a variable prevalence across studies depending on several factors (i.e. sample, design, symptomatology, socio-cultural background, etc.). Age and menopausal transition may impair the integrity of multiple biological systems involved in the normal sexual response. On the other hand, several intrapersonal and interpersonal issues may also affect feminine identity and quality of relationship which are equally important for expressing sexual feelings and behaviors. That being so, menopause is always, but particularly when it occurs prematurely or surgically and if vulvo-vaginal atrophy is evident, 'the golden moment' to bring up the topic of the quality of sexual life. Women may not be willing to start a conversation on sexual interest, behaviour and activity themselves, but they usually appreciate to be questioned by doctors. Indeed, it has been published that 3% of women spontaneously offered sexual complaints without direct inquiry, while an additional 16% acknowledged sexual problems upon questioning. In addition, among older adults in the US, in spite of the high prevalence of sexual symptoms, only a total of 22% of women reported having discussed sex with a physician since the age of 50 years. Some very simple questions may help the clinician to establish a connection between the occurrence of sexual symptoms and the menopausal transition, while it may require a skilled training to determine whether factors other than the hormonal changes enter the picture of sexual health. It is important to underline in here the great difficulties of bringing up sexual issues in the routinely consultation at menopause. Indeed, the menopausal symptom for which physician consultation is the highest is hot-flushes (37%) which are present in a series of 300 women aged 45-55 years in 46% of the cases, while changes in sexual desire, in spite of its high prevalence (41%), are a matter of consultation only in 7% of the cases. This may be due to a lack of awareness of postmenopausal women on the link between hormonal changes and sexual function or, alternatively, to the necessity of basic counselling 'to break the ice' in clinical practice.

SA13.2
HRT and cancers other than breast
Anne Gompel

Abstract not available at the time of printing

SA13.3
When might endometrial hyperplasia be hiding a cancer?
Lian Ulrich
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Endometrial hyperplasia results from unbalanced estrogen stimulation. It is characterised by histology as simple or complex and by cytology as hyperplasia with or without atypia. Hyperplasia without atypia is often seen during the years around menopause and spontaneous regression occurs in approximately 70% of cases without treatment. The risk of progression to cancer is low: 4-5% in 20 years. Observation without treatment is safe, but if hyperplasia persists more than 3-6 months, continuous progestogen
treatment is recommended, e.g. with a progestogen IUD for at least 6-12 months. Control should continue until total regression. Hyperplasia is not a normal finding in the late postmenopause and may be precursor of or co-existing with endometrial cancer. Treatment is directed at the cause of estrogen stimulation – eg obesity or unopposed estrogen treatment in which case progestogen should be added. Bleeding is not associated to endometrial histology during hormone replacement therapy and is not useful in controlling the endometrium. Histology is needed. Hyperplasia with atypia progress to cancer in about one third of cases and should be treated as cancer. Based on 778 patients originally diagnosed with hyperplasia with atypia in the Danish Gynecological Cancer Database, co-existent endometrial cancer was found in 59% of cases at time of surgery and 11% were stage II or higher. Risk of coexistent cancer was positively related to age but not to BMI. Young women with atypical hyperplasia are often obese or have co-existent ovarian pathology. Conservative treatment should include ovarian imaging and biochemistry.
SPONSORED SYMPOSIA

Thursday, 08 September 2011, 11:30 - 13:00

SS01  Benefits of new intake regimens in OCs
Sponsored by Bayer Pharma AG

SS01.1
New International Active Surveillance Study (INAS) results on OC effectiveness in real-life
Inger Sundström Poromaa

Abstract not available at the time of printing

SS01.2
24/4 drospirenone (DRSP)* - clinical benefits
Francesco M Primiero

Abstract not available at the time of printing

SS01.3
Contraceptive regimens and frequency of bleeding
Anne Szarewski

Abstract not available at the time of printing
Thursday, 08 September 2011, 13:15 - 14:00

SS02    Sponsored Symposium
   
   Sponsored by OM Pharma

Programme not available at the time of printing
Thursday, 08 September 2011, 14:00 - 15:30

SS03  Mirena® (levonorgestrel) and Qlaira® (Estradiol Valerate/ Dienogest) - more than just contraception
  Sponsored by Bayer Pharma AG

SS03.1
Should the utilization of intrauterine contraception be increased?
  Diana Mansour

Abstract not available at the time of printing

SS03.2
Recent study results with Mirena®
  Mary Short

Abstract not available at the time of printing

SS03.3
Qlaira® - the pill unlike any other pill
  Ian Milsom

Abstract not available at the time of printing
SS04  A breakthrough in the natural evolution of oral contraception
Sponsored by MSD and Théramex/TEVA

SS04.1
The replacement of ethinyl estradiol with estradiol: Optimization by pairing with nomegestrol acetate
Alfred O Mueck

Abstract not available at the time of printing

SS04.2
A monophasic nomegestrol acetate/estradiol contraceptive pill with a profile that addresses women's needs
Andrea R Genazzani

Abstract not available at the time of printing

SS04.3
Nomegetrol acetate/estradiol: a favorable metabolic profile
Sophie Christin-Maitre

Abstract not available at the time of printing
SS05  Combined oral contraceptives: responsible prescribing, benefits and risks
Sponsored by Bayer Pharma AG

SS05.1
Responsible prescribing of combined oral contraceptives
Ali Kubba

Abstract not available at the time of printing

SS05.2
Benefits and risks of combined oral contraceptives
Anne Szarewski

Abstract not available at the time of printing

SS05.3
Postmarketing safety studies with drsp-containing combined oral contraceptives
Phil Smits

Abstract not available at the time of printing
SS06  Visanne® (dienogest) - a new way to treat endometriosis
   Sponsored by Bayer Pharma AG

SS06.1
Prevalence of endometriosis and the impact on a patient’s quality of life
Felice Petraglia

Abstract not available at the time of printing

SS06.2
Clinical experience with Visanne®* in the treatment of endometriosis
Ludwig Kiesel

Abstract not available at the time of printing
Selective Progesterone Receptor Modulators (SPRMs) are a newer form of medical therapy that can be grouped in a large family of progesterone receptor (PR) ligands with mixed agonist-antagonist properties. Their biological effects are linked to their ability to bind to PR isoforms and recruit, in a tissue-specific manner, co-modulators that in turn modify transcription. The precise effects of SPRMs differ among the various compounds; this is thought to depend upon varying interactions with co-activators and co-repressors and/or specific modification of the PR-ligand binding domain. Nonetheless, all SPRMs suppress luteinizing hormone surges and ovulation without down regulating ovarian oestrogen levels, they also induce amenorrhea and produce reversible changes in endometrial morphology termed "Progesterone Receptor Modulator Associated Endometrial Changes" (PAEC). Ulipristal Acetate presents a dominant progesterone antagonist property and has confirmed that SPRM treatment of women with symptomatic uterine fibroids stops bleeding and reduces fibroid volume whilst not affecting oestradiol secretion and thus bone mass density. Ulipristal acetate may be a useful new tool in the armamentarium against uterine fibroids. The mechanisms of fibroid volume reduction with SPRMs are not fully understood but in vitro studies suggest that it exerts a direct action on fibroids, reducing their size through the inhibition of cell proliferation, induction of apoptosis and inhibition of angiogenesis. Ulipristal Acetate has completed the Phase III Studies for short term used successfully in patients with symptomatic uterine fibroids.
Introduction: Ulipristal Acetate belongs to a new class of drugs named Selective Progesterone Receptor Modulators (SPRMs). It is a hormonal treatment with a unique and targeted mode of action that reversibly binds the progesterone receptor in its target tissues and act as a potent, orally active progesterone receptor modulator. Results: A randomized Phase IIb study has evaluated the efficacy and tolerability of ulipristal acetate in premenopausal women with symptomatic uterine fibroids. Women aged 33 - 50 years with symptomatic uterine fibroids were randomized to receive once-daily oral ulipristal acetate (10 or 20 mg) or placebo for 12 weeks. Assessments included change in fibroid volume; amenorrhea; symptom severity and quality of life. Preliminary data analysis demonstrated that, unlike placebo, ulipristal acetate suppressed bleeding and reduced fibroid volume in most patients. Moreover, patients treated with ulipristal acetate showed a reduction in symptom severity and an improvement in quality of life. Ulipristal acetate was well tolerated without safety concerns. These data demonstrate that ulipristal acetate controls bleeding, reduces the size of fibroids and improves quality of life in women with symptomatic uterine fibroids. Building on these promising results, Phase II studies were started and 549 patients have been recruited across Phase I-III, double-blind, randomized, and controlled trials. The target population is composed of pre-menopausal women with symptomatic UF characterized by at least heavy bleeding and eligible for surgery. Conclusions: ALL Studies met the primary endpoints and shortly, further data will become available.
SS08.1
Introduction
Usha Menon

Short Summary Ovarian cancer (OC) is the gynecologic cancer with highest mortality. One in 70 women is at risk of developing an OC over her lifetime. The high frequency and poor prognosis of OC emphasizes the need for both additional and better diagnostic and prognostic factors. Recent studies have concluded that OC patients treated by gynecologic oncologists have better debulking rates and outcomes than patients treated by general gynecologists or general surgeons. Correct referral of ovarian cancer patients for surgery is therefore crucial. Practical experience from primary surgery will be used to illustrate the clinical need for a patient stratification tool. The combined use of the tumor markers HE4 and CA125 is intended to facilitate the stratification of patients based on their risk of ovarian malignancy. Independent validation data of this Risk of Ovarian Malignancy Algorithm (ROMA) are now available from Europe: The Danish Pelvic Mass study is a prospective study collecting clinical information and biological materials from patients with a pelvic mass. This study is optimal for translational research. The present study included serum samples from 1282 consecutively enrolled patients, with either an OC, Low Malignant Potential ovarian tumor, another malignancy or a benign ovarian tumor. All samples were blindly analysed for CA125 and HE4 and used for calculating the ROMA Index. Results of CA125, HE4 and ROMA used as marker/markers of differentiation will be presented and discussed. The investigators conclude, to present for the first time, a single marker, HE4, with a higher diagnostic accuracy than the gold standard CA 125. The accuracy was additionally improved by ROMA.

SS08.2
Usefulness of HE4 in endometriotic cysts
Antti Perheentupa
Turku University Hospital, Department of Obstetrics and Gynaecology, Turku, Finland

Endometriosis is a common benign gynecological condition that may affect up to 10% of women in reproductive age. The diagnosis of endometriosis relies on laparoscopy. Transvaginal ultrasound examination is of value, particularly in women with ovarian endometriomas. However, neoplastic ovarian cysts can resemble endometriomas in ultrasound. Furthermore, endometriosis increases the risk of certain ovarian cancer (OC) subtypes, like endometrioid and clear-cell carcinomas, which are thought to arise, at least partly, from endometriosis. CA125 is the most common biomarker in OC diagnostics. Unfortunately, it has a high false-positive rate among women with benign gynecological conditions like endometriosis. Furthermore, CA125 has low sensitivity in early-stage OC. To improve specificity and sensitivity, the use of novel biomarkers such as HE4 alone or in combination with CA125 have been intensively studied. HE4 possesses increased sensitivity for detecting OC, especially the stage I disease. However, the expression in endometriotic lesions is unknown. We measured serum HE4 and CA125 in 129 patients with endometriosis of whom 69 had ovarian endometriomas and compared with results obtained in 16 endometrial cancer patients, 14 with OC, and 66 healthy controls. HE4 levels were similar and below the 70pM limit, both in patients with endometriosis and in healthy controls. In summary, HE4 was not increased in patients with ovarian endometrioma or any other types of endometriosis. CA125 concentration was increased in patients with advanced endometriosis. The results, thus, suggest that the HE4 is a valuable marker to better differentiate patients with ovarian malignancies from those with benign ovarian endometriotic cysts.
Diagnostic value of HE4, CA125 and the ROMA index in ovarian cancer patients from a tertiary center

Claus Hogdall
University of Copenhagen, Rigshospitalet, Gynecologic Clinic, Juliane Marie Centre, Copenhagen, Denmark

Ovarian cancer (OC) is the gynecologic cancer with highest mortality. One in 70 women is at risk of developing an OC over her lifetime. The high frequency and poor prognosis of OC emphasizes the need for both additional and better diagnostic and prognostic factors. Recent studies have concluded that OC patients treated by gynecologic oncologists have better debulking rates and outcomes than patients treated by general gynecologists or general surgeons. Correct referral of ovarian cancer patients for surgery is therefore crucial. The combined use of the tumor markers HE4 and CA125 is intended to facilitate the stratification of patients based on their risk of ovarian malignancy. Independent validation data of this Risk of Ovarian Malignancy Algorithm (ROMA) are now available from Europe: The Danish Pelvic Mass study is a prospective study collecting clinical information and biological materials from patients with a pelvic mass. This study is optimal for translational research. The present study included serum samples from 1282 consecutively enrolled patients, with either an OC, Low Malignant Potential ovarian tumor, another malignancy or a benign ovarian tumor. All samples were blindly analysed for CA125 and HE4 and used for calculating the ROMA Index. Results of CA125, HE4 and ROMA used as marker/markers of differentiation will be presented and discussed. The investigators conclude, to present for the first time, a single marker, HE4, with a higher diagnostic accuracy than the gold standard CA 125. The accuracy was additionally improved by ROMA.
SS09 Improving global contraceptive care: thinking of emergency contraception as a natural piece of the puzzle
*Sponsored by HRA Pharma*

SS09.1 Emergency contraception use in Europe: where do we stand?
*Raha Shojai*
Assistance Publique Hopitaux de Marseille - CHU Nord, Department of Gynecology & Obstetrics, Marseille, France

Background: Despite a high level of contraceptive use in Europe, there are still a significant number of unwanted pregnancies. Methodology: A literature review was realized to identify reasons for this discrepancy and to understand the role of emergency contraception (EC). Results: Women on regular contraception are far less likely to have unwanted pregnancies than those who have no contraception at all. However inappropriate use of contraceptive methods contributes to the majority of unwanted pregnancies. The two most popular methods of contraception: oral contraception and condoms have approximate failure rates in actual use of 9% and 17% respectively. In France, this leads to an estimated number of 24 millions acts of unprotected sex each year only for women who are on OC and condoms. In contrast, only 1.28 million of EC pills were delivered last year in France. The main reasons for this underuse are misperception of risk of pregnancy, lack of knowledge among women and barriers to EC access. Conclusion: A global strategy integrating EC with effective contraception may contribute to prevent an unwanted pregnancy on an individual scale.

SS09.2 ellaOne®: mode of action, efficacy and safety
*Sharon Cameron*
NHS Lothian, Chalmers Sexual and Reproductive Health Service, Edinburgh, UK

Background: ellaOne (ulipristal acetate 30 mg) is the first progesterone receptor modulator to be developed for emergency contraception (EC). Its benefit/risk ratio is based on an extensive efficacy and safety database. Additional data is available from post-marketing experience since the launch in Europe in 2009. Methodology: All relevant materials on ellaOne including registration dossiers, recent published exploratory analyses and post-marketing pharmacovigilance database have been compiled. Results: ellaOne is the only oral EC method that is licensed for use beyond 72h after intercourse. However it should be taken as soon as possible after intercourse. A comparative meta-analysis, has shown that ellaOne is twice as effective as levonorgestrel (1.5mg) when administered within 72h of intercourse and that the risk of pregnancy is reduced by three compared to levonorgestrel, if taken with 24hr of intercourse. This higher efficacy has to be linked to the ability of ellaOne to inhibit or delay follicular rupture when given just prior to ovulation, a time when levonorgestrel is no longer effective. In clinical trials, UPA has been shown to be safe with a similar AE profile to levonorgestrel. This excellent safety profile is supported by postmarketing data based on an estimated 300 000 women exposed to this product. Conclusion: EllaOne is a more effective oral EC than levonorgestrel with similar tolerability. EllaOne should now be considered as the preferred option for oral EC.

SS09.3 Prescribing emergency contraception in practice
*Carlo Bastianelli*
University of Rome, Department of Obstetrics, Gynecoacological and Urological Sciences, Rome Italy

Background: National reports suggest emergency contraception (EC) is still broadly underused in Europe. In many countries, physician prescription is still necessary for EC product access or reimbursement. Because EC pills are more efficacious when taken as soon as possible after unprotected intercourse, the counseling role of the physician appears essential for optimal use and the prevention of unwanted pregnancy. Summary: EC pills are usually prescribed in an emergency situation after
unprotected intercourse or a contraceptive failure. This clinical setting is obviously loaded with anxiety for the woman and the role of the physician is to provide her with the most effective EC method to avoid pregnancy at that specific time. However in a routine clinical consultation for gynaecological check up women should be counselled on available methods of contraception and also on emergency contraception modalities. Women should be informed that EC should not be used for routine pregnancy prevention, but that in case of an unprotected intercourse the use of EC can prevent an unwanted pregnancy. It has been shown that advance provision increases the use of EC and improves promptness of EC use following unprotected intercourse, but does not have an impact on unintended pregnancy at a population level. Interestingly, most studies on advanced provision found no negative effects on ongoing contraceptive use or risky sexual behaviours. Conclusion: Informing women about EC should be done routinely during gynaecological consults and should be considered as a natural part of the contraceptive counselling.
FC01 Young scientist session Part I

FC01.1 Accidental findings of ovarian cysts

Rikke Sørensen, KR Petersen
Odense University Hospital, Department of Gynecology & Obstetrics, Odense, Denmark

Study objectives: An increasing number of patients are referred to MR, CT or abdominal ultrasound because of suspected extragenital disease. Such examinations may demonstrate accidental, asymptomatic ovarian cysts which poses diagnostic and therapeutic problems. In the present study we followed the clinical course of such women with special reference to the risk of malignancy and surgical complications. Methods: Retrospective study of patients referred to a tertiary University clinic because of accidentally found ovarian cysts during 2009 and 2010. Results: We identified 78 patients with ovarian cysts demonstrated by CT, MR or abdominal ultrasound. Their median age was 53 y.(range 15-84). 10 women were previously hysterectomized and of the remaining were 27 women(40%) postmenopausal. 2 postmenopausal women showed clinical signs of disseminated malignancy, which proved to be of ovarian origin. They were referred to primary chemotherapy. Of the remaining 76 women, there was no indication for surgical treatment in 46 women (62%) as judged by vaginal ultrasound and measurements of CA-125. 30 women (38%) were operated, 7 by laparotomy and 23 laparoscopically. No cases of malignancy were found. One patient had a small intestine perforation at surgery. It was treated primarily and she recovered uneventfully. 29 operations were uncomplicated. Conclusion: The study shows that the risk of malignancy in a patient with an asymptomatic and accidentally found ovarian cyst is small, and that the surgical treatment is associated with potential serious complications. Our results suggest that a more conservative approach to asymptomatic and accidentally found ovarian cysts may be acceptable.

FC01.2 Conservative management of ovarian cystic teratomas (Dermoid cysts)

Ahmad Ghiyath Shaye(1), P Lewis(2)
(1) University Hospital of Wales, Cardiff, UK
(2) Royal Albert Edward Infirmary, Wigan, UK

Objective: To assess natural progress of ovarian cystic teratomas, and the safety of expectant management. Methods: A prospective study of 41 pre-menopausal women with dermoid cysts all accepted expectant management between 2000 and 2007, in a North West of England NHS Trust. Patients were followed up with trans-vaginal ultrasound first 3 months after diagnosis, then 6 monthly for 2 years and annually thereafter. Colour Doppler ultrasonography and CA125 were used during the follow up. Results: Age at diagnosis, and the diameter of the cyst median (IQR) were 38 years (30, 42.5), 3.3 cm (2.5, 4.7) respectively. 10 (24%) patients had pelvic discomfort, and the finding of the cyst was coincidental in the rest. The mean period of follow up was 2 years (range 1-5 years). During follow up the majority of the cysts remained unchanged (37 cases), 1 became smaller, and 3 enlarged. 14 patients (34%) underwent surgery for their cysts during the follow up period. The indications were patient request (6), increasing discomfort (2), electively during another procedure (3), and medical advice (3). Patients who underwent surgery had larger cysts and more pelvic discomfort at diagnosis. Histology has confirmed the benign nature of the lesions in all of these cases. None of the patients managed conservatively have developed any signs or symptoms suggesting ovarian cancer. Conclusion: Most cystic teratomas remained unchanged during long term follow up. Our results support conservative management of ovarian cystic teratomas with adequate patient counselling. Reassurance may help to reduce anxiety and requests for surgery.
Management of Vulval Intraepithelial Neoplasia (VIN): a review of surgical and therapeutic medical treatments

Jessica Hui Cheah Lim(1), GHC Lim(2), MWA Mangat(3), F-A Sefre(1)

(1) Glasgow Royal Infirmary, NHS Greater Glasgow and Clyde, UK
(2) University of Glasgow, UK
(3) Crosshouse Hospital Kilmarnock, NHS Ayrshire and Arran, UK

Background: The incidence of Vulval intraepithelial neoplasia (VIN) is rising in younger population. Progression risk to vulval cancer remains low (<5%), but not negligible. The management of VIN is not well established. Objective: To compare the efficacy of radical vulvectomy, wide local excision (WLE), CO2 laser ablation and various medical therapies in treatment of VIN. Methods: All the literature in Pubmed and Medline were examined. 3174 patients from retrospective and prospective trials from 1968 to April 2011 were analysed. Recurrence rates, disease-free intervals, histological regression rates, advantages and disadvantages of each treatment were examined. Results: Radical vulvectomy achieved lowest recurrence (mean recurrence 15.4%) with the longest disease-free interval. The combined technique of WLE and laser ablation was next best (mean recurrence 25%), followed by WLE (26%) and laser ablation (30% - when performed alone). The most effective medical therapy was imiquimod (short-term mean recurrence 29.5%), followed by photodynamic therapy, PDT (43.8%). Therapeutic Human Papilloma Virus (HPV) vaccination showed a histological regression rate of 30-50%. Discussion: Vulvectomy is rarely performed nowadays due to severe psychosexual sequels. The current standard practice is WLE. Laser ablation is more cosmetically acceptable and should be considered in non-hair bearing lesions. Imiquimod and PDT are effective short-term, but require further studies to confirm the long-term efficacy. HPV vaccination proves to be promising, but is highly dependent on individual immune response. Conclusion: There is no single best treatment in managing VIN. Specific treatment should be based on the nature of VIN, clinician's experience, patients' characteristics and preference.

Uterine healing after treatment with TachoSil in the uterine cavity at the cesarean sectio with postpartum hemorrhage due to placenta previa

Katrine Fuglsang(1), M Dueholm(1), LK Petersen(1), E Stæhr-Hansen(2)

(1) University Hospital of Aarhus, Department of Gynecology and Obstetrics, Skejby Sygehus, Aarhus, Denmark.
(2) University hospital of Aarhus, Aarhus Sygehus NBG, Department of Patology and Anatomy, Aarhus, Denmark.

Objective: Application of a hemostatic fleece (TachoSil) directly onto the bleeding surfaces of the lower uterine segment has been used to obtain hemostasis during cesarean section due to placenta previa. The resorption of TachoSil in the uterine cavity was evaluated. Design: Quality control study. Setting: Department of Gynecology and Obstetrics, University hospital of Aarhus, Skejby Sygehus, Denmark. Patients: 11 of 15 treated with TachoSil for excessive post partum haemorrhage due to placenta previa attended the study. Interventions: Evaluation of the cesarean sectional scar by transvaginal ultra sound, the uterine cavity and endometrium by hysteroscopy and biopsy from the endometrium 5-25 month after treatment. Main outcome measures: Intrauterine adhesions, recovery of endometrium at the place for TachoSil application, visible remnants of TachoSil and healing of scars. Results: Eight patients had small reminiscence of TachoSil in the uterine cavity with signs of resorption. All had normal covering of endometrium and none had adhesions in the uterine cavity. All the cesarean sectional scars were healed without defects. Conclusion: TachoSil did not seem to impaire healing of the endometrium and scar formation in uterus after intruterine application at cesarean section. Resorption of TachoSil seems to be a process with individual velocity. Intrauterine treatment with Tachosil is a worthy supplement to traditional treatment of post partum haemorrhage which may retain the ability for reproduction. One year after the clinical control six of fifteen patients were found spontaneously pregnant by reviewing their hospital records (table 1).

Tabel 1. Results of clinical control and overview of pregnancies after treatment with TachoSil application in the uterine cavity.
a mens; menstruation was regained approximately two to three month post partum, but they did not remember the exact time interval for menostasia.
† Did not attend the clinical control due to pregnancy

<table>
<thead>
<tr>
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<th>Pregnancy</th>
<th>Sectio</th>
<th>Age</th>
<th>Menostasia</th>
<th>Time since delivery</th>
<th>Ultrasound</th>
<th>Hysteroscopy</th>
<th>Pathology Endometrium</th>
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Abnormal uteroplacental Doppler flow is associated with high NTproBNP and adverse offspring outcome in women with congenital heart disease

Ali Balci(1), KM Sollie(2), MWM de Laat(3), J Cornette(4), ME Spaanderman(5), JJM van Roosmalen(6), MA Oudijk(7), JPM Offermans(8), W Drenthen(1), JG Aarnoude(2) DJ van Veldhuisen(1) PG Pieper(1)

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(2) University Medical Center Groningen, Department of Obstetrics and Gynecology, Groningen, Netherlands
(3) Academic Medical Center, Department of Obstetrics and Gynecology, Amsterdam, Netherlands
(4) Erasmus Medical Center, Department of Obstetrics and Gynecology, Rotterdam, Netherlands
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Purpose: To elucidate the mechanism of offspring events in pregnant women with congenital heart disease (CHD), by comparing uteroplacental Doppler flow patterns (UDFP) between women with CHD and healthy controls, and by relating UDFP to NTproBNP and to offspring outcome.

Methods: In ZAHARA II, a prospective multicenter cohort study, we compared UDFP, measured at 20 and 32 weeks gestation, in 186 pregnancies in 177 women with CHD and 68 pregnancies in 68 healthy women. We related the UDFP in women with CHD to offspring outcome and to high NTproBNP levels (>95% of our control group).

Results: The umbilical artery pulsatility index (PI) and resistance index (RI) at 32 weeks gestation were higher in women with CHD than in healthy controls. (Table 1a) Offspring events occurred in 35.2% of pregnancies in women with CHD. Uterine artery RI at 20 weeks gestation, and umbilical artery PI and RI at 32 weeks gestation were associated with offspring events (OR 23.8, 95% CI 1.0-568, p=0.50; OR 6.4, 95% CI 1.3-30.8, p=0.22; and OR 179.0, 95% CI 1.6-19770 respectively). Women with high NTproBNP levels (>95% upper limit in our control group: 77 ng/L) had higher uterine artery PI at 32 weeks gestation. (Table 1b).

Conclusion: We demonstrated that uteroplacental Doppler flow patterns are abnormal in women with CHD, compared with healthy controls. Moreover, abnormalities in uteroplacental flow patterns are associated with increased NTproBNP and predict pregnancy outcome in this population.

**Table 1a.** Umbilical artery PI and RI in pregnant women with CHD and healthy pregnant women. (mean ± SD)

<table>
<thead>
<tr>
<th></th>
<th>Women with CHD</th>
<th>Healthy women</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Umbilical artery PI at 32 weeks</td>
<td>1.3 ± 0.22</td>
<td>0.94 ± 0.17</td>
<td>0.003</td>
</tr>
<tr>
<td>Umbilical artery RI at 32 weeks</td>
<td>0.65 ± 0.8</td>
<td>0.61 ± 0.7</td>
<td>0.002</td>
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</table>

**Table 1b.** Right uterine artery PI and RI in pregnant women with high and low NTproBNP. (mean ± SD)

<table>
<thead>
<tr>
<th></th>
<th>NTproBNP &lt; 77.2 at weeks</th>
<th>NTproBNP &gt; 77.2 at weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right uterine artery PI</td>
<td>0.70 ± 0.20</td>
<td>0.83 ± 0.30</td>
</tr>
<tr>
<td>Right uterine artery RI</td>
<td>0.47 ± 0.9</td>
<td>0.51 ± 0.10</td>
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</tbody>
</table>

PI, pulsatility index; RI, resistance index; CHD congenital heart disease; SD, standard deviation
Postpartum hemorrhage: does severity influence the risk of recurrence?

Sofie Hjortoe(1), AJ Winkelsoe(2), TA Gerds(3), J Langhoff-Roos(4)
(1) Roskilde Sygehus, Department of Obstetrics, Roskilde, Denmark
(2) Herlev Hospital, Department of Anesthesiology, Herlev, Denmark
(3) University of Copenhagen, Department of Biostatistics, Copenhagen, Denmark
(4) Rigshospitalet, Department of Obstetrics, Copenhagen, Denmark

Objective: Postpartum hemorrhage (PPH) is associated with increased risk of recurrence. We investigated if severe PPH requiring transfusion of more than 5 units of Red Blood Cells (RBCs) in a first delivery further increased the risk of PPH in a second delivery. Methods: We used the Danish Medical Birth Registry and the Danish Transfusion Database, and included all women with a first and second delivery in the period January 1st 2001 - December 31st 2009 - a total of 96,545 women. The risk of PPH (requiring RBC transfusion) in a second delivery was evaluated using logistic regression modeling including risk factors known prior to the second delivery and intended mode of delivery. Results: Recurrent PPH requiring RBC transfusion occurred in 158 women (0.16% [0.14-0.19]). Previous PPH was a significant risk factor of recurrent PPH (OR 6.23 for intended vaginal delivery; 5.81 for planned caesarian), but severe PPH did not significantly increase the risk of recurrence compared to previous PPH with 1-2 RBC transfusions (OR 1.77, p=0.1265 for intended vaginal delivery; 2.5, p=0.2457 for planned caesarian section). Other risk factors known prior to the second delivery - related to the first delivery and the second pregnancy - are listed in table 1. Risks are presented by intended mode of the second delivery, vaginal delivery and caesarean section. Conclusion: PPH at a first delivery is associated with a six times increased risk of recurrent PPH, but a very severe first PPH does not confer additional risk.

Table 1: Factors associated with the risk of PPH at a second delivery.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Intended vaginal delivery</th>
<th>Planned caesarean section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placental abruption</td>
<td>6.69 [4.7-10.47]*</td>
<td>-</td>
</tr>
<tr>
<td>Preeclampsia</td>
<td>2.41 [1.67-3.37]*</td>
<td>2.53 [1.5-5.20]*</td>
</tr>
<tr>
<td>Placenta previa</td>
<td>4.95 [1.85-11.3]*</td>
<td>11.59 [6.9-18.57]*</td>
</tr>
<tr>
<td>Stillbirth</td>
<td>3.97 [2.40-6.27]*</td>
<td>-</td>
</tr>
<tr>
<td>Multiple gestation</td>
<td>2.92 [2.14-3.88]*</td>
<td>2.92 [1.77-4.53]*</td>
</tr>
<tr>
<td>Maternal age</td>
<td>1.10 [0.99-1.2]</td>
<td>1.10 [0.98-1.5]</td>
</tr>
<tr>
<td>Previous caesarean section</td>
<td>3.16 [2.76-3.58]*</td>
<td>1.54 [1.12-2.14]*</td>
</tr>
<tr>
<td>Previous PPH</td>
<td>6.23 [5.7-7.67]*</td>
<td>5.81 [3.82-8.60]*</td>
</tr>
</tbody>
</table>

OddsRatio with [CI.95]. *p <0.001
FRIDAY, 09 SEPTEMBER 2011, 16:00 - 17:30

FC02 Best clinical practice Part I

FC02.1 Efficacy of symptomatic treatment of women with uterine myoma

Larisa Suturina, I Kovalenko, A Labygina
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Objectives: to determine whether indol-3-carbinol can enhance the clinical efficacy of dydrogesterone or levonorgestrel-releasing intrauterine system in women with uterine myoma

Methods: we examined 75 women of reproductive age with uterine myoma: 15 women (group 1) used dydrogesterone (Dufaston®) only (20 mg daily, 16-25 days of menstrual cycle), 15 women with uterine myoma-users of dydrogesterone and indol-3-carbinol (Indinol®) (300 mg daily)(group 2), 15 women with uterine myoma used levonorgestrel-releasing intrauterine system Mirena® only (group 3) and 15 women who used Mirena® and indol-3-carbinol (300 mg daily) (group 4). In 5th group we included 15 women as controls with similar myomas who were not undergone any treatment. Patients of all groups had similar clinical and age characteristics. Hyperpolymenorrhea was the main symptom in all groups. The exclusion criteria were: the size of dominant myoma nodule more than 4-5 sm, endometrial hyperplasia and submucose nodules. The survey of all women included gynecological examination and monitoring of ultrasound parameters at the baseline and after 3 months of treatment. The data obtained were analyzed by non-parametric statistical tests and χ²-square test. Results: In control group the frequency of clinical symptoms (hyperpolymenorrhea, dismenorrhea) was identical at the baseline and at the 3d month of study. After 3 months of dydrogesterone administration, combined with indol-3-carbinol, the clinical efficacy was significantly higher in comparison with women used dydrogesterone only. The changes of clinical symptoms were similar in groups 3 and 4. Conclusions: indol-3-carbinol can enhance the clinical efficacy of dydrogesterone in women with uterine myoma and hyperpolymenorrhea.

FC02.2 On-line information on cervical cancer - how well informed are your patients?

Natalie Fleming(1), JE Neffendorf(2)
(1) Kent and Sussex Hospital, Royal Tunbridge Wells, UK
(2) St Mary's Hospital, London, UK

Introduction: With the advancement of the internet, patients are increasingly seeking health information from websites. This study aims to examine the quality of websites offering information on cervical cancer. Method: We searched for the keywords 'cervical cancer' (English Language, exact phrase setting) in the 3 most popular search engines (Google/Yahoo/MSN Bing). The top 50 results for each search were analysed (n=150). We then used the Guinning-Fog Index (GFI-approximate age required to read text) and the Flesch Reading Ease Score (FRES score /100) to assess the readability of each website. To analyse the accessibility, usability and reliability of each website, the LIDA tool (an online validated instrument for health care websites) was used. Results: 47 websites out of 150 were analysed. Websites were excluded if they were repeated (75), irrelevant (22), or inaccessible (6). The mean GFI result showed the average website was akin to reading Newsweek or the Times (mean GFI=10.3, SD=1.99). The mean FRES score was 52.9 (SD=9.88), this is below the recommended target of 60-70. Application of the LIDA tool showed accessibility 79.53%, usability 44.4%, reliability 34.62% (SD=11.64). Conclusion: We have shown that the quality of information on the internet regarding cervical cancer is poor. Although the majority of the websites were found to be accessible, they were not usable and the information was not reliable. It is essential that we provide our patients with accurate information and guide them to use reliable internet sources.
A cost-effectiveness analysis of different type of treatment modalities of cervical intraepithelial neoplasia and cancer in situ

Marina Y Eliseeva, on behalf of the International Collaborative Study Group (ICSG)

Moscow State University of Medicine & Dentistry, Moscow, Russian Federation

The aim of this study was to determine both therapeutic and cost efficiency of different type of treatment modalities of cervical intraepithelial neoplasia and cancer in situ. The ICSG members: Eliseeva MYu, Mynbaev OA, Manukhin IB, Mishutina AA., Bulavina IA, Shagramanjan GB, Polsachev VI, Slovokhodov EK, Zykov AE, Basanov RV, Pismensky SV (Moscow State University of Medicine & Dentistry), Zvereva NS (The Family planning center of the West Administrative District of Moscow city), Konstantinova OD (Orenburg state medical academy), Zilber MYu (Ural state medical academy), Papiкова KA, Ryzhkov VV (Stavropol State Medical Academy), Basova O (Tula regional perinatal center), Zakhartdinova IV (Bashkir state medical university), Russia; Kosmas IP (Ioanina University), Greece; Khan VE & Makhanova GT (Kzyl Orda Regional Medical Center), Kokenova MU (The South Kazakhstan healthcare department), Rysbekov MM & Mynbaeva DZh (Kh-A.Yasavi International Kazakh-Turkish University), Malgazhdarova BS (South-Kazakhstan state medical academy), The Republic of Kazakhstan; Pirogova VI (Lviv national medical university), Savka RV (Volynsky regional healthcare department), Chernov AV (The Kiev city reproductive health center), Ukraine; Shilkina E (Belarus academy of postgraduate education), The Republic of Belarus The ICSG was formed to involve patients from several municipal and private clinicians from different regions of Russian Federation, the Republic of Kazakhstan, Ukraine and the Republic of Belarus. The cost-effectiveness analysis of different type of treatment modalities of cervical intraepithelial neoplasia and cancer in situ based on the unified study protocol and metaanalysis will be presented.

Experience with third generation ablation technique using THERMABLATE

Priya Chauhan, J Frederiksen, L Pretorius

Hillerød Hospital, Department of Gynecology, Charlottenlund, Denmark

Prospectively analysis of the effect, tolerance and follow up was done using a third generation endometrial ablation technique (Thermablate). Sixty perimenopausal patients with meno-metrorrhagia were offered endometrial ablation during 2008 to 2010 at Hillerød University Hospital, Denmark. Follow up at three and six months and one year was done using records of bleeding chart, satisfaction questionnaire and dysmenorrhoea levels. In one patient treatment could not be given due to cervical stenosis. The average VAS score for pain during the procedure which took under 3 minutes was 3.9. We await 1 year follow up results in eight patients. At three months 81, 4 % patients reported satisfaction of the treatment and 86, 5% had achieved either eumenorrhoea or hypomenorrhoea or amenorrhoea. At 6 months 86, 3% expressed satisfaction and 84, 4% patients had achieved either eu/hypo or amenorrhoea due to the treatment. At 1 year 97.1 % patients expressed their satisfaction and 85, 3 % had achieved either eu/hypo or amenorrhoea status. One patient had postoperative endometritis within the first 2 weeks after the treatment which was medically treated. We suggest that perimenopausal meno-metrorrhagia can be easily treated with endometrial ablation using Thermablate and is well tolerated in the out patient setup and must be considered before other surgical interventions.
Comparison of preterm labor rate in proloton and vaginal suppository progesterone in high risk pregnancies

Zahra Sabokru, M Zamani Banab, MA Seif Rabiee
Hamadan University of Medical Science, Hamadan, Iran

Preterm birth is the leading cause of perinatal morbidity and mortality worldwide. The administration of progesterone and related compounds has been proposed as a strategy to prevent preterm birth. The mechanism of progesterone action in preventing preterm birth is not clear. Progesterone has long been recognized as necessary for pregnancy maintenance, and the role of progesterone withdrawal in the initiation of labor in animal species has been known for decades. The objective of this trial was to determine comparison of preterm labor rate in high risk women who used 17-ß-OH-pc (proloton) IM and vaginal suppository progesterone. This was a randomized double blind study that included 100 high risk pregnancies for preterm labor (history of PTL, recurrent abortion, etc.) women were stratified at randomization to intend to use 17-ß-OH-p (proloton) IM weekly and 100 mg of vaginal suppository for two weeks. There was no significant difference between the two groups in rate of preterm labor (p>0.5) but the rate of preterm labor is lower in proloton (18%) group in comparison to progesterone group (32%). The rate of admission to neonatal intensive care unit (NICU) and preterm rupture of membrane were also no significant difference between two groups. This study showed also the prophylactic progesterone and 17-ß-OH-p (proloton) reduced the rate of preterm labor and preterm delivery in high risk pregnancies but there was no difference between this two agent and both of this two agent can be used in prophylactic program.

Vaginal delivery after cesarean section

V Krasnopolsky, Lidiva Logutova
Moscow Regional Research Institute of Obstetrics & Gynecology, Moscow, Russian Federation

Introduction: owing to liberalization of indications to the cesarean section all over the world quantity of patients with uterine scar is rising. Management of next pregnancies and delivery can presents difficulties among these patients. In case of scar consistency vaginal delivery at next pregnancy can be possible. Successful vaginal delivery required careful selection of patients, including technique and indications for previous surgery, complications, cervical readiness for the delivery. During delivery ultrasound control for the scar condition must be realize in static and in contraction period. Materials and methods: we observe 1524 patients after cesarean section. Repeatedly cesarean section was done 871 times: scheduled surgery 773 patients, urgently 98 surgeries during labor. Results: Among this 98 surgeries indications was: abnormalities of uterine contractions 70 cases, fetal hypoxia in 12 cases, clinically contracted pelvis in 3 cases and in 13 cases we found beginning of uterine rupture. Successful vaginal delivery was in 653 cases. Uterine rupture was detected in 1.7% cases. No deaths of women were admired. 1527 children was born (3 twins). Perinatal mortality was 4.6‰/ 4 child died after cesarean section, 3 during vaginal delivery.
Danish experience with pregnancies in women with a gastric bypass

Lise Lotte Torvin Andersen(1), J Lauenborg(2), D Møller Jensen(3)
(1) Odense University Hospital, Department of Obstetrics and Gynecology, Odense, Denmark
(2) Copenhagen University Hospital, Hvidovre, Copenhagen, Denmark
(3) Odense University Hospital, Department of Endocrinology, Odense, Denmark

Background. With the increasing incidence of severe obesity, bariatric surgery is increasing. Several studies have reported that especially the Roux-en-Y Gastric Bypass (RYGB) is associated with obstetrical and neonatal complications. First choice operation in Denmark is RYGB and fertile women are advised to avoid pregnancy for 18-24 months after operation. However, no national consensus regarding handling pregnant women with RYGB exists. Aim. The objective of the study is to describe the cases of pregnancies in women with RYGB from two Danish obstetric departments with 10,000 deliveries a year and to present a guideline based on existing studies and the pregnancy outcome from the two departments. Methods. Subject were all known cases of pregnancies from 2009 to 2010 in women with RYGB (n=21) from the two University Hospitals, Odense and Hvidovre. Data collected from medical records. Variables: prepregnancy, obstetrical and neonatal data. Results. There has been no systematic registration of pregnant women with RYGB so the cohort may be inadequate. Thirteen women (62%) became pregnant within 18 months after RYGB. Median age/pregestational BMI/birth weight: 33.0 years/29.8kg/m²/3,370g. Eight of 16 women (50%) delivered by caesarean section. The women were seen more often than normal pregnancies due to ultrasound, screening for diabetes and pregnancy complications. The weight gain for the mother and the birth weight was overall acceptable. Conclusion: The handling of this group is unstructured with the risk of maternal and foetal complications. There is a need for centralisation of the care and for national guidelines concerning pregnant women with RYGB.

Polycystic ovarian syndrome (PCOS) in adolescence and relationship with metabolic syndrome (MS)

Isabel Bouzas, D Rodeiro, C Braga, L Leao, MC Kuschnir
UERJ - Universidade do Estado do Rio de Janeiro, Nucleo de Estudo da Saude do Adolescente, Rio de Janeiro, Brazil

The menstrual disturbances and metabolic diseases in adult women with PCOS have their onset in perimenarche, and adolescents with these disorders share many common factors with MS. Objective: Evaluate clinical and laboratory variables in adolescents related to PCOS, and relationship with MS. Method: Observational, comparative, transversal cut study with 61 female adolescents aged between 12 and 19, underwent a clinical and laboratory evaluation of insulin resistance (IR), hormonal and lipid profile. Two groups were created: G-1: 30 with PCOS, and G-2: 31 without PCOS and two subgroups: G1A: 16 with SM and PCOS and G1B: 14 without SM with PCOS. Results: Observed: G-1 presented acne (p < 0.0001), menstrual irregularity (p<0,0001) hirsutism (p = 0,011), FH PCOS (p = 0,023), MS (p < 0,0001) fasting glucose (p = 0,015), fasting insulin (p = 0,001), insulin post Oral Glucose Tolerance Test(Insulin-120) (p = 0,0001), HOMA-IR (p = 0,0002), TG (p = 0,025), Total Testosterone (TT)(p = 0,005), LH (p = 0,031) greater than G-2. And G/I (p = 0,003) and QUICK (p = 0,004) lower than G-2. G1A Presented BMI (p = 0.014), weight gain in infancy (p = 0.002) gynecological age (p = 0.043) greater than G1B. There is a direct correlation between Insulin120 and TT (rs = 0.363, p = 0.006, n = 56). Conclusion: IR is a key factor in both pathophysiology of PCOS and SM. Physiological changes of adolescence can reveal factors that predispose to development of PCOS and SM whose prognosis is worse in earlier emergence.
Early markers of metabolic and cardiovascular risk in women: menstrual irregularity in adolescence

Isabel Bouzas, D Rodeiro, C Braga, MC Kuschnir, L Leão
UERJ - Universidade do Estado do Rio de Janeiro, Nucleo de Estudo da Saude do Adolescente, Rio de Janeiro, Brazil

Menstrual irregularity (MI) in first years after menarche may be a marker for underlying Insulin Resistance (IR). IR is associated with type 2 diabetes mellitus, hypertension, and dyslipidemia. Through these and other mechanisms, this condition may predispose to cardiovascular disease (CVD). IR is compensated by increased insulin production by pancreatic β cells, and resulting hyperinsulinemia may manifest itself by increasing insulin mitogenic effects, which can affect menstrual cycle. These changes may be present very early, before metabolic changes of IR. Objective: Evaluate MI in adolescence and its relationship with metabolic and cardiovascular risk. Method: Observational, comparative and transversal-cut study with 59 female adolescents aged between 12 and 19, underwent clinical and laboratorial evaluation composed of Fasting Glucose, Total Cholesterol, HDL-cholesterol, Triglycerides, Oral Glucose Tolerance Test (OGTT) post 120 minutes (glucose 120), Fasting Insulin and Insulin post OGTT post 120 minutes (insulin 120). Two groups were created. G-1, adolescents with irregular cycles, and G-2, adolescents with regular cycles. Results: 59 adolescents evaluated, 36 formed G-1, and 23 formed G-2. Observed: G-1 presented: waist/height (p=0.009), waist (p=0.026), fasting insulin (p=0.009), glucose 120 (p=0.002), Insulin 120 (p =0.0001), Homa-IR (p = 0.0008), triglycerides (p = 0.013), Metabolic Syndrome (p<0.0001) greater than G-2 and HDL (p = 0.001) lower than G-2. Logistic regression analysis observed:insulin 120>87.5 (p=0.010) and waist >95 were significant to predict irregular cycle. Conclusions: Clinical evaluation of adolescents and women should include an evaluation of menstrual cycle, since alterations in pattern might represent first sign of a condition to predispose to CDV.
FC03 Basic science & cross talk between disciplines

FC03.1 The association between birth weight and polycystic ovary syndrome in 339,515 Danish women.
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Odense University Hospital, Department of Metabolism and Endocrinology, Odense, Denmark
(2) University of Copenhagen, Institute of Public Health, Copenhagen, Denmark

Introduction: PCOS is characterized by insulin resistance and an increased risk of type 2 diabetes. Objective: To establish if birth weight is associated with PCOS in adult life. Methods: Female children born in Denmark from 1978-1991 of Danish mothers were included (n=339,515). The diagnoses of hirsutism and PCOS from 1994-2006 and diabetes diagnosis (type I, II, and gestational diabetes) in the mother during 1978-2006 were extracted from the Danish National Patient Registry (Landspatientregistret, LPR). Information on birth weight and length of gestation was extracted from the Danish Birth Register and analyses were adjusted for attained age period and analyses of birth weight were further adjusted for gestational age (GA). Results: The risk of PCOS was significantly increased in girls with birth weight > 4500 grams (Incidence Risk Ratio (IRR) =1.61 and 95% Confidence Interval (CI) 1.11-2.32) compared to girls with weight 3000-3499 grams at birth (IRR=1). We observed no difference in risk of PCOS according to size for gestational age. The risk of PCOS was increased in girls born to mothers with any type of diabetes (IRR=2.38 95% CI 1.92-2.95). Additional PCOS and diabetes events identified in LPR 2006-2009 will be included when presented at the SEG congress 2011. Conclusions: Our data suggest that girls with high birth weight and girls with diabetic mothers have increased risk of PCOS.

FC03.2 Oxidative/nitrosative stress and pro-inflammatory condition are pathogenic mechanisms underlying letrozole-induced murine model of polycystic ovary
Mohammad Amin Rezvanfar(1,2,3), MA Rezvanfar(1), A Ahmadi(4), HA Shojai Saadi(5), M Baeeri(1), M Abdollahi(1,2,3)
(1) Tehran University of Medical Sciences, Faculty of Pharmacy, Tehran, Iran
(2) Tehran University of Medical Sciences, Pharmaceutical Sciences Research Center, Tehran, Iran
(3) Tehran University of Medical Sciences, Endocrinology & Metabolism Research Center, Tehran, Iran
(4) Urmia University, Laboratory of Histology and Embryology, Department of Basic Science, Faculty of Veterinary Medicine, Urmia, Iran
(5) University of Calgary, Faculty of Veterinary Medicine, Production Animal Health, Calgary, Alberta, Canada

The possible relationship between ovarian functionality and the oxidative response during cystogenesis induced by hyperandrogenization with letrozole were the main objectives of this study. Daily oral administration of letrozol (1 mg/kg body weight) for 21 consecutive days induced ovarian cysts in the female rats. Biomarkers of ovarian function, serum estradiol (E), progesterone (P), testosterone (T), and the ovarian inmunomodulator prostaglandin E (PGE) were analyzed. To determine the role of oxidative stress in PCO, the level of lipid peroxidation (LPO), superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GPx), and peroxynitrite (ONOO), and tumor necrosis factor alpha (TNF-α) as a marker of inflammation and apoptosis were measured in serum and the ovaries. Letrozole-induced PCO in rats exhibited a significant increase in LPO and ONOO in serum and ovary while significantly decreased serum and ovarian SOD, CAT, and GPx. Also, serum T and TNF-α levels, and ovarian PGE were increased in animals with cysts compared with healthy controls, while E and P diminished. When compared to control group, letrozole-treated group showed polycystic ovaries characterized by high incidence of sub-capsular ovarian cyst with diminished or scant granulosa cell layer, increased number of atretic pre-antral and antral follicles and absence of corpus luteum (CL). The present study further supports the role of oxidative/nitrosative stresses and TNF-α in the pathogenesis of PCOS and shows that
the development of cysts involves changes in ovarian function and an imbalance in the oxidant–
antioxidant equilibrium.

FC03.3
Progestosterone-antagonistic effects of environmental chemicals in endometrium
Wolfgang Schaefer, L Fischer, W Deppert, A Hanjalic-Beck, HP Zahradnik
University of Freiburg, Department of Obstetrics & Gynecology (Endocrinology Laboratory), Freiburg, Germany

Endometrial receptivity is a critical aspect in human embryo implantation. It is controlled by progesterone and can be impaired by progesterone antagonists and selective progesterone receptor modulators (SPRM). A prominent example is RU486 which, besides its impact on ovulation, has distinct endometrial effects and has been considered for endometrial contraception. But also numerous environmental chemicals (e.g. bisphenol A, 4-nonylphenol) interact in transactivation assays with the progesterone receptor (PR). This raises health concerns due to possible undesired contraceptive properties. Our objective was to compare effects of environmental chemicals on pre-selected endometrial gene expression biomarkers with well-characterized SPRMs. As model system we used the human endometrial Ishikawa cell line. The PR and the estrogen sulfotransferase (SULT1E1) were identified by microarray experiments as appropriate biomarkers for (anti-) progestin effects. After priming with 17ß-estradiol the cells were incubated with combinations of progesterone and test compounds. mRNA levels of PR and SULT1E1 were analyzed by reverse transcription quantitative real-time PCR. In this model the SPRMs RU486, ulipristalacetate and ZK137316 antagonized dose-dependently the effects of progesterone on PR- and SULT1E1-mRNA (EC₅₀ approx. 10⁻¹⁰ - 10⁻⁹ M). Similar effects were observed for the chemicals 4-nonylphenol and bisphenol A and the plant compound apigenin at higher EC₅₀-values. Methylacetoacetate was used as negative control and displayed no effect. Effects on PR expression were confirmed by Western Blotting. Our results demonstrate that wide-spread environmental chemicals exert weak PR antagonistic effects on human endometrium. The impact of these in vitro findings on human fertility must be clarified in further studies.

FC03.4
Deiodinase D1-C785T polymorphism and maternal thyroid hormone in Romanian women with preeclampsia. Association with the severity and outcome of preeclampsia
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(2) Clinic of Endocrinology, Lboratory, Cluj-Napoca, Romania
(3) University of Medicine and Pharmacy 'Iuliu Hatieganu', Department of Gynecology, Cluj-Napoca, Romania

Objectives:To investigate the genetic and biochemical thyroid status in women with and without preeclampsia by analysing the association of the deiodinase D1-C785T polymorphism with serum FT3 and FT4 levels; we investigated the association of this polymorphism with the degree of severity and pregnancy outcome in women with preeclampsia Methods:We genotyped using PCR-RFLP methods 50 women with preeclampsia and 50 normotensive pregnant women. We determined the FT3 and FT4 levels using ELISA methods Results:There was an excess of the mutated C/T and T/T genotype in preeclamptic women compared to normal pregnant women. The association with severe preeclampsia was stronger for the homozygous D1-T/T genotype (OR6.57, p=0.029). FT3 levels (pg/ml,2.63±0.56 vs. 2.91±1.41) were low and FT4 levels (ng/dl,1.11±0.3 vs. 0.88±0.14) were high in women with preeclampsia compared to normal pregnant women. The association with severe preeclampsia was stronger for the homozygous D1-T/T genotype (OR6.57, p=0.029). FT3 levels (pg/ml,2.63±0.56 vs. 2.91±1.41) were low and FT4 levels (ng/dl,1.11±0.3 vs. 0.88±0.14) were high in women with preeclampsia compared to normal pregnant women. Women with preeclampsia with the D1-T785 allele had lower FT3 levels (pg/ml,2.31±0.81 vs. 3.04±0.39, p<0.001), higher FT4 levels (ng/dl,1.32±0.87 vs. 0.84±0.24, p=0.009) than women with preeclampsia with the D1-C/C genotype. Significant decrease in serum FT3 levels in positive women with severe preeclampsia compared to women negative for this genetic variation (pg/ml,1.59±0.74 vs. 2.77±0.23, p=0.003) was observed. Women with severe preeclampsia, positive for the D1-T785 allele, delivered at a significantly lower gestational age (31.75±3.69 vs. 38.66±3.21 weeks, p=0.035) neonates with a lower birth weight (1861.11±869.9 vs. 3500±424.3 grams, p=0.023) compared
to women negative for the same allele. Conclusions: The D1-C785T polymorphism and thyroid hormone levels were associated with the severity of preeclampsia. The D1-C785T polymorphism influences the outcome of pregnancy in severe preeclampsia.

FC03.5
A photosensitizing ability of Alasense in fluorescent diagnostics of severe cervical neoplasia and cancer in situ: preliminary results
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(1) The Institute of Postgraduate Education of the Russian Federal Medical & Biological Agency, Moscow, Russian Federation
(2) Moscow State University of Medicine & Dentistry, Moscow, Russian Federation
(3) Moscow City Municipal Hospital N40, Moscow, Russian Federation
(4) TDistrict of Moscow City, Moscow, Russian Federation
(5) Center of Natural Research, General Physics Institute, Russian Academy of Sciences, Moscow, Russian Federation
(6) The Institute of Reproductive Technologies AltraVita, Moscow, Russian Federation

The purpose: to study fluorescence activity of photosensitizer-Alasense in fluorescence diagnosis (FD) of high grade cervical intraepithelial neoplastic (CIN II & III) and cancer in situ (CIS) lesions. Study design: 37 patients 24-60 years with CIN 2-3 and suspected to CIS were included in this study. Patients were undergone screening and diagnostic procedures including Pap test, colposcopy with acetic-white and Schiller probes as well as FD to exclude or clarify CIS. Cervical biopsy and histopathology was as a reference assay. HPV persistence was evaluated by PCR and DNA HPV or Digene tests. In order to perform FD 10-20 mg/kg of photosensitizer Alasense was given before 2.5 or 10 hours of FD-procedures. An electronic-spectral-laser-equipment with radiation-intensity of 2 mW and optical-density of <1 J/cm2 with 420-440 nm of wavelengths was used to perform FD without tissue damage. Results: Spectrometric FD-values of CIS were 4.6 fold higher in comparison with those of surrounding normal tissues. There was coincidence of FD-images with visible borderlines of lesions in 23 patients, whereas FD-images were overridden of visible borders of lesions in 5 patients. CIS lesions were identified by FD in 6 patients without visible lesions by other assays. Inversely there was not seen FD-images of neither CIN3 nor CIS in 3 patients with visible inflammatory and hyperplastic lesions suspected as severe CIN and CIS. There was coincidence of spectral-analysis of FD-image parameters with histopathological results of tissue samples in all 37 patients. Conclusions: Photosensitizer-Alasense has a high ability to identify high grade CIN and CIS.

FC03.6
Ovarian endometriosis-associated cancer
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(1) University of Medicine and Pharmacy "Gr T Popa", Department of Obstetrics and Gynecology, Iasi, Romania
(2) Clinical Hospital "Cuza Voda", Iasi, Romania

Objective: To assess the relationship between the presence of ovarian endometriosis and clinical features as age, parity, menopausal status, stage, and survival in ovarian cancer patients. Methods: Using medical records, a retrospective analysis was conducted on 234 patients treated for ovarian cancer (OC) between 2003 and 2009 in our clinic. Histologic classification of OC was based on the WHO system. Each case was staged according to the current FIGO system. The presence of endometriosis was determined from H&E-stained section of resected specimens. Results: The median age was 57.3 ± 9 years for cases with OC and only 47.4 ± 3 year for cases with endometrioid epithelial ovarian cancer (EEOC). From all cases with OC only 15 was associated with lesions of endometriosis: 7 cases with EEOC, 2 with ovarian cancer clear cell (OCCC), 2 patients with mucinous borderline ovarian cancer, and 4 cases with synchronous primary endometrioid cancers of the endometrium and ovary arising as a result of a Mullerian field effect. Occasionally, endometrioid carcinoma may exhibit a microglandular pattern simulating sex cord-stromal
tumors. However, typical endometrioid glands, squamous differentiation, or an adenofibroma component are each presents in 75% of these tumors. Also we had 2 women with atypical endometriosis on lesions of ovarian endometriosis. From cases with EEOC 7/14 were associated with endometriosis and from those with OCCC only 2/15 cases. Conclusions: Women with endometriosis-associated cancers are typically premenopausal, and have early stage disease. Patients with concordant endometrioid tumors of the endometrium and ovary had a favorable prognosis.

FC03.7  
Comparative evaluation of sexual attitude and function of normal and dysmenorrhea patients with the QSAF 2009  
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Mehr Medical Group, Department of Internal Medicine/Gynecology, Tehran, Iran

We evaluated 60 normal and 60 dysmenorrhea patients with the questionnaire on sexual attitude and function QSAF-2009. The latter group used routinely drugs for dysmenorrhea in a PRN basis and some used medications as prophylaxis and was free to use psychoactive medication but people using psychoactive medications were excluded from the former group. Dysmenorrhea was not graded according to severity and stress was laid on personal view about the matter (major concern versus no concern). Both groups had good compliance for accomplishing the tests. Patients without dysmenorrhea were sexually more self conscious, became sexually active earlier in their life, had lower scores in almost all sexual dysfunction scales, had higher scores in experimentation, sensational, erotic, extramarital relationship, sex addiction and lower scales in couple problems while women with dysmenorrhea showed higher scores in couple problems, sexual pain syndromes, vaginism and a series of psychodynamic syndromes (0.04>p>0.07). Curiously, these people showed higher scores in homo-bisexuality scales. They showed high rates of sexual guilt feeling and the overall validity of their test was questioned. Patients with dysmenorrhea showed increased reluctance to answer the questions, regarded their problems as personal secrets and reported fewer visits to gynecologists. They preferred female gynecologists, and had never been visited by midwives. Most of them preferred cesarean delivery under general anesthesia and had in fact convinced their physician to undergo CS. We conclude that dysmenorrhea patients are categorically distinct from normal persons in regard to their sexual attitude and function.

FC03.8  
Nitric oxide and asymmetric dimethylarginine levels of serum and peritoneal fluid in women with endometriosis  
Maryam Kianpour(1), M Nematbaksh(2), M Ahmady(3), M Jaefarzadeh(3)  
(1) Isfahan University of Medical Science, Faculty of Nursing and Midwifery, Nursing and Midwifery Care Research Center, Isfahan, Iran  
(2) Isfahan University of Medical Science, Kidney Basic Sciences Research Center, Department of Physiology, Isfahan, Iran  
(3) Isfahan Fertility and Infertility Center, Isfahan, Iran

A great number of studies have reported increase NO concentration ,with altered peritoneal immune defence reaction ,was involved in pathogenesis of endometriosis. Asymmetric Dimethylarginine is an endogenous competitive inhibitor of NO synthase. This study was design to compare NO and ADMA concentration in serum and peritoneal fluid of patients with and without endometriosis. Material and Methods: Subjects were allocated to two groups ,according to their laparoscopic results. The first group ,women with (n=54) and the second group, without (n=34) endometriosis. The venous blood and peritoneal fluid samples were centrifuged, and stored until measurement. The serum and peritoneal levels of nitrite (stable NO metabolite) were measured using a colorimetric assay kit that involves the Griess reaction. The serum and peritoneal fluid levels of ADMA were measured using enzyme immunoassay kit. Data are expressed as mean ± SEM. Unpaired t-tests was applied to compare the parameters between the groups. was considered statistically significant. Results: The data for ADMA and NO levels in serum and peritoneal from the patients with endometriosis (case) and non-endometriosis (control) is
demonstrated in figure 1. Conclusion: The elevated level of No in PF but not in serum implying a possible role of NO in the pathogenesis of endometriosis.

Key words: Endometriosis, NO, ADMA, Serum, Peritoneal fluid, Infertility

Figure 1: ADMA and NO levels in serum and peritoneal from the patients with endometriosis (case) and non-endometriosis (control). The star (*) indicates significant difference (P<0.05).

**FC03.9**

**Opening the Jade Gate- the vulva in ritual, religion and myth**

*Therese Foran*

*University of New South Wales, School of Women's and Children's Health, Sydney, NSW, Australia*

In an age when pubic topiary, designer vaginas and hymen repair have become mere grist for the tabloid mill it may be time to take a more critical look at the role the vulva has played in shaping the spirituality and symbolism of so many cultures. The vulva and vagina, as potent totems of the female essence, feature prominently in the myth and mythology of many societies throughout the world. Likewise virginity, and in particular female virginity, has ancient associations with power, purity and a special connection with the gods. The vulva, or its representative symbol, has been variously used to ensure the fertility of the earth, to ward off evil or danger and to inspire retreating armies. These ancient meanings litter our subconscious like artefacts scattered about an archaeological site. Yet while most of our ancestors revered the abstract feminine, there was often an inherent duality in the way women themselves were regarded and portrayed. In the morality and folk tales of the past for instance women tended to be either pure innocents or evil crones—simultaneously evoking both desire and fear. This presentation seeks to explore the symbolism of the vulva and of virginity and to draw out the age-old themes which, to this day, influence our attitudes to the vulva and to the power of women in general. It will examine the ways in which various cultures and religions depict the feminine and consider the impacts that such long-held beliefs and perceptions still have in contemporary societies.
FC04 Young scientist session Part II

FC04.1
Menstrual cramp is associated with structural brain alterations
Cheng-Hao Tu(1), H-T Chao(2), D Niddam(1,3), T-C Yeh(1,4), J-F Lirng(5), J-C Hsieh(1,3)
(1) Taipei Veterans General Hospital, Integrated Brain Research Unit, Department of Medical Research and Education, Taipei, Taiwan
(2) Taipei Veterans General Hospital, Department of Obstetrics and Gynecology, Taipei, Taiwan
(3) National Yang-Ming University, Brain Research Center, Department of Research and Development, Taiwan
(4) National Yang-Ming University, Institute of Brain Science, Taipei, Taiwan
(5) Taipei Veterans General Hospital, Department of Radiology, Taipei, Taiwan

Primary dysmenorrhea (PDM) is the most prevalent gynecological disorder in the women reproductive age. However, the brain mechanisms of PDM remain largely unexplored. Our recent innovative brain morphometry study disclosed that PDM is associated with abnormal gray matter (GM) changes even in the absence of pain, indicating that the adolescent brain is vulnerable to menstrual pain. In the present study, we further investigated possible morphological changes across different menstrual phases in PDM. We used T1-weighted anatomical magnetic resonance imaging to investigate regional GM volume changes between menstrual and peri-ovulatory phase, in 32 PDM patients and 32 healthy, age- and menstrual cycle-matched controls. Comparing to peri-ovulatory phase, we observed larger GM volume in the regions involved in pain modulation, generation of negative affect, and regulation of endocrine function while smaller GM volume in the regions associated with pain transmission during menstrual phase in PDM patients. Such change has not been observed in healthy subjects. The volume changes in the regions involved in generation of negative affect, regulation of endocrine function, and pain transmission were correlated with the severity of menstrual pain experience. Our results demonstrated that short-term menstrual pain is associated with conspicuous structural brain alterations. These appalling findings mandate a great demand to a serious revisit of PDM regarding its impact on the brain and long-term clinical consequence.

FC04.2
The reproductive long-term prognosis after a first ectopic pregnancy, and the reproductive impact of ectopic pregnancy in the next generation
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Rigshospitalet, Gynaecological Clinic 4232, Copenhagen, Denmark

Objective: To assess the long-term reproductive prognosis in women with a first ectopic pregnancy (EP), and to compare the reproductive prognosis among daughters of women with and without EP. Methods: A historical prospective controlled cohort study with data from four Danish registries (1977-2009). 2,917 women with EP as their first pregnancy during 1977-1982 were matched by age and pregnancy year with women with a first miscarriage, a first induced abortion or a first delivery, respectively. The 4 cohorts were followed through 2009. Additionally all women with EP during 1977-1982 were matched to women without EP, and their daughters were followed through 2009 for pregnancy outcomes. Results: Compared with women with a first miscarriage or a first induced abortion, women with a first EP had a significantly higher long-term rate ratio EP, but a significantly lower long-term rate ratio for deliveries, miscarriages and induced abortions. Compared with women with a first delivery, women with a first EP had a significantly higher long-term rate ratio EP and miscarriages, and a significantly lower long-term rate ratio for induced abortions. Daughters of women with EP had, compared to daughters of women without EP, a significantly higher rate ratio for EP of 1.5 (95% CI 1.2-1.9), but a rate ratio of 1.0 (1.0-1.1) for deliveries. Conclusion: Women with a first EP had a several fold increased risk of further EP and lower delivery rate. Daughters of women with EP had a 50% increased risk of EP but a normal delivery rate.

Table 1:
<table>
<thead>
<tr>
<th>Long-term pregnancy outcomes</th>
<th>First EP compared with a first miscarriage</th>
<th>First EP compared with a first induced abortion</th>
<th>First EP compared with a first delivery</th>
<th>Exposed daughters versus unexposed daughters</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP</td>
<td>4.7 (3.8 - 5.8)*</td>
<td>6.6 (5.2 - 8.4)*</td>
<td>9.2 (7.0-12.2)*</td>
<td>1.5 (1.2-1.9)*</td>
</tr>
<tr>
<td>Deliveries</td>
<td>0.55 (0.52-0.58)*</td>
<td>0.89 (0.84-0.95)*</td>
<td>0.95 (0.89-1.0)</td>
<td>1.0 (1.0-1.1)*</td>
</tr>
<tr>
<td>Miscarriages</td>
<td>0.46 (0.41-0.52)*</td>
<td>0.85 (0.74-0.98)*</td>
<td>1.2 (1.0-1.4)*</td>
<td>1.1 (1.0-1.2)</td>
</tr>
<tr>
<td>Induced abortions</td>
<td>0.72 (0.65-0.80)*</td>
<td>0.49 (0.44-0.54)*</td>
<td>0.71 (0.64-0.79)*</td>
<td>1.3 (1.2-1.4)*</td>
</tr>
</tbody>
</table>

*p<0.05
Results from pooled Phase III studies of ulipristal acetate for emergency contraception
Caroline Moreau(1,2), J Trussell(2)
(1) INSERM, Le Kremlin Bicêtre, France
(2) Princeton University, Princeton, NJ, USA

Introduction: Ulipristal acetate (UPA) is a new effective option to prevent unintended pregnancies up to 5 days after unprotected intercourse. To refine our understanding of the efficacy of UPA by time from unprotected intercourse and the effects of other factors on pregnancy rates, we use pooled data from two phase 3 studies which provide better generalizability of results and increases statistical power of the analysis. Methods: Data from two phase III studies were pooled to create a larger analysis population, comprising 2,625 women treated with UPA up 120 hours after unprotected intercourse. Analyses were performed on the first participation of 2,537 women of whom 2,375 completed follow-up of adverse events and 2,183 women less than 36 years had known pregnancy status after EC intake. Results: A total of 41 women became pregnant despite using emergency contraception, yielding an overall pregnancy rate of 1.9% [1.3-2.5]. Women who had further acts of unprotected intercourse in the same cycle were 4 times as likely to report a pregnancy (OR=4.3 [1.9-9.6], p<0.001) while obese women were twice as likely to experience an EC failure (OR=2.1 [1.0-4.3], p=0.04). Results also showed a significant increase in the odds of pregnancy among women who weighted 85 kg or more (OR=2.2 [1.1-4.6], p=0.03). The most frequently reported adverse effects possibly related to UPA intake included headaches (10.0%), nausea (9%), dysmenorrhea (5%) and abdominal pain (5%). Conclusion: Ulipristal acetate is effective and safe in preventing pregnancy after unprotected intercourse. Its effectiveness is lower among women who have subsequent unprotected intercourse and among obese women.

Effect of regular aerobic exercise on hot flashes in postmenopausal women
Azar Aghamohammadi(1), A Rajabi
Islamic Azad University, Sari Branch, Department of Midwifery, Sari, Iran

Background and Objective: Most women that reached menopause, experience vasomotor symptoms (hot flashes). this study was done with this purpose to investigate the effects of regular aerobic exercise on vasomotor symptoms (hot flashes) in postmenopausal women. Methods: In this experimental study, twenty six healthy postmenopausal women with age of 45-55 years, who sampled randomly in 2 groups (control and experimental), were participated in this investigation. The subjects were individuals who had experienced at least five hot flashes per 24 h. The experimental group followed exercise training program including walking three times a week, for 3 months. But control group did not participate in any exercise program. hot flashes level was measured before and after exercise. Findings: Mean of hot flashes in experimental group before exercise training relative to after exercise training were significantly decreased. Conclusion: The results of present study demonstrated that regular aerobic exercise training decrease vasomotor symptom. So, the authorities should apply strategies to decrease vasomotor symptoms by changing life style from inactivity to exercise training in order to support postmenopausal women somatic health. Keywords: Aerobic exercise, Vasomotor symptoms, Hot flash
FC04.5
Studying the variation of symptoms with menopausal stage, and the symptom severity by age, education and time in Chinese women
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(2) Beijing University of Chinese Medicine, Beijing, PR China
(3) Peking University People Hospital, Beijing, PR China
(4) Islamic Azad University of Mashhad, Iran

Objectives: Studying the variation in menopausal symptoms with menopausal stage and the change in symptom severity score by age, education and the time distance from menstrual irregularity to final menstrual period (FMP). Methods: This cross sectional study was conducted in Gynecology clinic of Dongzhimen Hospital, Beijing, China. 97 women aged 48.9 +/- 4.4 years participated in the study. Symptoms were assessed by Kupperman Index. Results: The mean age in which menstrual irregularity has begun, and the average age at which menopause set in, were 46.5 +/- 4.42 and 47.4 +/- 4.3 years in order. There were significant correlations between age and level of education with number of symptoms (ANOVA: p=0.01, r =-0.24 for age and ANOVA: F=2.949, p=0.02 for education), while severity of symptoms did not show any significant relations with age. Severity of hot flash showed a significant negative correlation with level of education (r = -0.165, sig=0.03). The most common symptoms in both peri- and post-menopause were hot flashes and insomnia. In perimenopause, the next common symptoms were weakness and nervousness while in postmenopause, arthralgia was more common than weakness. Post-menopause women had significantly more symptoms than perimenopause (T= -3.22, p=0.002). The severity of paresthesia, arthralgia/myalgia, headache and palpitation was significantly higher in post-menopause than perimenopause (p<0.05). Conclusion: In the same culture and region, the level of education may affect the severity of hot flashes and number of menopause-related symptoms. The stage of menopause may contribute to variations in symptoms and the severity of some of them.
The adherence to the Rotterdam criteria and the prevalence of insulin resistance in a Danish PCOS population. A preliminary report

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(2) Institute of Public Health, University of Southern Denmark, Unit for Thrombosis Research, Esbjerg, Denmark
(3) Herlev Hospital, University of Copenhagen, Department of Endocrinology, Herlev, Copenhagen, Denmark
(4) Holbæk Hospital, University of Copenhagen, Department of Obstetrics and Gynecology, Holbæk, Denmark
(5) Hvidovre Hospital, University of Copenhagen, Department of Obstetrics and Gynaecology, Hvidovre, Denmark

Background: Polycystic ovary syndrome (PCOS) defined according to the Rotterdam criteria (anovulation, hyperandrogenisme, polycystic ovaries) affects up to 10% of women of childbearing age. PCOS is associated with insulin resistance (IR), impaired glucose tolerance and android fat distribution. Up to 10% of women with PCOS will develop T-2 diabetes by age 40. The prevalence of IR in PCOS is 75-80% depending on the methods applied to detect IR. BMI independent occurrence of IR has previously been reported among 30 % of the normal weight PCOS-women having IR. Objectives: To determine from preliminary data in an on-going multicentre study, the prevalence of IR in four PCOS phenotypes accomplishing the Rotterdam criteria. Design: A prospective cross-sectional clinical study analysing data from patients recruited consecutively from April 2010 to April 2011 at three Danish University clinics. Study population: Eighty women, fulfilling the Rotterdam criteria, were included. Methods: The BMI was measured and IR calculated by HOMA on the basis of fasting plasma glucose and c-peptide values. Results: Fifty-four % of the women met all three conditions of the Rotterdam criteria. Fifty-three % had a BMI > 25 and IR was present in 55% of these women IR, whereas 15% of the lean demonstrated IR. The overall prevalence of IR was 35%. Conclusions: Our preliminary results suggest that approximately half of women with PCOS fulfil all three criteria for the syndrome. We found the prevalence of IR in lean PCOS women different from what is reported previously in the literature.
FC05.1

Efficacy and safety of two low-dose intrauterine contraceptive systems
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(2) Bayer, Global Medical Affairs Women’s Health, Berlin, Germany
(3) Sexual Health Clinic, Västöllitto, Helsinki, Finland

Objective: To assess the efficacy and safety of two low-dose levonorgestrel-releasing intrauterine contraceptive systems (LCSs). Methods: This was a multicenter, randomized study with two LCSs (LCS12 and LCS16 with initial in vitro levonorgestrel release rates of 12 and 16 µg/day, respectively) and an active reference product, the 20µg per day LNG-releasing intrauterine system (LNG-IUS), Mirena®. The study was performed in healthy parous and nulliparous women aged 21-40 years at 37 family planning centers in five European countries. Results: A total of 738 women had an intrauterine system placed (LCS12, n=239; LCS16, n=245; LNG-IUS, n=254). Six pregnancies occurred during treatment; one in the LCS12 group and five in the LCS16 group. The three-year unadjusted Pearl Indices were 0.17, 0.83 and 0 in the LCS12, LCS16 and LNG-IUS groups, respectively. Both LCSs had a similar bleeding profile to the LNG-IUS. The placement of the LCSs was generally considered easier and less painful than LNG-IUS. Slightly more women in the LNG-IUS group experienced drug-related adverse events than in the two LCS groups. Conclusions: In this study, pregnancy rates were similar in both LCS groups and the Mirena group and both LCSs provided acceptable bleeding patterns and were well tolerated. A larger pivotal phase III study is currently ongoing.

FC05.2

Women’s reasons for choosing the pill, patch, or ring in 11 countries
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(2) Frauenklinik Kantonsspital Bruderholz, Baselland, Switzerland
(3) P.L. Shupik National Medical Academy of Post-Graduate Education, Kiev, Ukraine
(4) MSD, Oss, the Netherlands
(5) Ministry of Health and Social Development, Moscow, Russian Federation
(6) Ghent University Hospital, Gent, Belgium

Objective: The Contraceptive Health Research Of Informed Choice Experience (CHOICE) study was undertaken to encourage healthcare professionals (HCPs) to counsel women seeking combined hormonal contraceptives (CHCs) and to study the influence of counselling on women’s contraceptive selections. Methods: Women (in 11 countries) aged 15–40 years who consulted HCPs about CHCs and were considering a self-administered, reversible form of contraception were eligible to participate. HCPs counseled women about the daily pill, weekly transdermal patch, and monthly vaginal ring. Both HCPs and women completed questionnaires about their CHC preferences. Results: Of women (n=18,787) who underwent structured contraceptive counselling, 47.4% selected a contraceptive method that was different from the method they originally intended to use. One in four women who intended to use the pill selected another method (16.4% and 65.2% chose the patch and ring, respectively). The four most frequently cited reasons that led women to select or not select the pill, patch, or ring are shown in the table. Women who selected the pill cited ‘don’t like to use foreign body’ as the top reason they did not select the ring. ‘Daily use’ was the top reason why women who selected the patch or ring did not choose the pill. Conclusion: Counselling led women to choose alternative CHCs such as the patch and ring. Women who selected the pill, patch, or ring cited ‘convenience’ as a major reason that led them to choose these methods. Non-daily administration was the top reason women selected the patch and ring over the pill.

Table

<table>
<thead>
<tr>
<th>Top four reasons why women selected the daily pill (n=9418)</th>
<th>%</th>
<th>Top four reasons why women who selected the daily pill did not select the monthly ring (n=9418)</th>
<th>%</th>
</tr>
</thead>
</table>
Is efficacy of LNG consistent across EC trials?
Sharon Cameron(1), A Glasier(1), B Scherrer(2)
(1) NHS Lothian and University of Edinburgh, Chalmers Sexual and Reproductive Health Service, Edinburgh, UK
(2) Bruno Scherrer Conseil. SARL, Saint Arnoult en Yvelines, France

Background: The efficacy of levonorgestrel (LNG) in the emergency contraception (EC) setting has been well described by the WHO studies (1). However, more recent EC studies show that the efficacy of LNG is less than previously reported. A meta-analysis of two recent studies published in the Lancet (2) found BMI to be a significant confounding factor for efficacy. It is noteworthy that women were on average of higher BMI in these recent EC studies compared to the previous WHO studies. Methodology: We conducted an exploratory analysis, using a subgroup of women from the Glasier meta-analysis database, with BMI similar to those subjects included in the 1998 WHO study and compared the efficacy results obtained with those observed in the WHO study. Results: 508 women with a BMI of 26 and above were excluded from the Glasier meta-analysis database leaving a subgroup of 1223 women with a mean BMI of 21.9 +/- 2.2. The pregnancy rate obtained when LNG was taken within 0-72 hours of intercourse for this group was 1.13% (13/1152) which is exactly the same as that observed in the WHO study, 1.13% (11/976). As in the WHO study, we found the same decreasing efficacy of LNG over time especially when taken 72h or more after intercourse with a pregnancy rate of 2.82% (2/71). Conclusion: When we compare results on similar “normal BMI” populations, efficacy of LNG appears to be consistent across EC studies especially confirming its declining efficacy over time.


FC05.4
Patient satisfaction with hysterectomy: physical, psychological and sexual outcomes at 6-9 months
Nicola Long(1), E Kevelighan(2)
(1) Poole NHS Trust, Department of Surgery, Poole, UK
(2) Swansea NHS Trust, Department of Surgery, Swansea, UK
Objectives: To study patients' satisfaction with hysterectomy at 6-9 months and to assess their post-operative outcomes in terms of physical, psychological and sexual function. Methods: All patients available for interview who had undergone hysterectomy at Swansea NHS Hospital, Wales between 01/02/2007 and 30/04/2007 were included (n=34). Results: 74% underwent abdominal hysterectomy and 26% had vaginal hysterectomies. 68% (n=23) felt better following their operation, (64% after TAH, 78% after vaginal hysterectomy). 18% (n=6) felt worse and 15% (n=5) felt no different. Overall, 79% (n=27) were glad they had their operation and 9% (n=3) regretted it. 20% felt worse physically and 32% worse psychologically at 6-9 months. 56% suffered a physical complication, 48% of which had coexistent psychological or sexual dysfunction. 11% had physical, psychological and sexual problems. Psychological and sexual problems were given higher severity and 'Impact on Life' scores than their physical counterparts. There was no evidence that hysterectomy leads to worsening sexual function. Conclusions: We demonstrated similar satisfaction rates to those quoted in the literature for both abdominal and vaginal hysterectomy. However, a significant number of women felt worse physically, (20%) and psychologically, (32%) following their operation. Women who experienced physical complications were more likely to have coexistent psychological and sexual dysfunction which has important implications for assessing these patients post-operatively. Importantly, psychological and sexual dysfunction were rated more severe and had a greater impact on activities of daily living. This suggests that psychological and sexual function should be assessed routinely and given a high priority in post-operative management.
Surgical treatment of cesarean section complications

**Introduction:** The WHO estimates the rate of Cesarean sections at between 10% and 15% of all births in developed countries. In Moscow Regional Inst. O/G, 23.7% in 2008, 24.9% in 2009. In 2010 among 2177 deliveries after cesarean section was 203 (9.3%) patients. Scar defect was detected in 79 (38.9%) and become an indication for repeated cesarean section Puerperal endometritis in our region detected in 3-4% cases after cesarean section.

**Materials and methods:** from year 2006 till 2010 56 patients with scar inconsistency after cesarean section was treated in our institute. Indication for surgical treatment were scar inconsistency and puerperal endometritis complicated by abnormal uterine scar healing. 41 patients were undergoing surgery at first 40 days after childbirth. 15 women were treated before next pregnancy after 18-24 months. In all cases we did ultrasound investigation with measurement of blood flow and scar condition. In majority cases hysteroscopy was done. Results: lower segment reconstruction was done in 33 patients by laparotomy (19 at 10-30 days and 14 at 31-40 days). Main indication for hysterectomy in 8 cases were acute endometritis with scar inconsistency. 15 times after conservative treatment surgery was done 18-24 months later. 10 were treated by laparotomy, 5 by laparoscopy approach. Conclusion: The most often reason of uterine scar inconsistency after cesarean section is puerperal endometritis. Ultrasound investigation of scar condition with hysteroscopy allowed to identify patients who can be treated with uterus preservation in puerperal and delayed period by laparotomy and laparoscopy approaches.

**Antiadhesion barriers application in adhesion prevention**

**Introduction:** In present time weir is no authorized ways of adhesions prevention after surgery and inflammation diseases. We study results of surgical treatment patient with peritoneal infertility with 3 liquid barriers Mesogel (Lintex, Russia), Intercoat (J&J, USA), Adept (Baxter, USA). Materials and methods: We use 100–200 ml of Mesogel among 72 infertile patients in LS surgeries on fallopian tubes and ovaries. Intercoat gel (40ml) were applied in 50 cases: 20 times at LS miomectomy, 30 times at LS surgery in patients with hydroosalpinxes. We use Adept after adhesiolysis in 35 patients with 2-4 previous open surgeries on pelvic organs to prevent adhesion reformation. Results: 50 patients were undergone SLL at 4-36 months. In most cases at SLL adhesion were admired but we found significant decrease (from grade 4 to 1-2). Among 58 patients with infertility pregnancy rate is 51.7% (30 patients) at 6-18 months after surgery. Conclusion: We suggest what the most perspective are liquid (gel) antiadhesion barriers. Antiadhesional gel can stay in abdomen cavity for a long time (for period of peritoneum regeneration). In addition to surgery barriers show high efficacy in complex treatment of peritoneal infertility.

**Effects of Levonorgestrel-releasing intrauterine system (Mirena®) on the fibromatous uterus**

**Background:** Our study evaluates the effects of the levonorgestrel releasing-intrauterine system (LNG-IUS) upon the fibromatous uterus regarding both the bleeding complications and the uterine dimensions. Study design. Between 01/01/2003-31/12/2009, one hundred and two patients with intramural or...
subserous myomas complicated with menorrhagia and/or frequent irregular uterine bleeding, were assessed at 3, 6 and 12 months after the insertion of a Mirena®. Our clinical prospective study included the Pictorial Blood Assessment Chart (PBAC; Higham score) and ultrasound measurement of the uterine volume and the volume of the myomas. Statistical data were analysed using SPSS 16 software. Statistical evaluation was calculated using Student’s t-test, which was considered significant for p<0.05. The study protocol was approved by the Ethical Committee of “Gr.T.Popa “University of Medicine and Pharmacy.

Results: There were 11 cases of discontinuation of the treatment due to device expulsion or removal during the 1 year period of follow up. PBAC score diminished from a median value of 23.17 at the beginning to 17.58 at 12 months. The duration of menstrual bleeding also decreased significantly (p<0.001). Uterine volume reduced from an average of 144.08cm³ to 128.94cm³ at 12 months (p=0.01). The comparison between myomas’ volumes did not produce statistically significant results (p=0.23).

Conclusion: The LNG-IUS has beneficial effects upon the bleeding complications associated to subserous and intramural uterine fibroids, but has no significant effect on the size of the tumours. Thus, the surgery might be avoided or postponed in many situations.

Key words: levonorgestrel-releasing intrauterine system, fibromatous uterus, menorrhagia, Higham score

FC05.8
Implantation of laparoscopic sacrocolpopexy- establishment of learning curve and short term outcome
Michael Deutsch, S Mustafa, I Netzer, S Filmar, A Amit, U Paz, J Itskovitz-Eldor, L Lowenstein
Rambam Health Care Campus, Haifa, Israel

Introduction: to evaluate the learning curve of senior urogynecologic surgeons adopting laparoscopic sacral colpopexy (LSCP); to evaluate the associated morbidity, the short and medium term follow-ups following LSCP. Methods: Consecutively all patients who underwent LSCP between March 2009 and December 2010 were included. Preoperative, intraoperative, postoperative, and demographic data were retrieved from patients' electronic charts. Pelvic organ support was assessed objectively using the pelvic organ prolapse quantification scale (POP-Q). Anatomic failure was determined if POP-Q stage > 1.

Results: Forty seven women with a mean age of 58 years (range, 35-73 years) were included. The median POPQ was III (II-IV). Concurrent to LSCP seven patients had sacrohysteropexies. Of the 47 patients, 96% (45) were completed by laparoscopy. The median operative time and postoperative inpatient stay were 172 minutes and 3 days respectively. The length of surgery was gotten shorten along the learning curve of the surgeons, while in the first 15 cases the average time was 196±62 minutes following 30 cases the mean duration time of surgery was gotten shorter by an average time of almost 40 minutes to 156±26 minutes The mean follow-up period was of 10 months. During this period, 4 patients (9%) presented with a recurrence of prolapse. 7%(3) women had de novo stress urinary incontinence. Immediate and short-term complications were uncommon. Two woman sustained a cystotomy during adhesiolysis and 1 patient had a port-site hernia. Conclusions: LSCP is a safe and effective treatment for POP, providing excellent anatomical support in the short term.

FC05.9
Tension-free vaginal tape (TVT)
Ayesha Imran, A Bako, S Dasari
Pilgrim Hospital/UK, Department of Obstetrics and Gynaecology, Boston, UK

Objective: To Evaluate the effectiveness and complications of Tension-free vaginal tape (TVT) for treatment of female stress urinary incontinence (SUI). Patients and Methods: 40 women with SUI undergoing TVT procedure from January 2007 to January 2009 were studied. Patient symptoms and urodynamic parameters were collated. Intraoperative and post-operative complications including voiding dysfunction were analysed. Results: Majority of patients (42%) were 51 - 60yrs old. Mean parity was 2 (range 0 - 4). 35% of the patients had a BMI greater than 30. 77% of patients had evidence of Urodynamic stress incontinence prior to surgery. We performed only TVT in 65%, TVT and surgical repair of vaginal prolapse in 33% and TVT and non-prolapse repair procedure in 2% ( abdominal hernia repair =1). The following intra operative complications were observed: Bladder perforation in 5 patients
(13%), haemorrhagic dissection (2%). No intraoperative complication in (80%). Post operative complications including suprapubic abscess (2%), urinary tract infection (13%), and Voiding dysfunction occurred in (36%). 22% of women with voiding dysfunction had post op catheterization for > 48 hours. And (10%) needed intermittent self catheterization for >2 weeks. Mean follow up was 3 months and Objective cure rate was (89%). Conclusion: The Tension-free Vaginal Tape procedure is a safe and effective ant incontinent surgical procedure in women, including those with BMI greater than 30. High cure rate, low complications rate and short recovery time facilitates this procedure for treatment of stress urinary incontinence.
SUNDAY, 11 SEPTEMBER 2011, 09:00 - 10:30

**FC06 Future Strategies & Updates/New Insights**

**FC06.1**

**Genetic markers in patients with Polycystic Ovary Syndrome and two of her relatives in the first degree of consanguinity**

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(2) GENES Ltda, Laboratorio, Medellin, Colombia
(3) Fundación para Investigaciones Medicas Profesor Pedro Nel Cardona, Junta Directiva, Medellin, Colombia

Introduction: Polycystic Ovary Syndrome (PCOS) is a heterogeneous endocrine disorder. Objective: To identify genetic markers in women with polycystic ovary syndrome and two of her female relatives in the first degree of consanguinity. Methodology: We evaluated 50 patients diagnosed with PCOS according to the Rotterdam criteria and two of her female relatives in the first degree of consanguinity. Quantitative variables are presented with their mean ± standard deviation (SD); student t test and the Pearson X2 statistic were used. ORs were calculated for PCOS and its respective confidence interval (CI) of 95% for exposure differences between case and control relatives. Results: The mean age was significantly lower in controls (23±6 years) than in cases (39±18 years). There were no differences between groups in the BMI category. Menstrual disorders were more frequent in cases group (OR of 3.1 and 10.4 the first second), as occurred in the manifestations of hyperandrogenism, hirsutism and acne (OR 7.5 and 4.7, respectively). Polymorphisms del / ins (in cases) and ins / ins (in controls) DCSNP-19 had the highest proportions in the two study groups, but difference was not statistically significant (X2 Yates corrected: 0.362, p = 0.835). This study identified 14 D19S884 alleles ranging from 215 to 242 bp. Conclusions: There was no a relationship between the polymorphism UCSNP-19 of CAPN10 gene and marker D19S994 with PCOS in the study population. Further studies are needed to confirm these findings in our population with a bigger sample.

**FC06.2**

**The relationships between serum anti-Müllerian hormone (AMH) level and the clinical and biochemical characteristics of women with polycystic ovary**

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Background. AMH has been the focus of interest due to its potential clinical utility as a marker of ovarian reserve and dysfunction. The objective of the study was to investigate relationships between AMH and biochemical and clinical characteristics of woman with PCOS and compare them with those of women with polycystic ovarian morphology alone (PCO group) and those of women with normal ovaries (control group). Methods. Transvaginal ultrasound assessment, anthropometric measurements and routine laboratory methods in the diagnosis of PCOS were used. Results. A strong correlation was found between antral follicle count (AFC) and serum AMH levels in PCOS (N=67; r=0.59), PCO (N=29; r=0.64) and the controls (N=108; r =0.64).This was the only significant correlation observed in the PCO group. There were significant differences in serum AMH concentration and AFC among the groups. In PCOS women, AMH was also strongly correlated to LH (r=0.35) and menstrual cycle length (r=0.47). AMH levels were found to be in strong inverse correlation with age only in the control group (r=-0.398), whereas no relationship was observed between AMH and BMI, hyperandrogenism, estradiol in any of the groups. Conclusion. Women with PCO alone have distinctive properties compared to controls and women with PCOS diagnosed by the Rotterdam criteria. The high AMH level due to intrinsic dysregulation of granulosa cells might be involved in impaired folliculogenesis in PCOS.
**Evaluation of personality of patients with dysmenorrhea with the help of the Millon’s Clinical Multiaxial Inventory III**  
*Kiumars Pirkalani, Z Talaeerad*  
*Mehr Medical Group, Department of Internal Medicine/Gynecology, Tehran, Iran*

Abstract For systematic evaluation of patients with dysmenorrhea, we studied 120 consecutive patients with the Millon’s Clinical Multiaxial inventory MSMI-III. Half of the patients reported dysmenorrhea of some concern while the other half of no or minor concern. The former group used routinely drugs for dysmenorrhea in a PRN basis and some used medications as prophylaxis. The former group was free to use psychoactive medication but people using psychoactive medications were excluded from the latter group. Dysmenorrhea was not graded according to severity and stress was laid on personal view about the matter. Both groups had good compliance for accomplishing the tests. The two groups were completely different in regard to many scales of both tests. Axis I disorders (personality) could not be attributed to chronic pain and because of this only axis I disorders were regarded for correlation. Patients with dysmenorrhea had higher scores in passive aggressive, borderline, avoidant, dependent, histrionic and obsessive personality scales (p<0.04). On the other hand patients without dysmenorrhea showed higher scores in narcissistic, schizoid, schizotypal, paranoid personality scales (p<0.07). Most patients with dysmenorrhea showed a lower pain threshold, increased preoccupation about disease and higher rates of menstrual irregularity. These patients are more regularly visited by their gynecologist, ask more questions about cancer risk and are more prone to early adjustment with depressed and anxious mood. We conclude that although the pathophysiological basis of dysmenorrhea can purely be attributed to organic and molecular landmarks the expression of pain and reaction to it is personality dependent.

**Acceptability of the LNG-IUS and ENG implant in Europe: an observational study**  
*Mary Short(1), D Dalley(2), S Omokanye(3), J-U Hanisch(4), P Inki(5)*  
(1) Rock Court Medical Centre, Dublin, Ireland  
(2) Service de Gynécologie Obstétrique, Hopital PELLEGRIN, Bordeaux Cedex, France  
(3) Central Health Clinic, Sheffield, UK  
(4) Global Non-Interventional Studies, Bayer Schering Pharma AG, Leverkusen, Germany  
(5) Global Medical Affairs Women’s Healthcare, Bayer Schering Pharma AG, Berlin, Germany

Objective: To analyse the acceptability and patterns of use of the levonorgestrel-releasing intrauterine system (LNG-IUS) and the etonogestrel-releasing subdermal implant (ENG implant). Methods: A total of 454 women aged 20-35 years opting to switch their method of contraception from short-acting hormonal contraception to the LNG-IUS or ENG implant, were recruited in an observational study in four different European countries and followed up at 3 and 12 months. Results: Data from 311 subjects (n= 211 using the LNG-IUS and n=100 using the ENG implant), with at least one follow-up visit after insertion, were analysed. The cumulative continuation rates at 12 months for the LNG-IUS and ENG implant were 93.3% and 85.7%, respectively. Most discontinuations with the ENG implant occurred due to bleeding problems, whereas the reasons for the discontinuation of the LNG-IUS were more variable. The vast majority of women were satisfied with their method of contraception (Table I).

Table I. Overall satisfaction: degree of agreement with statement “I am satisfied with my contraceptive method”.

<table>
<thead>
<tr>
<th></th>
<th>LNG-IUS</th>
<th></th>
<th>ENG Implant</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>211</td>
<td>100.0</td>
<td>100</td>
<td>100.0</td>
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<tr>
<td><strong>Overall satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No specification</td>
<td>30</td>
<td>14.2</td>
<td>21</td>
<td>21.0</td>
</tr>
<tr>
<td>Definitely agree</td>
<td>130</td>
<td>61.6</td>
<td>36</td>
<td>36.0</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>38</td>
<td>18.0</td>
<td>29</td>
<td>29.0</td>
</tr>
<tr>
<td>Not sure</td>
<td>3</td>
<td>1.4</td>
<td>1</td>
<td>1.0</td>
</tr>
</tbody>
</table>
Conclusions: The continuation rate at 12 months is high among young European women who wish to switch their method from short-acting hormonal contraception. This suggests that the LNG-IUS and ENG implant are highly acceptable contraceptive options and should be more readily offered also to young women. The results suggest a higher continuation rate and subject satisfaction rate for the LNG-IUS than the ENG implant after one year of use. Longer follow-up is needed to confirm or refute if this trend continues in longer term use.

**FC06.5**

**Contraceptive efficacy of oral Nomegestrol Acetate/17β-Estradiol**


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(6) Department of Women’s and Children’s Health, Uppsala University, Uppsala, Sweden

**Objective:** To compare the efficacy and safety of a monophasic combined oral contraceptive (COC) containing nomegestrol acetate (NOMAC) and 17β-estradiol (EE) with drospirenone (DRSP)/ethinyl estradiol (EE). Methods: Women (18-50 years) were randomized (3:1) to receive NOMAC/EE (2.5 mg/1.5 mg) in a 24/4-day regimen (n=1591) or DRSP/EE (3.0 mg/30mcg) in a 21/7-day regimen (n=535) for one year. Efficacy was expressed as Pearl Index (PI, in-treatment pregnancies per 100 woman years of exposure with a conception date within 2 days of last active pill intake; excluding cycles with confirmed backup methods). At each visit, clinicians monitored adverse events (AEs), which included worsening acne. Results: Estimated PIs (95%CI) for NOMAC/EE and DRSP/EE were 0.38 (0.10, 0.97) and 0.81 (0.17, 2.35) (≤35 years) and 0.31 (0.08, 0.79) and 0.66 (0.14, 1.94) (18-50 years), respectively. Withdrawal bleeding was shorter and lighter with NOMAC/EE (4 days; 2 bleeding/2 spotting days) than with DRSP/EE (5 days; 3 bleeding/2 spotting days) and was sometimes absent altogether. Intracyclic bleeding/spotting was low in both groups and decreased over time. Acne was unchanged in the vast majority of subjects, while improvements occurred more often than worsening in the remainder, especially with DRSP/EE. Discontinuation rates for NOMAC/EE (28.2%) and DRSP/EE (23.4%) were most frequently due to AEs (18.2% vs 10.5%, respectively), notably those that were also actively assessed periodically, such as acne, weight gain, and absence of withdrawal bleeding. Conclusion: NOMAC/E2, provides robust contraceptive efficacy with an acceptable bleeding profile. NOMAC/E2 was well-tolerated, with an adverse event profile typical for a COC.

**FC06.6**

**Radiopaque Etonogestrel implant with new applicator: 3 year study**


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(2) Cabinet Medical, Mulhouse, France  
(3) Praxis Volksdorf, Hamburg, Germany  
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(5) Medicus Norway, Trondheim, Norway

**Objective:** To evaluate the radiopaque etonogestrel implant for efficacy, safety, and ease of insertion using a next generation applicator (NGA). The user’s expectations and degree of satisfaction were also
assessed. Materials and Methods: In this open-label, non-controlled, multicenter 3 year trial, the insertion using the NGA, efficacy, tolerability, and removal characteristics of radiopaque etonogestrel implant (68 mg, IMPLANON NXT®, Merck) were evaluated in healthy women (18-40 years). Contraceptive efficacy was based on pregnancies. Implant visualization was assessed by X-ray imaging. The women’s expectations and satisfaction with the implant were assessed by questionnaire throughout the study. Results: Of 301 women receiving the implant, 145 (48%) discontinued prematurely, primarily because of bleeding irregularities (19%). No in-treatment pregnancies were recorded. Almost all investigators found the insertion using the NGA easy from the first insertion onwards. Median insertion time was 19 seconds. Implant removal was uneventful in 280/296 (95%) of women, with the main event reported as fibrotic tissue surrounding the implant. The implant was palpable before removal for all 293 women with data on palpability. Median implant removal time was 78 seconds. X-ray imaging was performed for 63 subjects after implant insertion and for 54 subjects before implant removal. All implants were clearly visible. At removal, the majority of the women (65%) were satisfied with the implant. Conclusion: The radiopaque etonogestrel implant was highly effective, easy to insert using the NGA, and clearly visible using X-ray imaging. Implant removal was largely uneventful. Investigators and most women were satisfied with Implanon NXT®. (NCT00620035)

FC06.7
Abortion access in Europe: where is the 'European standard'?
Christian Fiala
Gynmed Clinic, Vienna, Austria

Europe is far from united when it comes to abortion and a ‘European standard’ is not in sight. The historical timeline of legalizing abortion reveals the reluctance of most countries to do so, even though abortion laws originated centuries ago in monarchies, dictatorships, and war-leading countries. In 1920, the former Soviet Union became the first to change its laws, with Portugal the most recent in 2007. But abortion remains illegal in Ireland, Poland, and Malta until today. Huge variations exist in allowable gestational limits and other access restrictions: waiting periods, written permission from two doctors, obligatory counselling, and more. These restrictions are rooted in tradition and morality, with no scientific evidence of any benefit. But negative consequences are well-documented, such as women being forced to delay the procedure or travel long distances to find care. Consequently, countries with the easiest access to abortion have the lowest gestational age at the abortion, and vice versa. Most countries in Western Europe provide coverage of abortion as part of universal healthcare. However, the regulations vary widely, unlike the straightforward funding of procedures for other medical treatments. Given these huge underlying differences, it is no surprise that the frequency of abortions also varies widely between countries. The abortion rate is not linked to legal restrictions, but rather mirrors the use of effective contraception. Switzerland, The Netherlands, and Belgium lead the way, while most Eastern European countries, together with Sweden and the UK, sit at the bottom with abortion rates 3 to 4 times higher.

FC06.8
Local anaesthesia and remifentanil sedation versus total intravenous anaesthesia for operative hysteroscopic procedures in day surgery. A randomised clinical trial
Birgitte Majholm(1), Jens Bartholdy(1), Helle Vibeke Clausen(1), Rie Adser Virkus(2), Jens Engbaek(1), Ann Merete Møller(1)
(1) Copenhagen University Hospital, Herlev
(2) Copenhagen University Hospital, Hillerød

Introduction: Operative hysteroscopic procedures are often performed under general anaesthesia in the day surgery setting. The use of intravenous sedation-analgesia with local anaesthesia (monitored anaesthesia care; MAC) may minimize the time each patient spends in the operating room and promote earlier mobilization and discharge. Aim: To compare Total Intravenous Anaesthesia (TIVA) with MAC during day surgery operative hysteroscopy regarding: operation time, time to mobilization and discharge, and patient satisfaction. Methods: Ninety-one healthy women were randomised to MAC with paracervical local anaesthesia and remifentanil or to TIVA with propofol and remifentanil. Primary
outcome: Time from arrival to leaving the operating room. Secondary outcome: Time from arrival in the recovery room to mobilization and discharge readiness, and patient satisfaction with MAC and TIVA.

Results: Time from arrival to leaving the operating room showed no significant difference between groups (p = 0.6). The time to mobilization (MAC: 53 min (IQR 40-83)), TIVA: 69 min (IQR 52-96)) (p = 0.017) and the total time from arrival to discharge readiness (MAC: 118 min (IQR 95-139)), TIVA: 138 (IQR 120-158)) (p = 0.0009) were significantly reduced for patients in the MAC group. More patients in the MAC group 45 (91.8%) than in the TIVA group 24 (64.9%) responded positively to the question: Would you like to receive the same kind of anaesthesia for a similar procedure in the future? (p = 0.003). Conclusion: Paracervical local anaesthesia combined with remifentanil is suitable for operative hysteroscopy in day surgery.
FREE COMMUNICATION POSTER PRESENTATIONS

THURSDAY, 08 SEPTEMBER 2011, 10:00 - 16:00

P01 The breast

P01.01
Estimation of phenomenon of lassitude in patients with cancer of breast who are following chemotherapy and radiotherapy
Spyridon Dimitrakopoulos, A Andriotis, S Koliantzaki, A Sidiropoulou, A Saltamauros, K Sorras, A Bonas, D Papadimitriou, N Oikonomopoulos, N Sidiropoulos
General Hospital of Pyrgos 'Andreas Papandreou', Department of Obstetrics & Gynaecology, Pyrgos, Greece

Aim: The emergence of phenomenon of lassitude in women suffering from cancer of breast and who are in chemotherapy and radiotherapy. Material - Method: There were studied 26 women of age of 25 – 79 years, (15 after menopause women and 11 pro menopause women) stage I - II, who had been submitted in semi-annual chemotherapy with cytostatics and 6 - 8 weeks, 5000rad radiotherapy for cancer of breast. All of the participants had been submitted in chirurgical intervention (onco-excision, part excision or mastectomy, that was accompanied by cognate underarm lymph nodes cleaning), 5 until 10 years before and 7 that recently have finished their treatment. As research tool was used the completion of questionnaire and the reception of personal interview from the patients in three successive measurements. The study became with qualitative analysis of results of the previous questionnaire. The statistical analysis of results became with the method SPSS. Results: The first team of the 11 pro menopause patients present because of the pharmaceutical gonadectomy with the Gn-Rh analogues from the second month menopause symptoms and more intense lassitude in the means of the treatment with augmentative tendency to the end. The second team of the 15 after menopause patient reports elements of lassitude to the end of the treatment. Conclusions: From the evaluation of our results it comes up with clarity that the lassitude of women that suffers from cancer of breast is increasing with the progress of chemotherapy and radiotherapy.

P01.02
The psychosocial effect of change of bodily image in patients that were submitted in mastectomy - advisory
Spyridon Dimitrakopoulos, S Koliantzaki, A Andriotis, A Sidiropoulou, A Saltamauros, K Sorras, A Bonas, D Papadimitriou, N Oikonomopoulos, N Sidiropoulos
General Hospital of Pyrgos 'Andreas Papandreou', Department of Obstetrics & Gynaecology, Pyrgos, Greece

Aim: The recording of emotions that were experienced by patients who were submitted in mastectomy. Material - Method: The sample of our analysis composed of 37 women, age of 30 - 65 years. The material included women that in the past had been submitted in mastectomy. The collection of data became according to anonymous questionnaire. The study became with qualitative analysis of results of questionnaire which was given in these women. Results: From the elaboration of elements it emerges that the bodily change leaves psychosocial stain without regard to the age of patient. Almost all of them report that the loss of their breast initially caused them anger. The younger report that they accepted a backset of their femininity so that it affects for a big percentage adversely in their sexual relations. Some of them at first couldn't speak for this change to their social environment, so that they avoid social activities even if they had the need to express their fears and their emotions. Conclusion: The patients who were submitted in mastectomy require support from the professionals of health but also from their environment. To achieve this it is needed to bring them in contact with the problem and to help them to accept their new bodily image, recommending them improvements with the use of cosmetic additions, the choice of proportional clothing and their beautification. There is required their encouragement so that they can verbally express their emotions as well as their prompt in attendance of various social activities.
P01.03
Renewal of normal biocenosis of vagina for pregnant with breast fibrosis-cystic disease
Iryna Zhabchenko, T Chernenko, T Shevel
Institute of Pediatric, Obstetrics and Gynecology, Kiev, Ukraine

The got is presented by us data about the state of biocenosis of genital tracts for pregnant with breast fibrosis-cystic disease. The flow of pregnancy and basic disease is studied at 142 pregnant with breast fibrosis-cystic disease. Activating of conditionally-pathogenic and pathogenic microflora is marked on a background the decline of amount of lactobacilliÆs as far as progress of basic disease. A twostage method of sanitation of genital tracts is offered taking into account the sensitiveness of causative agent: 1 stage is removal of pathogen (Hexicon), 2 the stage is renewal of normal microflora by means of peroral probiotic of the directed action (Vagisan). High efficiency of the offered methodology is marked.

P01.04
Combined estrogen-progestogen administration and breast cancer risk - new insights on possible mechanism
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(2) Tübingen University Women's Hospital, Tübingen, Germany
(3) Charles Sturt University, School of Biomedical Sciences, Wagga Wagga, NSW, Australia
(4) Hospital of Tongji University, Department of Obstetrics & Gynecology, Shanghai, PR China

Objectives: The aim was to investigate the influence of different estradiol concentrations and addition of progesterone or two very different synthetic progestins on MCF-7 breast cancer cells overexpressing 'Progesterone receptor membrane component' (PGRMC1), which is expressed in breast cancer and may be important in tumorigenesis. Methods: MCF-7 cells were stably transfected with PGRMC1 expression plasmid (MCF-7/PGRMC1-3HA). To test the effects of estradiol and progestogens on cell proliferation MCF-7 and MCF-7/PGRMC1-3HA (WT-12) cells were stimulated with different concentrations of estradiol (10-10 M and 10-12 M) alone and in combination with progesterone (P), medroxyprogesterone acetate (MPA) and norethisterone (NET) (each 10-6 M). Results: Estradiol elicited a concentration-dependent proliferative effect on both cell lines, which was much more pronounced in WT-12 cells (50%vs. 200%). This effect could be completely abrogated by the addition of the E2-antagonist fulvestrant. Addition of P had no influence on the E2-induced effect, whereas MPA and NET enhanced the E2-induced effect at the low E2 concentration which was, again, more pronounced in the WT-12 cells. The figures were between 60 and 250% in WT-12 cells for MPA and between 100 and 220% for NET, respectively. Conclusion: The presence of PGRMC1 sensitizes the proliferative response of the MCF-7 breast cancer cell line to estradiol. The addition of progesterone had no effect on the estradiol-induced stimulation, whereas MPA and NET elicited a further increase of proliferation. Thus the effect of progestogens on breast cancer tumorigenesis may depend on the specific progestogen used for hormone therapy or oral contraception.
Possible mechanism for the contribution of progestogen-only administration to breast cancer risk

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(2) Tübingen University Women's Hospital, Tübingen, Germany
(3) Charles Sturt University, School of Biomedical Sciences, Wagga Wagga, NSW, Australia

Objectives: Evidence is accumulating that progestogens play a crucial role in the development of breast cancer. Little is known about progestogen-only action comparing different progestogens used in contraception and hormone therapy, without combination with estrogen. Progesterone receptor membrane component 1 (PGRMC1) expressed in breast cancer may be important in tumorigenesis. For the first time the influence of progesterone and nine synthetic progestins on MCF-7 breast cancer cells overexpressing PGRMC1 have been investigated.

Methods: MCF-7 cells were stably transfected with PGRMC1 expression plasmid (MCF-7/PGRMC1-3HA). To test the effects of progestogerone (P) and the synthetic progestins chlormadinone acetate (CMA), desogestrel (DSG), dienogest (DNG), drospirenone (DRSP), dydrogesterone (DYD), levonorgestrel (LNG), medroxyprogesterone acetate (MPA), nomegestrol (NOM) and norethisterone (NET) on cell proliferation MCF-7 and MCF-7/PGRMC1-3HA (WT-12) cells were stimulated with different concentrations (10^-9 M to 10^-7 M).

Results: In MCF-7 cells DNG, DRSP, DSG, DYD, LNG and NET increased the proliferation at 10^-7 M, the effect being highest for NET with about 20%. In WT-12 cells the same progestins, but additionally MPA, showed a significant increase, which was much higher (30-245%) than in MCF-7 cells. Here again NET showed the highest proliferative effect. No effect was found for CMA, NOM and P.

Conclusion: These data indicate that especially synthetic progestins with partial androgenic properties trigger a proliferative response of PGRMC1 overexpressed MCF-7 cancer cells. In contrast most progesterone-derived progestins act neutral. Thus the effect of progestogens on breast cancer tumorigenesis may clearly depend on the specific pharmacology of the various synthetic progestins.

Lymphatic drainage of the arm in axillary region - analysis of X-ray lymphography scans

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(2) Institute of Anatomy of 1st Medical Faculty of Charles University, Prague, Czech Republic

Aim: To simplify and improve the technique of targeted dissection of the axila with aim to spare lymphatics passing from arm and running through axilla, to reduce occurrence of lymphedema of the upper arm after breast cancer surgery. Methods: We analysed 10 X-ray lymphography scans of the upper extremity from 1972. These scans were made in comparative group of healthy probands in former anatomical study. As contrast substance was used Lipidoil. Scans were performed 4 hour after slow administration into lymphatic vessels on dorsal part of the hand. Results: After administration of contrast, the lymphatics of the arm demonstrated great variability. Most often were visualized two or three main lymphatic collectors running along axillary vein and usually led to the lateral nodes in central axillary region and than to the nodes in central axilla. We observed also very dense network system of lymphatic collectors connecting nodes in axilla each other together. There was none direct collecting lymphatics which led separately from central axillary nodes to the subclavicular nodes. Conclusion: From the course of the lymphatic vessels of the arm running through the axilla we can assume, that is highly unlikely to spare all lymphatics when axilla dissection is performed. Reliable prevention of the occurrence of lymphedema remains still dubious. There is need to perform subsequent study to prove result of this study.

This study was supported by the grant No. NS 9773-4 of the Internal Grant Agency of the Ministry of Health of the Czech Republic.
P01.07

Breast cancer in pregnancy: a case series analysis
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(2) Comenius University, Jessenius Faculty of Medicine, Department of Pathology, Martin, Slovak Republic
(3) Institute of Molecular Biology, Marin, Slovak Republic

Objective: Breast cancer is second most frequent malignancy in pregnancy. As delaying in maternity is becoming more obvious, there is awaited rising trend of such cases. Aims: To present the management of pregnancy associated breast cancer (PABC) based on our experiences and literature review. Methods: Case series analysis for period of one year (2009). Results: There was a 9.3% rate of PABC managed during observed period (n=4/43). The mean age of women was 26.5 years (interval 21-32) presented in 25th, 21th, 27th and 22nd g.w. All women were presented with palpable mass in breast, two with breast swelling, skin erythema and local metastasis. In all cases core-biopsy was performed. The histology showed 3x ductal and once tubular carcinoma (grade 1-3), luminal A/B or Her-2+ types. Patients were referred to multidisciplinary tumor-board after which they have been operated (breast conserving surgery with ipsilateral axillary lymph node dissection). Imaging modalities and histopathology staged cases as pT1mi-pT2, pN1-2a, and pM0-1. In one case (21th g.w.) women agreed with termination of pregnancy, others declined this as well as any form of chemotherapy during pregnancy. Thus, prolongation in pregnancy to 32nd or 34th g.w. was recommended. Afterwards, all cases were delivered by caesarean section. There is no evidence of local recurrence or distant metastases during 18 months follow-up in 3 patients. One developed metastatic spread 6 months after surgery despite chemotherapy. Conclusion: PABC is becoming more frequent and cases are presented in advanced stages. Thus, any palpable breast masses during pregnancy should be promptly evaluated.

P01.08

Management of granulomatous mastitis: a series of 14 patients
Justine Hugon-Rodin, G Plu-Bureau, A Gompel
Paris Descartes University, APHP, Gynaecology Endocrinology Department, Hotel-Dieu Hospital, Paris, France

Objective: To analyse history of relapses and treatment efficacy in Idiopathic granulomatous mastitis (IGM) and to define therapeutic strategy. There is no consensus about the most appropriate treatment and management of IGM. The duration and number of relapses are unpredictable and the place of surgery and steroid remain controversial. Design: retrospective study. Setting: Gynecology department ,Hotel-Dieu Hospital, Paris. Patients: A series of 14 patients with IGM and a mean of 87 months follow up. Interventions: History of relapses and treatment efficacy were analyzed. Numbers of relapses before and following steroid therapy were compared. Main outcome measure:Number of relapse per year before and following steroid therapy. Results: A total of 125 episodes analysed. Before steroid treatment, 60 recurrences occurred corresponding to a mean of 4.03± 4.22 relapses per year. After the first treatment with prednisone, patients experienced 47 relapses representing a mean of 1.11±1.27 relapse per year (p=0.0371). Conclusions: Medical treatment with steroid in association with a close follow up and management reduces duration and number of episodes. It also prevents from invasive breast surgery.
A case of malignant phyllodes tumor of the breast suddenly growing after a pregnancy

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(4) Hotel-Dieu Hospital, Department of Surgery, Paris France

Background: Phyllodes tumors (PTs) are uncommon fibroepithelial breast lesions. They are composed of a benign epithelial component and a benign, borderline or malignant stromal component which determines histological grade of the tumor. Malignant PTs account for less than 1% of all breast neoplasms. The median age at presentation is 45 years and they are very rare in young women. Few cases have been reported during and just after pregnancy.

Cases: We report here the case of a 26-year-old woman with a 7-years history of two nodules of the right breast, mimicking fibroadenoma (FA) on ultrasound examination. Only medical and echographic control was performed and no histological diagnosis was established initially. Her medical history showed no other relevant history and she has no familial history of breast cancer. During her second pregnancy, the largest right breast lesion became very painful. A malignant phyllodes tumor was finally diagnosed after sudden large growth acceleration ten months after giving birth. The patient underwent mammectomy and 6 cycles of adjuvant chemotherapy. Reconstructive right breast surgery was secondary performed. After a four years follow-up, no recurrence was observed.

Conclusion: This case-report brings up several unresolved questions. The etiological relationship between FA and PT remains unclear. Whether PT develop from preexisting FA or occurring de novo remains to be defined. The possible estrogen dependency of PT remains controversial and the therapeutic management is not consensually determined because of the rarity of this tumor.
P02 The endometrium

P02.01
A comparison of transvaginal ultrasound with sonohysterography technique for evaluating unexplained vaginal bleeding
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Objective: To compare the diagnostic accuracy between saline infusion sonography (SIS) and routine transvaginal ultrasound for evaluating unexplained vaginal bleeding that may be the result of uterine abnormalities

Materials And Methods: Participants: 120 women who unexplained vaginal bleeding between 2006-2009 in our department. Age between and 44-55. All women underwent a baseline transvaginal ultrasound followed by saline infusion hysterosonography. The final diagnosis was made by endometrial biopsy with vacuum curettage. The procedure was performed one week after menstruation to avoid the risk of infection at this time in the menstrual cycle the endometrium is at its thinnest. No special preparation was required prior to the exam

Results: The most common frequent abnormalities were endometrial polyp the result of uterine abnormalities were 15 polyps, 10 fibroids, 6 with adhesions, 1 congenital defects, 2 atrophy, 84 with normal uterine cavity in hysterosonography 12 polyps, 10 fibroids, 2 adhesion, 1 congenital defects, 2 atrophy, 82 with normal uterine cavity 5 endometrial hyperplasia in transvaginal ultrasound. In three women sonohysterography could not be performed because of cervical stenosis. The sensitivity and specificity of saline infusion hysterosonography was 98.7-99.4% with a positive prognostic value of 98.6% and a negative prognostic value of 99.4%. The sensitivity and specificity of transvaginal ultrasound was 93.5 - 99.4%. Conclusions: Both saline infusion hysterosonography and routine transvaginal ultrasound were well tolerated by women. Hysteroscopy is a relatively short procedure that provides an excellent view of the uterus and endometrial lining and is a valuable technique for evaluating unexplained vaginal bleeding.

P02.02
Effects of bisphenol a on development of the decidualized endometrium
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Decidualization, essential for successful mammalian pregnancy, i.e. humans and rats, involves development of endometrial stromal cells into decidual cells, or maternal placenta, with dual hormonal support: estrogen (E) followed by progesterone (P4). Bisphenol A (BPA), an endocrine disruptor, targets the uterus and ovary. The present study compared the decidual proliferative responses to BPA during the E-regulated pre-decidual induction and the P4-dominated post-induction periods. Proestrus/estrous female rats (200-250g) were subjected to mechanical vagino-cervical stimulation to initiate pseudopregnancy (PPG), followed by surgical uterine trauma on PPG day 4 to induce deciduoma formation. Animals were then treated with 4 daily subcutaneous BPA doses (200mg/kg) on PPG days 1-4 or days 5-8, and were killed on both PPG days 5 or 9 for evaluating decidual proliferative mechanisms: serum hormones by radioimmunoassay, western blot for inducible nitric oxide synthase (iNOS), and mRNA expression by RT-PCR for both decidual prolactin-related protein (dPRP) and the estrogen receptor (ER). Decidual responses to BPA included unchanged levels in decidual weights, protein and serum P4 during the pre-induction period. However, these endpoints were significantly reduced (p < 0.001) at post-induction. While pre- and post-induction serum E levels remained unchanged, ER mRNA expressions were reduced following both BPA treatments (p<0.01-0.001). Additionally, dPRP and iNOS profiles were decreased by BPA in the P4-supported phase only (p < 0.01-0.001). These results indicate that whereas BPA enhanced decidual proliferation during the E-regulated pre-decidual induction phase, post-induction BPA suppressed P4-regulated proliferation. Pre-decidual BPA treatment apparently reduced the uterine sensitivity to the decidualogenic stimulus.
Mechanical vagino-cervical stimulation (vcs) or mating stimulates hypothalamic neurons that regulate pulsatile secretions of gonadotropin-releasing hormone and the gonadotropins which affect deciduoma formation of decidualization, an essential for successful mammalian pregnancy that is induced via ovarian steroidogenesis. Progesterone-regulated deciduomal growth is promoted by numerous paracrine factors including uterine stores of pituitary adenylate cyclase-activating polypeptide (PACAP), decidual prolactin-related protein (dPRP), plus the matrix metalloproteinases (MMPs). The purpose of the study was to temporally evaluate the effects of neurogenic stimulation on decidual/placental proliferative responses triggered by copulation and blastocyst implantation during normal pregnancy, and by copulomimetic vcs followed by decidentomimetic stimulation under artificially-induced pseudopregnancy (PPG). Female rats were subjected to vcs (proestrus/estrus) and surgical uterine trauma (day 4 PPG) for PPG/decidualization initiation, or to cohabitation with fertile males for pregnancy induction. The RT-PCR determined mRNAs of the progesterone receptor (PR), PACAP and dPRP, derived on PPG days 3, 6, 9, 12 and 15 (from the decidual endometrium), or during gestation (from the gravid uterus or placenta), increased from days 3 to 9 (p < 0.05) and then declined. Zymography-detected decidual MMP-2 and -9 levels rose sharply from PPG days 3 to 15 (p < 0.05). During gestation, gravid endometrial mRNA expressions rose from days 3 to 9 (p < 0.05) and remained elevated. Placental mRNA was consistently high from days 9 to 15. By way of the hypothalamic-hypophyseal-ovarian neuroendocrine axis, decidual/placental endocrine and molecular proliferative mechanisms responded in comparable profiles to artificial or normal neurogenic signals that respectively induce pseudopregnancy or pregnancy.

The objective of this retrospective study is to compare the rates of cure of gynecological and obstetric infections using a daily dose of gentamicin with clindamycin 1x/day versus 3x/day. Electronic records of all patients who used clindamycin between September/2002 and August/2010 were reviewed for age, conditions, days of treatment with clindamycin, and cure. All patients who used 1x/day or 3/day clindamycin were included. Patients who used different regimens were excluded. Cure was defined as clinical improvement and substitution of intravenous for oral antibiotics before hospital discharge. Treatment failure was defined as no clinical improvement and the need for other antibiotics or surgery with the suspension of clindamycin. Statistical analysis was performed as an equivalence trial, having a delta between both treatments as <10%. A total of 495 cases met inclusion criteria and were analyzed. Similar conditions were observed in both groups- 1x/day: 170 infected abortions; 74 pelvic inflammatory diseases; 12 puerperal infections; 3 urinary infections - 3x/day: 118 infected abortions; 96 pelvic inflammatory disease; 19 puerperal infections; 3 urinary infections. A significant difference was found between age groups; 1x/day: 27.7±8 vs. 29.4±9.8 (P=0.03 -Student t-test). Rate of cure in experimental arm (1x/day) was 244/259 [0.9457 (95%CI 0.91-0.97)], while in the traditional arm (3x/day) was 218/236 [0.9536 (95%CI 0.8911-0.96)]. Time of use for clindamycin was significantly different between groups (2.6±1.3 vs 3.5 ±2.5 - mean ±SD;P<0.0001 -Student t-test). The use of 1x/day dose of clindamycin for gynecologic or obstetric infections seems to be equivalent or superior to 3x/day.
Relevance. Cervical pathology comprises up to 40% of gynecological diseases. The aim is to evaluate the state of the epithelium of the cervix in women with chronic recurrent candidiasis genital (CHRCG) and bacterial vaginosis (BV). Materials and methods. Examined 200 women with cervical pathology, median age ±8.7. For the diagnosis infection held microscopic (budding yeast cells, pseudomycelium, 'key cells') and cultural studies. Polymerase chain reaction used for the detection of human papilloma virus (HPV). The patients were divided into two groups: I group - 48 women (24%) with CHRCG; II group - 44 women (22%) had combination of CHRCG and BV. Results. The dominant agent in I group - C. albicans (95%). In II group - Candida spp., anaerobic microorganisms (Gardnerella vaginalis, Bacteroides sp. et al.). Cytologically reactive metaplasia was detected in 30% and 25% of women of the I and II group respectively. Low Grade Squamous Intraepithelial Lesion - 8% in group I, in group II - in 4% of cases. High Grade Squamous Intraepithelial Lesion revealed only in patients of the I group. HPV high carcinogenic risk identified in 36.7% and 25% of cases, respectively. Cervical biopsy was performed in 24 patients and among patients with CHRCG revealed squamous cell carcinoma up in situ (2.8%) and high-grade squamous cell carcinoma with microinvasion (2.8%). The Conclusions. Genital infections (CHRCG and BV) can be found in 46% of patients with cervical pathology. Candida spp. and anaerobic microorganisms plays a significant role in the formation of dysplastic processes.

Prediction of endometrial malignancy in women with postmenopausal bleeding

Objectives: To determine if gray-scale ultrasound morphology and endometrial vascular morphology as assessed by color Doppler ultrasonography can discriminate between benign and malignant endometrium in women with postmenopausal bleeding. Design: Retrospective study. Participants: Postmenopausal women referred for investigation and management of abnormal bleeding between 2007 and 2009 who had not used hormone replacement therapy in the last six months. Interbentions: The women underwent transvaginal ultrasonography (TVS) combined with endometrial sampling by curettage. Measurements and Main Results: Ultrasonographic findings (endometrial thickness, morphology, the endometrial border and the endometrial vascular tree) were evaluated on the basis of final diagnoses established by histological examination. The best ultrasound variables to predict malignancy were heterogeneous endometrial echogenicity and endometrial thickness. In 63 of 110 women with postmenopausal bleeding endometrial thickness was ≥4 mm, endometrial malignancy was absent in women with endometrial thickness < or =4 mm. Then as the endometrial thickness increases, the probability of finding endometrial pathology in curettage increases, including proliferative and secretory endometrium, endometrial hyperplasia, polyps and cancer. Heterogeneous endometrial echogenicity was funded in cases of malignancy (10), but sonograms showed heterogeneous endometria in women with endometrial polyps too, in 35 cases. Multiple-vessel pattern tended to be more common in malignant endometria (89%) than in benign endometria (60%). Conclusions: This study shows that transvaginal scanning may be used as the first diagnostic step in the investigation of women with postmenopausal bleeding but ultrasound cannot always reliably distinguish between benign proliferation, hyperplasia, polyps, and cancer.
Accuracy of preoperative and intraoperative evaluation of endometrial cancer in planning surgical treatment - 56 cases revised

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Background: Endometrial carcinoma is the most common gynecologic malignancy in developed countries. It is surgically staged, being total extrafascial hysterectomy with bilateral salpingo-oophorectomy plus pelvic and paraaortic lymph node dissection its standard staging. Surgery alone is usually curative for low risk disease (grade 1 or 2 endometrioid histology, confined to the uterus, invasion limited to the endometrium -stage IA- or less than one-half of the myometrium -stage IB-) who have no risk factors for recurrence. In these situations, lymph node dissection may be omitted. Objectives: Evaluate the accuracy and efficacy of the preoperative and intraoperative evaluation in endometrial cancer patients. Methods: We made a population-based retrospective analysis using D. Estefânia Hospital data collection from 2006-2011, which involves 56 women with endometrial cancer submitted to surgery. We compared the preoperative (endometrial sample by hysteroscopy direct biopsy) and intraoperative evaluation with the final histopathological report. Results: In the 56 endometrial cancer women submitted to surgery, lymph node dissection was performed in 11 cases: 49 women had previous endometrial carcinoma diagnosis and in 6/49 (12,2%) situations, the final histopathological grade report was greater than the preoperative and intraoperative evaluation, justifying lymph node dissection; 4 had a previous atypical complex endometrial hyperplasia diagnosis; the other 3 were submitted to surgery for supposed benign pathology. Discussion: The preoperative and intraoperative evaluation of the depth of tumor infiltration into the myometrium is important to plan the extend of the surgical treatment and the performance of lymph node dissection.

Postmenopausal bleeding and endometrial changes: clinical significance?

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Introduction: Postmenopausal bleeding is a common complaint from women seen in general practice, although majority of them, will have no major problem. Objective: Study of endometrium in postmenopausal women with suspicious sonographic endometrial changes. Comparison of findings in asymptomatic women and those who reported metrorrhagia. Methods: Consultation of outpatient medical records of 487 women undergoing endometrial study (sonohysterography, hysteroscopy), between January/2004 and July/2010. Patients were subdivided into two groups: women with (G1) and without (G2) complaints of postmenopausal metrorrhagia. Results: G1 and G2 comprises 78 and 409 women, respectively. G1: 23.1% normal uterine cavity, 74.3% benign pathology (majority endometrial polyps) and 2.6% of them endometrial carcinoma. G2: 14.4% normal uterine cavity, 83.7% benign pathology (majority endometrial polyps), 1.4% endometrial hyperplasia and endometrial carcinoma in 0.49%. Conclusion: Postmenopausal metrorrhagia is associated with an increased risk of endometrial malignancy, in relation to asymptomatic, although represents a minority of the population. To highlight the existence of premalignant and malignant pathology in asymptomatic endometrial thickening.
Evaluation of abnormal vaginal bleeding in women of reproductive age
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Aim: The causes of abnormal uterine bleeding include a wide spectrum of diseases of the reproductive system and nongynecologic causes as well. The aim of our study is to assess causes of abnormal vaginal bleeding in patients of reproductive age attending Ippocratio General Hospital. Patients & Methods: 109 patients presenting massive uterine bleeding involving blood loss greater than 80ml, aging between 23 and 37 years of age were included in our study. All women underwent pelvic ultrasound, both abdominal (suprapubic) and transvaginal, chorionic gonadotropine assay, clinical examination as speculum examination and Pap smear and a blood count for red cells+platelets to test for anemia for women whose history and/or bleeding score justify it. Results: 89 patients showed complications of pregnancy (43 threatened, 33 incomplete abortion, 11 ectopic pregnancies, 2 placental polyps), 5 infection (endometritis, salpingitis), and 4 traumatic lesions of the vagina, 5 cervical polyps, 1 cervicitis, 2 endometriosis, 2 endometrial polyps. One patient showed hypothyroidism after accurate examination. Conclusions: Patients in reproductive age with abnormal vaginal bleeding should not be underestimated. Complications of pregnancy often hide behind bleeding as well as tumors and infections, or systemic diseases as hypothyroidism, that can compromise their quality of life.

Thyroid hormone receptors in the primate uterus: effects of long-term sex hormone treatment
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Background: Thyroid gland dysfunction is known to have major effects on the reproductive function. Thyroid hormone receptors have been shown to be present in the human endometrium. However, little is known about the role and regulation of these receptors in the uterus. Objective: To determine the effects of long-term treatment with sex steroid hormones on the expression and distribution of THRα1/α2 and THRα1 in monkey uterus. Methods: Eighty-eight cynomolgus macaques (Macaca fascicularis) were ovariecotomised and treated orally with conjugated equine estrogens (CEE), a combination of CEE and medroxyprogesterone acetate (MPA) or tibolone for 2 years. Immunohistochemistry was used to evaluate the protein expression and distribution of the receptors in luminal epithelium, glands, stroma and myometrium of the uterus. Results: Immunostaining of THRαs was detected in all uterine compartments. THRα1 immunostaining increased in glandular epithelium but decreased in stroma in the CEE group. THRα1/α2 and THRα1 immunoreactivity was down-regulated in the myometrium in the CEE and CEE+MPA treated groups. Conclusions: Protein levels of the receptors involved in thyroid hormone action is located in the uterus. Our findings suggest that sex hormones can affect thyroid hormone signalling in the uterus.
P02.11
Abnormal uterine bleeding in the perimenopause: bleeding and satisfaction assessment after LNG-IUS
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The LNG-IUS can cause a reduction of menstrual flow and dysmenorrhea and may prevent many patients undergoing surgical treatment. The objective of this study was to assess bleeding and satisfaction in premenopausal women after the use of LNG-IUS. Materials and methods: In this retrospective cohort study, we evaluated all women aged >35 who had a LNG-IUS inserted in Menopause Clinic at Hospital de Clínicas de Porto Alegre because of abnormal uterine bleeding. Follow-up from 6 - 36 months. Exclusion criteria: blood dyscrasias and malignancies. The patients underwent a questionnaire to evaluate their pattern of bleeding before and after insertion of the IUS and about satisfaction with the method. They were advised to numerically quantify the bleeding (ten as the highest amount of bleeding) in a score of zero to 10, and quantify the satisfaction with a score of zero to 10 (ten as the highest satisfaction). Results: We followed 61 patients with an average age of 43.5 years. 16 women (26%) discontinued the use of the LNG-IUS: six because of expulsion, 5 asked for withdrawal and 5 were submitted to hysterectomy. 45 women remained using the LNG-IUS: 14 (31%) presented amenorrhea, 29 (64%) reported reduced bleeding and 2 (3%) reported increased bleeding. The average score of intensity of bleeding before insertion was 8.26 and at least 6 months after was 2.17. The average satisfaction score with the method was 8.7. Conclusion: Small bleeding scores and big satisfaction scores demonstrates that LNG-IUS is an effective option for perimenopausal uterine bleeding.

P02.12
Endometrial cancer in patients with breast cancer and its relation with Tamoxifen
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Introduction: We examined the frequency of endometrial cancer in breast cancer patients (BC) and its relationship with Tamoxifen. We also examined the pathological features compared with a series of endometrial cancer without BC. Methods: A total of 2436 patients diagnosed with breast cancer in the Vigo University Hospital Complex (Spain) between 1974 and 2009 were evaluated prospectively for over 20 years. In addition we studied the pathological features of 422 patients diagnosed with endometrial cancer without BC. Results: The results of our study suggest that 36 patients with BC (1.47%) were also diagnosed with endometrial cancer; 1% (24 of 2436) developed endometrial cancer after the BC; 0.16% (4 of 2436) had metastases in the endometrium. The endometrial cancers in patients with BC are associated with high-grade tumors (p <0.05) and more aggressive histological types (serous, clear cell, undifferentiated, squamous and TMMM) (p <0.0001). However, there was no association with FIGO stage. Conclusion: The risk of developing an endometrial cancer in the patients treated with Tamoxifen for BC is 2.4 times higher than those who did not (p = 0.05). The disease-free survival of endometrial cancers in BC patients receiving Tamoxifen was associated with a worse prognosis when compared with endometrial cancers not associated with BC both at 5 years to 20 years of follow up (p = 0.04).
P03 The ovary

P03.01
Evaluation and management of the adnexal mass
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Objective: The purpose of this study was to evaluate the management and outcome of adnexal masses and to determine the level of importance of ecographic characteristics and serum CA125 levels in the differentiation between benign and malignant adnexal masses. Methods: Retrospective study of all consecutive women who were diagnosed with adnexal mass which were submitted to surgical exploration and excision between January 2008 and December 2010. Each lesion was categorized ecographically on the basis of its complexity as typically benign or indeterminate/malignant in appearance. Serum CA125 was previously determined in all masses who were excised. Results: The study population included 216 women. The final diagnosis of the excised adnexal masses were: 62 benign serous cystadenomas (28.7%); 19 benign mucinous cystadenomas (8.8%); 42 teratomas (19.4%); 33 endometriomas (15.3%); 19 ovarian carcinomas (8.8%) of which 11 were borderline tumors (5.1%); 32 benign serous ovarian or tubal cysts (14.8%); 9 miscellaneous (4.2%). From the 19 cases of ovarian cancers all of them presented ecographic characteristic of indeterminate/malignant, comparatively from all other benign masses that presented indeterminate/malignant ecographic characteristic in 115 cases (58.4%). Serum CA125 was elevated (>35) in 8 ovarian carcinomas (42.1%), 21 cases of endometriomas (63.6%) and 18 cases of all other 164 benign masses (10.9%). Conclusion: The most frequent histological diagnosis was serous cystadenoma. Ecographic characteristics and serum CA125 are important in the differentiation between benign and malignant adnexal masses but are of little importance when used independently. The association of these parameters with the clinical history is indissociable in the correct management of adnexal masses.

P03.02
Ovarian cancer in pregnancy – a case report
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Background. The co-existence of ovarian cancer with pregnancy represents an infrequent condition. Immature teratoma is the second most common germ-cell malignancy which possesses elements resembling to embryo-derived tissues. It accounts for less than 1% of all ovarian cancers. Because it tends to occur in young patients, it may associate with pregnancy. Medical file. A 25-year-old woman, primigesta, presented at 12 weeks of pregnancy for low abdominal and lumbar pain, enlargement of the abdomen, dysuria and constipation. She was hospitalized between 18.12.2010 and 07.01.2011 in the 4-th Department of Obstetrics and Gynecology. Laboratory investigations showed normal results for routine blood and urine tests. Bimanual pelvic examination, abdominal ultrasound scan and MRI revealed a large, irregular, hard, non-homogenous abdominal mass of 200mm/140cm/130mm and the intrauterine 12 weeks’ pregnancy. Surgical treatment was indicated. At exploratory laparatomy, the previously described mass appeared originate from the right ovary. Per-operatively, a biopsy was taken and immature teratoma was confirmed on the pathological specimen. After resolving the adhesions with the uterus and the sigma, only right adnexectomy was performed (P. op. 393/22.12.2010), according to the patient's decision. Postoperative evolution was simple and the patient was discharged in the 15-th day after the surgery with normal, in evolution pregnancy. Unfortunately, the patient did not accept the interruption of pregnancy and the appropriate chemotherapy because of religious reasons and eventually she did not survived. Conclusion. The possibility of malignancy should be considered in any pregnant woman presenting an ovarian tumor.
Clinical, histopathological and immunohistochemical correlation in ovarian cancer
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The aim of the study is to present the corelation of the clinical response of the ovarian tumors function of the changes of the next markers: CA 12-5, c-erbB2, survivine, Ki 67, p53. The study is retrospective and enrolled 25 patients diagnosed with locally-advanced ovarian cancer within 2 years period of time; the patients, 40-75 years old were diagnosed in the II-III evolutive stages, being treated chemotherapic, based on platinum salts and taxanes and operated; the histologic study revealed that all the tumors were malignant epithelial tumors, 8 serous adenocarcinoma, 12 papilar adenocarcinoma, and 5 mucinous adenocarcinoma. CA 12-5 was expresed on the membrane of all tumoral cell in all the cases of seros and papilar adenocarcinoma and absent in the mucinous cells. The crbB2 was absent in all the cases in almost half cases the tumoral proliferation was very small, and the others almost didn't express Ki67; the p53 expresion was veriy high in more than half cases certifying the presence of the mutations of the p53 supressor gene; the nuclear expression of surviving was very high in more than 80% of cases. In conclusion we discussed how this tumor markers, previously presented, could be used as an important indicator of response to treatment, guiding therapeutical decisions and identifying those patients whose response to chemotherapy and survival is short.

P03.04
A case report on treatment of infertility due to premature ovarian insufficiency by Faradarmani
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Objectives: In patients diagnosed with ovarian failure case due to the Polycystic Ovarian Syndrome, the first treatment step is Clomiphene as an anti-Estrogen agent, however, if ovulation still doesn’t happen the next step is referral to the infertility specialist for surgical treatments. Faradarmani as an alternative complementary medicine is based on the theory of “the consciousness bond of the parts” or “parts having consciousness in common” and could be regarded as an optimum complementary and alternative treatment without the use of any medication or surgery. Method: The patient is a 38 year old female physician with a history of 2 unsuccessful surgical procedures, microinjection and the Z.I.F.T. She started Faradarmani treatment. In this treatment the patient is asked to close her eyes and examine the sensations. The patient becomes connected to the interuniversal consciousness (network of consciousness governing the universe) via Fara-therapist and undergoes the Scanning process of the universal intelligence. Due to the nature of this connection, some information is conveyed and the defective and impaired parts are treated. Results: After 2 months of faradarmani without the intervention of any medical treatment patient got pregnant. Conclusion: This patient’s recovery through Faradarmani treatment, affirms that this method can be easily undertaken without any side effect and in the view that spontaneous pregnancy in spite of P.C.O hasn’t been reported up to this date and the patient was not undertaking any other treatment except for Faradarmani at the time, we can definitely attribute this recovery and cure to Faradarmani method.
P04 Gynecological & obstetrical endocrinology

P04.01
Hypo-, hyper-thyroidism and preeclampsia: defining a cause-result axis
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Background: The rising contradictions from the studies addressing any relation between preeclampsia and thyroid function are of such extent that one cannot help but wonder whether they pertain to the same field at all. Preeclampsia has been termed “the disease of theories” for the numerous theories concerning its aetiology. Willing not to add another study of theoretical contemplations to the pile of obscurity, the aim of this work was to somewhat elucidate “what leads to what”. Conclusions: Both hypo- and hyperthyroidism constitute risk factor to preeclampsia. Additionally, transient hypothyroidism is induced in mother and in utero, for teleological reasons, subject to regulation by an intact hypothalamus-pituitary-thyroid axis. The clinician should expect normal or slightly pathological TSH up to a time relatively close to delivery. Counteracting influences lead to incalculable alterations in T3, T4, FT3 and FT4 and though a most common pattern coincides with lower FT3 and raised FT4, more diversity is allowed. In terms of opposing to preeclampsia-induced diminishment of magnesium, the presumed preeclampsia-induced hypothyroidism appears to act beneficially. The diminishment of zinc in preeclampsia may not suffice per se for a profound hypothyroid effect but it offers additional indication in favour of maternal as well as in utero hypothyroidism. The element of copper appears elevated in the serum and in the placenta of preeclamptics. A side beneficial effect of the assumed induced hypothyroidism could be seen in that it offsets further intake-induced rise in serum iron which is found raised in preeclamptics.

Fig. 1. Thyroid and (pre)eclampsia in mother

(adding to the inability of spiral arteries to remodel successfully)

Hypothyroidism

(Pre)eclampsia

Hypothyroidism

(P)erhaps mild, transient during gestation or appearing in a horizon of decades, less apparent or absent in cases of pre-existing treated hyperthyroidism, its aetiology perhaps lies in damage of thyroid gland from antiangiogenic factors, gradually established)

Hyperthyroidism

raises anabolic processes which cannot be brought off by spiral arteries)
Background: The prime for this work were the rising contradictions from the studies exploring preeclampsia and thyroid function whose disconcordance is of such extent that one cannot help but wonder whether they pertain to the same field at all. Preeclampsia has been termed “the disease of theories” for the numerous theories concerning its aetiology. Willing not to add another study of theoretical contemplations to the pile of obscurity, effort has been made in this work to stay with the facts, with the aim to somewhat elucidate “what leads to what”. Conclusions: Integrity of the hypothalamus-pituitary-thyroid axis is inferred. The clinician should expect raised, normal or slightly pathological TSH up to a time relatively close to delivery. Counteracting influences lead to incalculable alterations in T₃, T₄, FT₃ and FT₄ and though a most common pattern coincides with lower FT₃ and raised FT₄, more diversity is allowed.
Insulin pump therapy in improvement of pregnancy outcomes
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Aims: Evaluation of efficacy of insulin pumps therapy in pregnant women with diabetes mellitus 1 type. Methods: During 2 years of observations we analyzed pregnancy outcomes of 36 patients with DM 1 type in the age of 19 to 37 y.o [26 (23; 29) years], duration of the DM from 1 month to 20 years [9 (2,75; 12,5) years]. Mean level of HbA1c was 6,0 (5,4; 6,9)%. According to the insulin mode of administration we divided all the patients on 2 groups: 15 patients used insulin pump and 24 patients used functional insulin therapy with insulin pens. These patients were equal on the years of age, duration of the DM and compensation level (p>0,05). To analyze all the data we used nonparametric and descriptive statistics. Results: In the group of patients on insulin pump therapy 11 women had delivery on 37-40 g.w. (67,67%), 5 women had premature delivery (33,33%); in the group of patients with functional insulin therapy 10 women had delivery on 37-40 g.w. (41,66%), 15 women had premature delivery (58,34%). In the cases of premature delivery in the group of patients with insulin pump median value of g.w. was 34 (33; 36) g.w., in the group of patients on functional insulin therapy - 30 (25; 36) g.w., although there is no significant difference in these parameters (p=0,14). Conclusion; Our results carry inference that therapy with insulin pumps allows to improve pregnancy outcomes.
The balneotherapeutic rehabilitation of patients with pelvic pain: preliminary results

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(5) The Central Sayram District Hospital of the South-Kazakhstan Region, Belye Vody, Republic of Kazakhstan
(6) Central Hospital Outpatient Clinic of Ministry of Internal Affairs, Shymkent, Republic of Kazakhstan
(7) The Charitable Foundation “Zdorovaya Asia”, Shymkent, Republic of Kazakhstan
(8) The Central Sayram District Hospital of the South-Kazakhstan Region, Belye Vody Village, Republic of Kazakhstan
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(10) Ioanina University, Ioanina, Greece

The “Sanatoria Mankent” is one of famous and oldest health resort situated at the softly mineralized with alkaline-sulphate-nitric-sodium-calcium-chloride thermal spring in the Southern Kazakhstan. Balneotherapeutic properties of this spring optimized due to high concentrations of ferrous oxide 5.0-7.5 mg/dm³, fluorine 4.22-4.65 mg/dm³ and silicic acid 20-28 mg/dm³ as well as its temperature at 38° C. Traditionally in the sanatoria “Mankent” spa-baths used in combination with therapeutic clay-baths from salty-clay sources of the Southern Kazakhstan. In order to study an efficiency of balneotherapeutic rehabilitation (BTR) of patients with pelvic pain in the sanatoria “Mankent” the international balneotherapeutic group was established by Professor Mynbaev O.A., Ass.prof. Kosmas I.P. and Doctor Kurganov Kh.A. - The general manager of the “Sanatoria Mankent”. Study design: Patients were divided into 5 groups: 1).100 women in control group without BTR; 2).50 patients received full BTR including spa/clay baths, vaginal spa/clay applications; 3).50 - spa/clay baths; 4).50 - spa baths/vaginal applications; 5).50 – only spa-baths. Patients received BTR in the sanatoria “Mankent” were questioned before and at the 0, 6, 12, 18 & 24 months after BTR. Including criteria: dismenoreia, dyspareunia, premenstrual syndrome and pelvic pain without uterine myoma, endometriosis, and ovarian cysts. Excluding criteria: whatever internal and external neoplastic lesions; contraindications to hot baths and clay applications; recent surgical procedures (1 year); acute and sub acute PIDs. BTR efficiency was evaluated by modified pelvic pain scoring system. Results/conclusions: BTR significantly reduced pelvic pain and its impact was pronounced by combination both spa/clay and their perceptual modalities.
Biochemical and pathological evidences on the usefulness of IMOD a novel selenium-based electromagnetically-treated multi-herbals medicine in letrozole-induced murine polycystic ovary syndrome

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(1) Tehran University of Medical Sciences, Faculty of Pharmacy, Tehran, Iran
(2) Tehran University of Medical Sciences, Pharmaceutical Sciences Research Center, Tehran, Iran
(3) Tehran University of Medical Sciences, Endocrinology & Metabolism Research Center, Tehran, Iran
(4) Urmia University, Laboratory of Histology and Embryology, Department of Basic Science, Faculty of Veterinary Medicine, Urmia, Iran
(5) University of Calgary, Faculty of Veterinary Medicine, Production Animal Health, Calgary, Alberta, Canada

The possible protective effects of IMOD, an electromagnetically-treated selenium-based multi-herbal medicine, during ovarian cystogenesis induced by letrozole were the main objectives of this study. Letrozol (1 mg/kg body weight) and effective dose of IMOD (30 mg/kg/day) were administrated for 21 consecutive days. Serum estradiol (E), progesterone (P), testosterone (T), and the ovarian immunomodulator prostaglandin E (PGE) were analyzed. To determine the role of oxidative stress in PCO, the level of lipid peroxidation (LPO), superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GPx), and peroxynitrite (ONOO), and tumor necrosis factor alpha (TNF-á) as a marker of inflammation and apoptosis were measured in serum and the ovaries. PCO rats exhibited a significant increase in LPO and ONOO in serum and ovary while significantly decreased serum and ovarian SOD, CAT, and GPx. Also, serum T and TNF-á levels, and ovarian PGE were increased in animals with cysts compared with healthy controls, while E and P diminished. In PCO rats high incidence of sub-capsular ovarian cyst with scant granulosa cell layer, luteinized granulosa cells in the cyst wall, theca cell hyperplasia, increased number of atretic pre-antral and antral follicles and absence of corpus luteum (CL). All measured parameters were improved by IMOD and reached close to normal levels. It is concluded that letrozole-induced PCO correlated with oxidative stress and it is strongly recommended to examine selenium based agents like IMOD in the clinic concurrent with standard therapeutics to ascertain its benefit in patients undertaking PCO therapy.
Discordances between serum anti-Müllerian hormone values (AMH) and antral follicle count (AFC)

Miro Simun Alebic(1), N Stojanovic(2)

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(2) Merkur Clinical Hospital, Department of Clinical Chemistry and Laboratory Medicine, Zagreb, Croatia

Background. Both AMH and AFC were found to be good markers of ovarian reserve that strongly correlate with each other. Nevertheless, discordances between these ovarian reserve tests are sometimes encountered during initial routine infertility evaluation. The objective of this study was to investigate clinical cases in which these discordances are to be expected.

Methods. A total of 350 women aged 20-44 years undergoing infertility evaluation were included in the study and separated according to AFC in three groups: low (≤), intermediate (7-20) and high (>20). Serum AMH concentration was determined using AMH Gen II ELISA. AFC was assessed by a single investigator using a two-dimensional transvaginal probe. Predicted AMH value for a given AFC (pAMH) was calculated using a regression equation (pAMH=-5.9570+1.7102xAFC). The ratio between pAMH and AMH was used as an index of discordance between AMH and AFC. AFC undercounting and overcounting was assumed if pAMH/AMH was <0.80 and >1.2, respectively.

Results: The proportion of undercounted AFCs was the highest in the group with low AFC (76.9%), while intermediate group had the highest proportion of overcounted AFCs (51.3%). The similar proportions of undercounted AFCs were found in intermediate and high AFC groups (23.8% and 25.1%, respectively).

Conclusion: Discordances between AMH and AFC are most expected in patients with low AFC and could be primarily attributable to AFC undercounting. This should be taken into consideration when counseling patients prior to infertility treatment.

Significant decrease in maternal serum concentrations of Angiopoietin-1 and -2 after delivery

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The objective of the study was to characterize the physiological distribution of the vascular growth factors Angiopoietins (Ang)-1 and Ang-2 and their soluble Tie-2 receptor at term and following delivery. The concentrations of Ang-1, Ang-2 and Tie-2 were analyzed by ELISA from twenty healthy pregnant women undergoing elective Cesarean delivery and their newborns. Samples included maternal antepartum and the first postpartum day sera, umbilical serum, amniotic fluid and maternal and newborn urine.

Concentrations of maternal serum Ang-1 and Ang-2 decreased after delivery [Ang-1 33 ng/ml, 25 - 51 ng/ml (median, range) to 30 ng/ml, 18 - 49 ng/ml; P=0.017 and Ang-2 5.4 ng/ml, 1.8 - 18 ng/ml to 1.4 ng/ml, 0.7 - 4.6 ng/ml; P<0.0001], whereas Tie-2 concentrations remained stable (23 ng/ml, 13 - 41 ng/ml vs. 25 ng/ml, 14 - 29 ng/ml; P=0.107). As compared with maternal antepartum serum, umbilical serum concentrations of Ang-1 (46 ng/ml, 28 - 59 ng/ml; P<0.0001) and Tie-2 (45 ng/ml, 2171 ng/ml; P<0.0001) were higher and those of Ang-2 similar (5.4 ng/ml, 1.8 - 18 ng/ml vs. 4.2 ng/ml, 2.9 - 6.0 ng/ml; P=0.067). Low concentrations of Ang-1 (1.2 ng/ml, 0.1 - 2.2 ng/ml), Ang-2 (1.1 ng/ml, 0.3 - 4.1 ng/ml) and Tie-2 (0.4 ng/ml, 0.08 - 0.9 ng/ml) were observed in amniotic fluid, but they were undetectable in newborn urine and in most of the maternal urine samples. In conclusion, circulating maternal concentrations of Ang-1 and Ang-2 decreased following delivery. Umbilical concentrations of angiogenic Ang-1 and Tie-2 were significantly higher than maternal concentrations.
Humoral immune system in pregnancy with iron deficiency

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In order to define the degree of immune system violation we have studied phago-cytic activity of leucocytes (PAL) in 44 pregnant women with 22-39 weeks of gestation. All the patients have shown latent iron deficiency combined with anemia of various stages. Basal NBT test has revealed minor deviations of PAL ranging 0,36-0,71 (0,54±0,04 conventional units in average) with normal parameters at 0,4-0,7 conventional units. Stimulated NBT test has resulted in lower indices 0,43-0,8 (0,56±0,03 in average). Decrease by 43-54% in PAL has been found to accompany anemia irrespective of its severity degree (normal performance comprises 50-60%). IgM parameters have been revealed to vary insignificantly in pregnant women with latent iron deficiency and anemia, mild or average. IgM index has been registered higher in pregnant women with mild iron-deficiency anemia with figures reaching 2,58 g/l (normal performance at 0,79-1,57 g/l). In case of aggravated anemia IgM rate has been noted to drop though remaining slightly higher compared to that of healthy patients. IgG index has been found lowest in pregnant women with average iron-deficiency anemia (up to 3,01 g/l), white pregnancy with mild anemia has shown 9,55 g/l, which is twice lower than regular parameters (10-18 g/l). IgA concentration in pregnancy with mild and average iron-deficiency anemia is also lower (0,55-2,22 g/l).

Training for women with antiphospholipid syndrome in pregnancy

Alfiya R Khaibullin, LV Sakhautdinova, TP Kuleshov, IM Tayupova, EM Zulkarneeva
Bashkir State Medical University, Ufa, Republic of Bashkortostan, Russian Federation

Complications of pregnancy and childbirth in antiphospholipid syndrome (APS) occur in 80% of cases. In 95% of women suffering from APS, without medical assistance fetus dies. These figures do not tend to decrease. In this regard, further study and development of complex therapeutic measures in pregravidal training for women with this syndrome. We examined 180 women aged 18 to 39 years. Amongst them, 49 patients based on history, the detection of antibodies to cardiolipin class IgG, IgA, IgM ELISA and studies of blood coagulation system (deployed gemostaziogramma) was exposed to the diagnosis - APS. All patients were asked for help after an unsuccessful pregnancy for the survey, determine the cause of available morbidity and subsequent pregnancy planning. Preparing for pregnancy was carried out for 3-6 months prior to its planning. Patients were ad hoc methods: ELISA antibodies to cardiolipin class IgG, IgA, IgM, studied the blood coagulation system according to the expanded gemostaziogrammy. In a survey of all patients had antibodies to cardiolipin: IgG - 25-29 IU / ml, IgA - 24-31 IU / ml, IgM - 15-24 IU/ml. Indicators gemostaziogrammy were also elevated in all studied women: fibrinogen - 6.0-6.5 g / L, D - dimer> 250 (400-500) mm/mg, APTT 36-38 s, SFMC 9.11 mg / liter. In preparation for the pregnancy was administered chimes, clexane or fraxiparine, plasmarhesis and vitamins. After the treatment significantly improved performance gemostaziogrammy: fibrinogen - 3.5 - 4.0 g / l, D - dimer <250 mm / mg, APTT 26-28 s, SFMC 0-4 mg / liter. Antibodies to cardiolipin were observed in low titres: IgG - 4-6 IU / ml and IgA - 2.4 IU / ml, IgM - 2.4 IU / ml. After the pregravidal training in 45 patients got pregnant, at 42 - pregnancy ended happily. Term delivery occurred in 36 women, premature - at 6. By Caesarean section rodorazresheny 12 patients. In 1 patient there was a spontaneous miscarriage in the period 9-10 weeks of pregnancy, in 2 - attempted abortion in terms of 6 and 8 weeks respectively. Thus, the developed scheme pregravid preparation and maintenance of pregnancy can improve perinatal outcome.
DUB are uterine bleeding that doesn't have an organic cause. DUB mostly appears in menopause(50%), in reproductive age (30%) and adolescence (20%). Anovulation is the substract of the 85% of DUB. The study has taken place at UHOG ' Queen Geraldine' during the period January 2009-December 2010 and there were 229 cases of DUB presenting with vaginal bleeding. The patients age was between 12-82 years. Patients with uterine bleeding, those accepted and examinated by a preprepared protocol were included in the study. Only patients with non organic causes were escluded (Ca c uteri, cervical polip, fibromyoma uteri and ovarial patologies). The clinical diagnosis of DUB were menorraghia, metrorraghia,menometrorraghia, perimenopausal menometrorraghia, postmenopausal metrorraghia. The incidence and prevalence of DUB were evaluated.

Control of gestational diabetes with the newly described instillation of insulin into the auditory channel via a piezoelectric pump: a comprehensive approach and a novel option

Kiumars Pirkalani, Z Talaeerad, K Mohammadi, M Nazari, K Zarei
Mehr Medical Group, Department of Internal Medicine/Gynecology, Tehran, Iran

Objectives: To find out kinetics and tolerability of auditory insulin (AI) in pregnant patients compared with 212 non pregnant diabetics. Materials and Methods: Ten pregnant patients with gestational diabetes were treated with AI in one session. The dose was adjusted as insulin equivalent (20IU for BS less than 200 and for each additional 100mg/dl 10 additional units). 24h after discontinuation of treatment instillation was performed 3h postprandial. Four pregnant patients received instillation of AI via a piezoelectric pump for one week. The data of the former and latter group were compared with 212 and 26 non pregnant diabetics respectively as reported before. Results: All ten patients responded to AI with no local or systemic side effects. The response was comparable with non pregnant cases in a dose basis. All 4 patients showed reduction of FBS, random BS and glycosylated Albumin. The data were comparable to 26 non pregnant patients reported at the 20th international Congress in Montreal 2009. Conclusions: We conclude that auditory insulin as shown before in more than 300 patients is safe and extremely feasible. Instillation via a tiny piezoelectric pump is also of extreme effectiveness in controlling all diabetes parameters. As gestational diabetes is a very special entity in the field of diabetes with major metabolic changes jeopardizing the health of mother and fetus, use of auditory insulin which has shown much promise in a large group a phase III study is underway. The absence of teratogenic constituents in the preparations is another advantage.
The effect of dydrogestrone in reducing spontaneous abortion, a review

Farnaz Akbari Kamrani, S Asl fallah
Tehran University of Medical Sciences, Department of Medicine, Tehran, Iran

Spontaneous abortion and preterm labor, undoubtedly, are the most important complications of pregnancy. The effect of decreased serum progesterone levels is a proved fact in occurring spontaneous abortion. In this case, nowadays, many laboratories are in competition of creating new progesterone derivatives, but unfortunately clinical trials researches and following up essays to evaluate the effect of these kinds of drugs are in the blind point of importance. In this review article, first, we a have quick look at progesterone and its effect in the process of pregnancy and its maintenance, and in the second part we focused on some prospective clinical trials related to the topic and try to analyze their results. The results from studying some clinical trial articles about effects of the drug dydrogesterone ( duphaston™) indicated that usage of this drug in all women with history of spontaneous abortion is effective although still mean incidence of abortion and preterm labor in this group is higher than normal population. Almost always, increased serum level of Progesterone Induced Blocking Factor (PIBF) correlated with a successful pregnancy (as it was compatible with proposed biologic mechanisms). there is a shortage in the number of placebo-controlled trials, which has more reliable results (due to reducing the bias), and it is in need to investigate more in the future.

Criteria of efficiency and acceptability of the oral contraceptive during premenstrual syndrome among patients of teenage and genesial ages

Olga Basova, V Volkov
Tula State University, Faculty of Medicine, Tula, Russian Federation

Introduction. The urgency of the given work is explained by the fact that during the long randomized research including the group of teenage age we proved that ovulation suppression by means of the monophasic combined oral contraceptives (COC) in various age groups is considered to be a pathogenetically proved perspective method of therapy of PMS. Purpose. To prove the efficiency and acceptability of the COC containing 20 mkg of etinilestradiol and 3000 mkg of drospirenone, with the extended intake regimen 24/4 in treatment of a premenstrual syndrome among patients of teenage and genesial ages. Design of research. Clinical prospective randomised research has been made. 123 patients of genesial age from 18 till 45 years old I group (n=76) and teenage age from 15 till 17 years old II group (n=47) took the medicine during 12 cycles. Result. This medicine reduces displays of endocrine and metabolic symptoms in I and II groups: after 6 months - to 81,1 % and to 81,8 %; by the end of the treatment - to 92,2 % and to 92,0 %; vascular vegetative: to 79,1 % and 73,9 %; to 89,9 % and 84,1 %; psycho-emotional: to 78,0 % and 67,8 %; to 87,0 % and to 80,5 %, accordingly (p<0,05). The symptomatology of PMS among 73,7 % of patients of I group and 86 % of II group had disappeared completely by the end of the treatment. The majority of women (89 %) are satisfied with the medicine. Conclusion. Treatment of PMS among sexually active patients including teenagers is considered perspective.
Introduction: The disorders affect both the physical and the emotional sphere, disappear with the onset of menstruation and premenstrual syndrome (PMS). The symptoms of PMS is accurate, we can simplify data collection for gathering SYMPTOMS (Table one). Aim of the Study: The purpose of this study is the rational application of Vitex agnus castus in fast version and normal version in PMS by recording symptom incidence before and after treatment. Emphasize the need to share standardized phyto-effective drug per tablet, which ensures reproducible results. Materials and Method: From 02/2008 to 11/2009 in our observational study, 597pt were recruited and selected cohort of women with the debilitating symptoms of PMS and menstrual rhythm disorders: Group 1 => 420 pt, mean age of 30.9yo (range 16-49yo) Group 2 => 177 pt, mean age of 32.1yo (range 21-53yo) Results: All patients treated had a positive response to therapy. These results clearly demonstrate that 90 days. In the table below the results are grouped by type of symptoms (Table Two). As for the physical symptoms (Table Three) Conclusions: We can be considered as an effective tool for the treatment of symptoms of PMS in terms of psychological and physical symptoms. This blend so balanced and specific drug-phytotherapy, which is present in Vitex Agnus Castus has no direct input hormone but rather to direct interference on productivity hormone is effective rebalance the proportion endogenous production of prolactin.

Tab one
<table>
<thead>
<tr>
<th>PHYSICAL SYMPTOMS</th>
<th>PSYCHIC SYMPTOMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abnormal menstrual rhythm &lt;25/&gt;35day</td>
<td>Mood disturbante and depression</td>
</tr>
<tr>
<td>Mastodynia, engorgement</td>
<td>Difficulty concentrating, lack clarity</td>
</tr>
<tr>
<td>Intermenstrual spotting (2-7days pre/post)</td>
<td>“Blue-down” more like crying</td>
</tr>
<tr>
<td>Costipation, abdominal swelling</td>
<td>Disorders of sexual</td>
</tr>
<tr>
<td>Weight gain</td>
<td>Sleep disorders</td>
</tr>
<tr>
<td>Acne and other skin rashes</td>
<td>Tiredness, fatigue, lethargy, apathy</td>
</tr>
<tr>
<td>Voltage change in appetite</td>
<td>Malaise, restlessness, anxiety, panic</td>
</tr>
<tr>
<td>Reducing the pain</td>
<td>Threshold in search of sweet food disproportionately</td>
</tr>
<tr>
<td>Cramping / abdominal pain</td>
<td>Insatiable appetite</td>
</tr>
<tr>
<td>Headache / Migraine</td>
<td>Irritability</td>
</tr>
<tr>
<td>Tachicardia / Tachyarrhythm paroxysmal</td>
<td>Agressivity</td>
</tr>
<tr>
<td>Muscle stiffness or joint</td>
<td>Coordination difficulties</td>
</tr>
<tr>
<td>Water retention markedly face and limb</td>
<td>Loss of self-control</td>
</tr>
<tr>
<td>Alteration mechanism of thermogenesis</td>
<td>Fragility inadequacy</td>
</tr>
</tbody>
</table>

**Tab two**

<table>
<thead>
<tr>
<th>PSYCHIC SYMPTOMS</th>
<th>GRUPPO 1 before</th>
<th>1</th>
<th>GRUPPO 1 after</th>
<th>GRUPPO 2 before</th>
<th>2</th>
<th>GRUPPO 2 after</th>
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<tbody>
<tr>
<td>Mood disturbante and depression</td>
<td>75% - 315</td>
<td>5% - 21</td>
<td>70% - 124</td>
<td>3% - 6</td>
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<tr>
<td>Difficulty concentrating, lack clarity</td>
<td>66% - 278</td>
<td>7% - 30</td>
<td>70% - 124</td>
<td>8% - 15</td>
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<tr>
<td>“Blue-down” more like crying</td>
<td>33% - 139</td>
<td>---</td>
<td>37% - 66</td>
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<tr>
<td>Disorders of sexual</td>
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<tr>
<td>Tiredness, fatigue, lethargy, apathy</td>
<td>55% - 231</td>
<td>2% - 9</td>
<td>45% - 80</td>
<td>5% - 9</td>
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<tr>
<td>Sleep disorders</td>
<td>80% - 336</td>
<td>2% - 9</td>
<td>80% - 142</td>
<td>4% - 8</td>
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<tr>
<td>Malaise, restlessness, anxiety, panic</td>
<td>16% - 68</td>
<td>1% - 5</td>
<td>14% - 29</td>
<td>3% - 6</td>
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<tr>
<td>Insatiable appetite</td>
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<td></td>
</tr>
<tr>
<td>Irritability</td>
<td>70% - 294</td>
<td>3% - 13</td>
<td>75% - 133</td>
<td>3% - 6</td>
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<tr>
<td>Agressivity</td>
<td>70% - 294</td>
<td>5% - 21</td>
<td>75% - 133</td>
<td>5% - 9</td>
<td></td>
<td></td>
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<tr>
<td>Coordination difficulties</td>
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<td></td>
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<tr>
<td>Loss of self-control</td>
<td>70% - 294</td>
<td>5% - 21</td>
<td>75% - 133</td>
<td>4% - 8</td>
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<td>Fragility inadequacy</td>
<td>44% - 185</td>
<td>5% - 21</td>
<td>35% - 62</td>
<td>2% - 4</td>
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**Tab three**

<table>
<thead>
<tr>
<th>PHYSICAL SYMPTOMS</th>
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<th>GRUPPO 1 after</th>
<th>GRUPPO 2 before</th>
<th>2</th>
<th>GRUPPO 2 after</th>
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<tr>
<td>Abnormal menstrual rhythm &lt;25/&gt;35day</td>
<td>90% - 378</td>
<td>7% - 30</td>
<td>92% - 163</td>
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<td>Mastodynia, engorgement</td>
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<td>10% - 42</td>
<td>75% - 133</td>
<td>8% - 15</td>
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<tr>
<td>Intermenstrual spotting (2-7days pre/post)</td>
<td>90% - 378</td>
<td>1% - 5</td>
<td>92% - 163</td>
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<tr>
<td>Costipation, abdominal swelling</td>
<td>73% - 307</td>
<td>20% - 84</td>
<td>57% - 101</td>
<td>9% - 16</td>
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<tr>
<td>Weight gain</td>
<td>80% - 336</td>
<td>5% - 21</td>
<td>78% - 139</td>
<td>7% - 13</td>
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<tr>
<td>Acne and other skin rashes</td>
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<tr>
<td>Voltage change in appetite</td>
<td>25% - 105</td>
<td>20% - 84</td>
<td>28% - 50</td>
<td>12% - 22</td>
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<td>Reducing the pain</td>
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<tr>
<td>Headache / Migraine</td>
<td>70% - 294</td>
<td>15% - 63</td>
<td>68% - 121</td>
<td>11% - 20</td>
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<td>Tachicardia / Tachyarrhythm paroxysmal</td>
<td>45% - 189</td>
<td>35% - 146</td>
<td>55% - 98</td>
<td>43% - 77</td>
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<tr>
<td>Muscle stiffness or joint</td>
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<tr>
<td>Alteration mechanism of thermogenesis</td>
<td>40% - 168</td>
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<td>51% - 91</td>
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Non surgical abortion: clinical applications of mifepristone and prostaglandins
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Mifepristone or RU 486 is the most common selective progesterone receptor modulator or SPRM. Its use in the management of interrupted pregnancies during first trimester as in the second trimester is well known. This type of molecule has also been studied in several diseases such as endometriosis, myomas, advanced breast cancer and meningioma. Only practical management of abortion using mifepristone in association with misoprostol will be described here. The incomplete miscarriage are also concerned. In addition, the administration of misoprostol via the vaginal route has been recently questioned. Non surgical abortion alternatives expand a woman's treatment options and, in turn, the quality of care. At all stages of pregnancy, the use of Mifepristone facilitates and ameliorates prostaglandines expulsive effects on uterine contents. Dosage, treatment options, and use in late first trimester of pregnancy provide important flexibility for patients and clinicians alike. Keywords: abortion, miscarriage, mifepristone, misoprostol

Diagnosis of polycystic ovary syndrome (PCOS): revisiting the threshold values of follicle count on ultrasound and of the serum AMH level for the definition of the polycystic ovary (PCO)
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Objective: The threshold value of antral follicle count (AFC) at 12/ovary for the definition of the Polycystic Ovary (PCO) seems no more appropriate and should be revisited. This assessment is hampered by the "contamination" of the control group by asymptomatic women with PCO. Materials and methods: From 2008 to 2010, 167 patients were referred to our center for hyperandrogenism (HA), menstrual disorders (MD) and/or infertility. All these patients had a measurement of serum anti-Müllerian hormone (AMH) and AFC. This population was divided into 2 groups without using the AMH or the AFC: the group 1 "control" including women with neither HA or MD (n = 105) and the group 2, "PCOS" with both HA and MD (n = 62) (after exclusion of other diagnosis). Results: Statistical method of clusters confirmed the heterogeneity of the group 1 by isolating objectively two homogeneous subgroups 1A and 1B. Group 1B (n = 39) very likely consisted of asymptomatic women with PCO since they had higher values of AMH and AFC than in group 1A. The ROC analysis including control group 1A exclusively (n = 66) and group 2 (PCOS) yielded a discriminant threshold at 19 for AFC (se = 81%, Spe = 92%) and at 5 ng/ml for the AMH level (Se = 92%, Spe = 97%). Conclusion: The former threshold for AFC (>12) is no longer valid and should be revised upwards (>19). For the definition of PCO, serum AMH appears more sensitive and specific than the AFC.
Polycystic ovary syndrome (PCOS) is a heterogeneous endocrine disorder that affects about 5% of women. The causes of this disease are unknown but several factors are implicated such as a GnRh pulsatility disregulation with an inversion of LH/FSH ratio and an intrinsic morphological ovarian alteration consisting in abnormalities of folliculogenesis with a great number of primary, secondary and small antral follicles and an increased neurotrophins levels in follicular fluid and their receptors' expression on granulosa cells. The purpose of this study was to investigate Brain-Derived Neurotrophic Factor levels in follicular fluid and in plasma because this protein levels are influenced by hormonal status. We evaluated BDNF plasma levels on twenty women in follicular phase (age 16-4; BMI 18,1-36,4) affected by PCOS in comparison to twenty normal cycling women in follicular phase (age 20-37; BMI 17,8-36,4). BDNF plasma levels was 729,55 ± 195,86 pg/ml in PCOS women and 408,15 ± 45,68 pg/ml in normal cycling women with a significant statistical difference between groups (p<0,01). We evaluated BDNF in follicular fluid on seven PCOS women undergoing an IVF cycle in comparison to seven infertile women for male factor. BDNF levels in the first group was 243,18 ± 25,98 pg/ml and in the second 129,18 ± 16,67 pg/ml with a significant statistical difference between groups (p<0,01). In conclusion we can assert that the high levels of BDNF in follicular fluid reflect in peripheral circulation and that high LH levels probably influence BDNF synthesis and production.
Endometriosis is a disease characterized by the development of endometrial tissue outside the uterine cavity. Cardinal symptoms of endometriosis are chronic pelvic pain and infertility, which may severely interfere with the patient’s quality of life and be perceived as a persistent stressor. Although its pathogenesis is still largely unknown, several studies have demonstrated the potential role of ovarian steroids hormone in the growth of endometriosis. We like to evaluate plasmatic and salivary levels of DHEA and DHEA-S in women with endometriosis in order to understand if such steroids may have, directly or indirectly, a possible supporting role in the pathogenesis and progression of this heterogeneous disease. DHEA and DHEA-S in plasma and in saliva were assessed in 20 fertile women suffering from endometriosis aged 23-36 years and in 21 healthy women aged 21-30 years, both in follicular and luteal phase from each subject. Our data show that both salivary and circulating DHEA and DHEA-S levels are significantly higher (p < 0.05) in endometriotic women in comparison with healthy subjects. Besides, such plasmatic adrenal D5 steroids in suffering patients are statistically higher during follicular phase than luteal one. These results could likely be due to an increased activity of hypothalamus-pituitary-adrenal axis leading to increased production of adrenal DHEA and DHEAS. Addition, last data may further explain the pathophysiology of endometriosis since DHEA and DHEA-S can be converted periferically and at central level in biologically active estrogens which probably regulate the growth of ectopic endometrial tissue.

Objectives: Studies have demonstrated a relationship between subclinical hypothyroidism (SH) and obstetrics complications like pre-eclampsia, stillbirth and perinatal mortality. Positive thyroperoxidase antibodies (TPOab) increase the risk of miscarriage, placental abruption and preterm delivery. But there is not a consensus if the prevalence of TPOab should be treated before and during pregnancy when the level of thyroid-stimulating hormone (TSH) is normal. Thyroid hormones are regulators of the mitochondrial activity and our research group has previously shown that SH affects mitochondrial activity. The aim is to estimate the relationship between SH and spontaneous abortion and/or obstetric complications because of mitochondrial dysfunction. Methods: A prospective study where data from the General Suburban Population Study (GeSuS) in Naestved will be analysed to measure the frequency of subclinical hypothyroidism and TPOab. SH is defined as raised serum concentrations of TSH > 3.4 mU/l and normal levels of free T4 and T3. A cut-off of 60 mU/l is used for TPOab. To estimate the relationship between SH or TPOab and early spontaneous abortion and pregnancy outcome. Inclusion of women who have experienced a minimum of one early spontaneous abortion and between 20-50 years old: 80 women who have SH and/or TPOab-positive and 80 women who have normal levels of TSH and TPOab-negative. The basal oxygen consumption will be measured and mitochondrial functions will be determined by flow cytometry. Results: Data is currently being processed and the first results will be presented at the conference. Patients will be included in Autumn 2011. Conclusion: Final results during 2012/2013.
An alternate endocrine function in adipocytes with possible associations to polycystic ovarian syndrome

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The overall aim was to examine the possibility of localized androstenedione synthesis within adipocytes. It is well established that female androgens are produced via adipocyte tissue. Androstenedione is the precursor supplied through the circulation and produced via the ovaries and adrenals. Recent research into adipocyte androgen metabolism has shown evidence for the presence of the steroidogenic enzymes involved in androstenedione synthesis (17βHSD, 17α-hydroxylase). With the associations of obesity and high circulatory androgens in conditions such as PCOS, the implications of local adipocyte androgen synthesis is of clinical relevance. Volunteers were recruited from patients attending the Gynaecology clinic at The Royal Derby Hospital (n=10, 5 control vs 5 PCO). Following fully informed written consent a subcutaneous adipose biopsy was taken from the abdominal wall, processed for culture and analysed via westernblotting, immunocytochemistry and ELISA techniques. Results have shown the presence of the essential steroidogenic enzyme CYP17 required for androstenedione synthesis. ELISA analysis has also shown the presence of androstenedione (2.07 pmol/1000cells +/- 0.8) suggesting synthesis via mature adipocytes although currently no variation in concentrations occurs across control and PCOS samples. Collection and analysis is ongoing.
P05 New office techniques

P05.01
Misoprostol versus oxytocin for labor induction randomized controlled trial

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Objective: Misoprostol, a synthetic E1 methyl analog prostaglandin, is at present receiving attention as a cervical modifier and labor induction agent. To compare intravaginal misoprostol versus intravenous oxytocin for cervical ripening and labour induction in pregnant women with unripe cervices. Methods: Randomized controlled trial. The study was performed at Mobini Hospital between 2009 and 2010. 110 pregnant women with intact membranes and indication for labour induction were selected. The women randomly received 1/8 tablet of vaginal misoprostol only once, with, oxytocin in a continuous if it was need The main parameters measured were: latent period, time from induction to vaginal delivery, delivery route, occurrence of vaginal delivery with time, occurrence of uterine tonus alterations, hypoxia and neonatal morbidity. To verify the statistical significance of the differences between the groups, the chi-squared, Student t and log-rank tests were used. Results: There were no significant differences between the groups concerning conditions for labour induction, age, parity, race, marital status, family income, initial Bishop Index and number of prenatal visits. The cesarean section rate, latent period and period from induction to vaginal delivery were significantly lower for the misoprostol group. With regard to uterine tonus alterations, tachysystole was significantly more common in the misoprostol group. Conclusion: 1/8 tablet of misoprostol used vaginally is safer and more efficient for cervical ripening and labor induction than oxytocin.

Key Words: Misoprostol. Oxytocin. Prostaglandins. Labour induction

P05.02
The perceived effect on vaginal health of administrating a prebiotic to the vaginal biosphere

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Objectives: To evaluate the perceived effect on vaginal health of a lactose vaginal tablet. Methods: A vaginal tablet was developed after a prebiotic concept, which modulates the indigenous vaginal flora by addition of a carbohydrate providing selective competitive advantage for lactic acid bacteria. The perception of the effect of the tablet was evaluated by an internet-based questionnaire amongst women having purchased the product. Results: Among the users, 496 indicated discharges with a fishy smell as the reason to use the vaginal tablet, 90 per cent of these indicated that the problem became much less or less. 253 users indicated itching and smarting as a problem, and 83 per cent of these indicated that the problem diminished. Similarly 119 users had that problem, and 81 per cent indicated that the problem was diminished. For dryness 108 users had that problem, and 76 per cent indicated that the problem was diminished. Women having used the tablet for longer periods indicated similar results. The side-effects were predominantly discharge, being unmetabolized tablet remnants or a clear liquid resulting from the metabolism. There were no serious side effects from the use. Conclusion: The perceived effect of the lactose vaginal tablet is that it is highly effective. The detailed elucidation of the effect on vaginal biosphere and female physiology needs further investigation.
Learning curve of Essure and minor anatomical abnormalities
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Introduction: The placement of Essure tubal coiled micro implants has become increasingly more frequent method of noninvasive, simple and safe permanent birth control. We present some interesting cases of imaging during our learning curve. Methods: Between November 2010 and May 2011 we successfully performed 40 cases of Essure hysteroscopic sterilization. After 3 months the patients had pelvic X ray done, which were evaluated according to 4 criteria to verify the correct placement of the inserts. In suspicious cases HSG was carried out to confirm tubal obturation. Results: Mean age of the group was 41.7 (35-47) years. We present 3 cases with unsatisfactory x ray criteria and high suspicion of abnormal implant placement. The HSG procedures showed there were minor anatomical abnormalities in these women and the tubes were successfully obturated (there was no leakage of dye). Case 1 (image 1.1; 1.2). X ray: distance between implants more than 4 cm. HSG: uterus bicornis. Both tubes obturated. Case 2 (image 2.1;2.2). X ray: distance between implants more than 4 cm. HSG: T shaped uterus. Both tubes obturated. Case 3 (image 3.1;3.2). X ray: asymmetrical placement of implants, abnormal alignment of right implant, distance between implants more than 4 cm. HSG: RVF uterus, atypically placed right tube. Both tubes obturated. Conclusions: Essure is a simple and effective technique of tubal sterilization. However, sometimes the x ray image with high suspicion of abnormal placement or suspected perforation could be a result of minor anatomical abnormalities in different women. Every case is unique.
P05.04
Valiability in anorrectal angle measured in puerperal period with threedimensional ultrasound
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The rectal ampulla is rotated laterally to the left of the sagittal axis, producing a large variability in conventional biplanar measurement. The evaluation by three-dimensional transperineal ultrasound offers the possibility to obtain a pure sagital view of the anorrectal angle. Using this tool we compared classic biplanar (RA) versus standardized method of measuring the anorrectal angle (RASTD) and we evaluate whether this angle change when we compare two puerperal moments and if it relates to the delivery mode. This is a prospective observational study with 150 pregnant woman recruited. Exams were performed on the second day and four months after delivery with standardized settings. Volumes were obtained at rest and on Valsalva, anti-Valsalva and abdominal contraction manoeuvres. The measurements were determined in axial plane in biplanar versus 3D mode. A measure systematic method was established to evaluate the repeatability of the technique. Three observers repeated each measurement. Results: Sagittal 2D-images without correction were different than their 3D-corrected counterparts (p <0.05). 3D-reconstruction in the axial plane parallel to the mucosal anal wall allows for an accurate assessment of anorrectal angle despite positioning differences and results in increased accuracy while maintaining high reliability. No significative differences of RASTD founded between immediately delivery versus four months later (p=0.287) neither between caesarean and partum(p=0.06, p=0.96). Conclusion: The rotation of volumes allows standardising a good reproducible method to measure angle independently of positions or manoeuvres. No differences in women which deliver vaginal way vs caesarean were found; neither between immediate deliver versus four months later.

P05.05
Questionnaire on Sexual Attitude and Function 2009: A novel clinical and epidemiological computer based tool
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Objective: To study sexual problems of our patients and standardizing it for patients with or without religious and cultural restrains we developed a questionnaire with 240 phrases that were extracted from a pool of 1400 sentences addressing sexual problems. Sixty four scales under four headings (sexual general characteristics, deviations, dysfunctions and psychodynamic syndromes) (16 items each) were evaluated based on criteria of DSM-IV and ICD 10. Five validity scales (honesty, desirability, debasement, guilt feeling and overall validity) were also used for better assessment. Methods: A total of 1300 patients in the four variants of the test were evaluated during a time span of 7 years. The questions were presented to examinees at 8th. Grade and higher in a calm environment and the results were evaluated by a computer software specifically developed for this purpose. Results: The last version of the test was completed by 734 patients with excellent compliance. It was of nice politeness and comprehensiveness. For almost all scales the sensitivity and specificity were around 85 and 92% respectively. Conclusion: We conclude that QSAF 2009 is an excellent tool both in clinics (diagnosis and follow up) and epidemiology with high sensitivity and specificity. It has also application in cross cultural studies, medico – legal issues and medical documentation. It prevents face to face interviews, breaks patients' resistance and is less time consuming than scheduled interviews.
Objective: To evaluate the performance of visual inspection with acetic-acid and its comparison with cytology in cervical cancer screening. Method: 400 non-pregnant reproductive age women were subjected to Paps test and VIA in this prospective study done in a tertiary-care centre in Delhi. Reference standard used for all was colposcopy and colposcopic-directed biopsy, whenever indicated. Results: Of 400 Pap smear done 11.75% were normal, 77.5% inflammatory, 5.5% had ASCUS, 0.25% ASC-H, 0.5% AGUS, 2% LSIL, 1.5% HSIL and invasive cancer in 0.5%. With LSIL and above smears as significant, the sensitivity and specificity of Paps were 50% and 97.66% respectively. VIA was considered to be positive according to two thresholds. When high-threshold was used then only well demarcated, opaque white areas near the squamo-columnar junction were taken as positive where as in low-threshold criterion faint or ill-defined acetowhite anywhere and well defined areas away from SCJ was also taken as positive. 29.3% were positive with low-threshold criterion for VIA and 9.3% with high-threshold criterion. The sensitivity with low threshold criteria was 100% and specificity 72.7%. With high-threshold sensitivity and specificity were 85.7% and 95% respectively. Conclusion: VIA with low-threshold criteria had high sensitivity (100%) but specificity (72.7%) was low but with high-threshold criteria for positivity the specificity increases upto 95% which is comparable to cytology. The gynecologists in tertiary-care centers can thus, use the high threshold criterion effectively and patient with significant lesions can be directly subjected to further management at the earliest thus reducing loss to follow-up.
P06.01
Prevalence of endometriosis among patients undergoing laparoscopy in Rasoul Akram Hospital during 2005-2008
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Objective: To find out prevalence of Endometriosis and percentage of associated medical problems for prevention and management of subsequent morbidities

Material & Methods: a retrospective cross-sectional study of 110 patients with primary sign & symptoms indicative of Endometriosis, who underwent Laparoscopy in Rasoul- Akram Hospital during 2005-2008. Results: 6.32% (7 of 110) patients in our study group had endometriosis and the main presentations of endometriosis were secondary infertility (1.8%), acute abdominal pain (1.8%); Ovarian Cysts (0.9%), recurrent abortions (P=0.9%) and Intractable dysmenorrheal (0.9%). Conclusion: the prevalence of Endometriosis in this study was the same as previous studies in western countries. A notable finding was that biopsy results of suspicious cases during Laparoscopy was not approved by pathology and in contrast, in patients which pathologic results were positive, none of them were suspicious cases during Laparoscopy. This study represents this fact that gross appearance of suspicious lesions cannot determine the definite diagnosis of Endometriosis. Thus Laparoscopy and biopsy result is mandatory for definitive diagnosis.

P06.02
Levonorgestrel intrauterine device as an alternative for endometriosis adjuvant treatment
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The objective of this study is to evaluate the effectiveness of different adjuvant treatments in conservative endometriosis surgery, and to assess the rate of adverse events. A prospective study was conducted from September/2005 to May/2007. 97 women aged 22-53 years with moderate-severe endometriosis undergone conservative surgery were treated with levonorgestrel intrauterine device (LNG-IUD) (n=25), GnRH agonist (tryptorelin) (n=27), combined oral contraceptives (COC) (n=20) or were untreated (UT)(n=25). Dysmenorrhea, dyspareunia and other clinical symptoms were evaluated using a verbal scale from 0 for no pain/symptom, to 10 worst possible pain/symptom. Adverse events and withdrawals were also assessed LNG-IUD, GnRH agonist and COC treated women shown improvement in dysmenorrhea compared with UT women (tryptorelin: from 7.23 to 4.15, p=0.003; LNG- IUD: from 7 to 3.45, p=0.019; COC: from 8.80 to 4.40, p=0.002). Dyspareunia, dysuria, and other symptoms were also improved in treated women when compared to UT women. No statistical differences were noted between different treatments. LNG-IUD shown significant less adverse event rate than the other treatments (30,4% LNG-IUD; 47,1% COC and 66,7% GnRH agonist). Treatment compliance was higher in LNG-IUD and COC groups when compared to GnRH group (withdrawal 2%, 2% and 8,6% respectively). LNG-IUD seems to be a suitable option for adjuvant endometriosis treatment due to its effectiveness, similar to GnRH agonist and COC, and a higher tolerance.
Alexithymia trait in endometriosis patients. A case control study

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Introduction: Alexithymia appears to affect the subject's ability to deal with the diversity of subjective pain factors although the mechanism through which it influences the perception of pain remains to be clarified. Aim of the study was to evaluate the presence of the alexithymic trait in a group of patients with endometriosis and chronic pelvic pain in comparison to healthy controls using a validated tool. Methods: 41 patients with pain and surgical diagnosis of endometriosis and 40 healthy controls were recruited in the study. All subjects taking part in the study underwent a semi-structured interview by a psychologist and the Italian version of the Toronto Alexithymia Scale (TAS-20), used to assess the presence of alexithymia was administered. Following interview the physician evaluated the intensity of chronic pelvic pain in the patients by means of a modified version of the Biberoglu pain scale. Results: A positive score for alexithymia was achieved by 14.6% (n. 6) of patients with, whilst this condition was absent in the control group; alexithymia was indeterminate in 29.3% (n. 12) and 12.5% (n. 5) of patients and controls, respectively, and absent in 56.1% (n. 2) and 87.5% (n. 35). Inter-group differences were significant for three factors evaluated by TAS-20: difficulty in identifying feelings and distinguishing from bodily sensations (Fact. 1), difficulty in describing feelings (Fact. 2), and externally-oriented, or operative thinking (Fact. 3). Discussion: The present study underlined how women with endometriosis were significantly more alexithymic compared to controls. Effective treatment of chronic pelvic pain should therefore be based not only on an accurate medical assessment, but also on a knowledge of the emotional management of the disease and its psychological consequences.

Expression of leptin receptor and potential effects of leptin on the cell growth and activation of STAT3 and ERK signals in endometriotic cells

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Leptin acts as a potential growth stimulator in several neoplastic cells including ovarian cancer cells. Recent studies showed the presence of increased levels of leptin in the peritoneal fluid of patients with endometriosis, a risk factor of ovarian cancer. However, the specific function of leptin in the induction of mitogenesis in endometriosis is not known. The present study investigated the expression of the leptin receptor (ObR) in immortalized endometriotic cells, and the effect of leptin on cell growth. Human endometriotic epithelial cells (11Z and 12Z) showed a high level of ObR when compared to endometrial cells (HES and HESC) and endometriotic stromal cells (22B). Leptin treatment stimulated the growth of 11Z and 12Z cells, but not that of 22B cells. Knockdown of the ObR using specific ObR siRNA impaired the ability of leptin to induce cell growth in 11Z cells. In addition, leptin induced the activation of JAK, STAT3, and ERK. Furthermore, pretreatment with the JAK inhibitor AG490 and the ERK inhibitor PD98059 notably inhibited leptin-induced cell growth in 11Z and 12Z cells. Taken together, these data suggested that the leptin receptor is induced in endometriosis and leptin stimulates the growth of endometriotic epithelial cells through the JAK/STAT3 and ERK pathways.
P07.01
IMRT in carcinoma of the vulva surgery: preliminary results
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Purpose: To document the initial experience of our service with IMRT in carcinoma of the vulva operated. Material/Methods: Retrospective analysis of patients with carcinoma of the vulva operated between August 2009 and September 2010. All patients were treated with IMRT dynamic (sliding window) Clinac 2100CD linear accelerator of 6 MV photon energy planning in reverse. We evaluated the coverage of the PTV dose homogeneity of the plan and organs at risk (Recto(D40), Bladder(D40), intestine(D35) and marrow(V20). An acute gastrointestinal, genitourinary, hematological, and skin was evaluated according to RTOG / EORTC. Results: 11 patients, median age 75 years with vulvar carcinoma were treated with adjuvant IMRT. All patients completed the treatment at all. The average dose was 62.76 Gy. The mean volume receiving less than 95% of the prescribed dose in the PTV was 2.75%. 1 in 11 patients received more than 107% of the prescribed dose in the PTV. The average bladder dose was 30.78 Gy, 33.04 Gy to the rectum, the intestines of 26.54 Gy and 22.23 Gy to bone marrow. The average D40 of the rectum was 25.50%, the Bladder was 18.56% D40, D35 intestine was 22.64% and bone marrow V20 was 39.47 Gy. One patient developed grade 3-4 skin toxicity that led to suspension of therapy for one week. No patients with GI toxicity, urinary and haematological grade 3. Conclusion: IMRT is a promising approach in patients with cancer of the vulva. The IMRT planning has an adequate PTV coverage, with considerable savings of organs at risk. The treatment was well tolerated.

P07.02
Ovarian non-Hodgkin lymphoma: case study
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Non-Hodgkin lymphoma (NHL) may involve the gynecological tract (most often ovaries) and is usually secondary occurring as part of systemic disease. In our case, a 46 year-old woman presented to the gynecologic department of General County Hospital of Kilkis on 3/9/2009 complaining about lower abdominal pain. The physical examination revealed a mass extending up to the umbilicus. The chest radiograph was normal and abdominal Computed Tomography (CT) showed a large, heterogeneously enhancing mass with lobular limits, originating from the right ovary. There were no pathologically enlarged retroperitoneal lymph nodes and no other findings from spleen, liver, suprarenal glands and kidneys. Blood analysis showed that all tumor markers were within normal limits except for CA-125 which was 146 U/ml (normal range: 0-33) . The following day urgent laparotomy was performed that included total hysterectomy, left salpingo-oophorectomy, excision of a large mass from the right ovary area, epiplectomy and excision of a smaller omental mass. All the samples were send for histopathological examination that revealed negative (-) lymph node specimen and a mass of 21.8 cm in diameter. Then, immunohistochemical study was performed with two formalin-fixed, paraffin embedded tissue sections and a variable panel of antibodies. The tumor was identified as a diffuse large B-cell lymphoma (DLBCL) centroblastic variant with entirely diffuse architecture of large cells with round nucleus and visible one or more nucleoli and areas with a view of a starry-sky background. The tumor was positive (+) for CD20/L26, CD10, BCL2, BCL6, CD45RA/PANB and negative for (-) CD3, CD5, CD45RO/UCHL-1, and MUM-1. The cellular proliferation marker MIB-1/Ki-67 showed 80% positive cells. The patient was referred to the Oncologic Hospital of Thessaloniki. A decision to start chemotherapy was made. The follow up continuous with the next appointment scheduled on May.
A case report concerning an interferon treatment (IFN-TRT) induced progression of autoimmune thyroiditis (AIT) and abnormal enlargement of the thyroid glands (AETG) in HPV-infected patient and a systematic review covering side-effects and complications of IFN-TRT is presented. Patient 0.26 years with subtle layer acetowhite area around cervical ostium had abnormal Pap smear (low grade CIN). DNA HPV test presented persisted high risk HPV infection (16 and 18 genotypes). Because of thyroid hypofunction and AIT with AETG patient received a hormone replacement therapy with 75 mg daily L-thyroxin. Ultrasound size of left thyroid gland lobi was 14,5 cm$^3$ and right – 15,1 cm$^3$. A TTH concentration was around 0,88 mkgMU/mL (reference values – 0,34-5,6). A gynecologist from the medical center of Kiev prescribed several courses of IFN-TRT. Patient received two courses of rectal suppository with IFN-α2 (500000 U) twice daily for 10 days and 15-intracervical injections of IFN-α2 (3000000 MU) every-other-day. This treatment was before and after cryodestruction of cervical lesions. Treatment had been prolonged for 8 months but HPV persistence remained unchanged. In the end of IFN-TRT patient experienced weakness, rapid fatigability and other symptoms of AIT progression and noticeable AETG: left till 24,3 cm$^3$, and right – 17,8 cm$^3$, lobes with increased values of TTH – till 8,4 mkgMU/mL. In order to stop progression of AIT daily dose of L-thyroxin was increased till 150 mg. An IFN-TRT was stopped. After 7 months HPV infection spontaneously disappeared and after 1 year patient had a baby without any infertility and pregravidiary treatment.
Quality of life of women with lower-limb lymphoedema following gynaecological cancer

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Objectives: This review summarises results of studies assessing the impact of lower-limb lymphoedema (LLL) on Quality of Life (QoL) of women with gynaecological cancer, evaluates their methodologies, and discusses limitations and priorities for future research. Methods: To be eligible, studies needed to involve women with LLL following treatment for gynaecological cancers and evaluate the relationship between lymphoedema and any aspect of QoL. QoL could be measured using validated tools or qualitatively explored. Only articles published in English in peer-reviewed journals were eligible for inclusion. Results: Of the ten eligible papers, seven were descriptive papers, of which four used qualitative research methods, and three (two using data from the same patient population) used quantitative methods. The remaining three papers reported the results from intervention trials. Despite differences in methodology and study samples, findings are largely consistent and indicate patients with LLL following treatment for gynaecological cancers experience reductions in physical, psychological and emotional functioning, and significant reductions in QoL. Women's ability to perform daily tasks (e.g., grocery shopping, exercise, social activities) was adversely affected and they faced additional difficulties in finding suitable clothing and completing self-management tasks required for treatment of their LLL. Living with LLL affected social, work and personal relationships and severe sexual difficulties and the loss of intimacy were also reported. Conclusion: Despite limited research involving women with LLL, it is clear that the condition adversely impacts all aspects of life. Future research investigating strategies to minimise the impact of lymphoedema on quality of life is needed.
Misoprostol as an alternative for termination of first trimester missed abortion

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Objectives: To evaluate the effectiveness of intravaginal followed by oral Misoprostol tablets for medical termination of missed abortion between 8-13 weeks calculated from the first day of last menstrual period (LMP) according to menstrual history and to compare the efficacy of sublingual/oral route and vaginal/sublingual Misoprostol in the medical management of missed abortion. Methods: a prospective study of 70 women (50 women vaginal/sublingual route and 20 women sublingual/oral route) with diagnosed missed abortion admitted to SUOGJ ‘Queen Geraldina’ 800 micrograms (4 tablets) of Misoprostol inserted in the vagina followed by 400 micrograms (2 tablets) sublingual 6 hours later. Another 400 micrograms (2 tablets) were given sublingually 6 hours from the last dose for those patients who did not respond to the previous two doses. 600 micrograms (3 tablets) sublingually and 600 micrograms (3 tablets) orally given at the same time. Results for vaginal/sublingual route: (42) patients (84%) had complete expulsion. (18) patients (36%) after the vaginal dose. (17) patients (34%) respond after the first sublingual dose and (13) patients (14%) after the second sublingual dose. (4) patients (8%) had incomplete abortion; the remainder (4) patients (8%) failed to respond within 24 hours of starting treatment and required surgical evacuation. Results for sublingual/oral route: (16) patients (80%) had complete expulsion. (4) patients failed to respond within 24 hours of starting treatment and required surgical evacuation. Conclusion: First trimester missed abortion medical termination by Misoprostol is effective, safe and a practical method.

Appendiceal mucocele -unexpected diagnosis in a gynecology department

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Appendiceal mucocele is a rare entity, occurring in < 1% among appendicectomies, with a female predominance 4/1 (F/M) and a mean age of more than 50 years. The preoperative diagnosis is difficult; in most cases, it’s an intraoperative finding. In such work, we describe the two clinical cases occurring in last 10 years in our Department: Case 1 - 56 years old, posmenopausal, referred to our Department (02/2004) because an asymptomatic right adnexal septated cystic image, 53x48mm, with hipovascularized septa and a vascularised capsule with low flow resistance (IR 0,57). CA 125 elevated (71,3 U/mL). Exploratory laparotomy: an ovary increased, with a gelatiousous consistency and an appendicular enlargement. Extemporaneous examination: a pseudomixoma peritonei, associated with a mucinous appendicular and an ovary tumor. It was performed a radical surgery. The histo-pathological analysis showed a mucinous cystadenoma of the appendix with peritoneal mucinous dissemination involving the ovary. Expectant attitude since the surgery, without clinical and imaging signs of recurrence. Case 2- 62 years old postmenopausal and asymptomatic woman, with a large adnexal mass detected on routine pelvic ultrasound: heterogeneous, 94x84mm without vascularisation signs in its interior. CEA was elevated (41,47U/ml). Exploratory laparotomy (02/2010): enlarged appendix and macroscopically normal pelvic organs. An appendicectomy was performed. The histo-pathological analysis showed a 10cm mucinous cystadenoma of the appendix and signs of localized (visceral peritoneal surface) pseudomyxoma peritonei. Currently she’s clinically well, in an expectant attitude. Despite mucoceles of the appendix are rare, they should be considered in women presenting with abnormal quadrant masses.
Identification of aberrant methylated genes in breast cancers with different ER/PR status

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Background: Aberrant DNA methylation has been found in breast cancers associated with different hormone receptor status. Large-scale epigenomic technologies may be useful in our attempts to define more putative aberrant methylated genes related to ER/PR status in breast cancer. Methods: 1. Using MeDIP-chip analysis, we searched aberrant methylated CpG islands in promoters of ER+ and ER- breast cancers and paired normal breast tissues. Gene classification analysis was analyzed by DAVID (Database for Annotation, Visualization and Integrated Discovery). 2. Further verification of candidate gene was assessed by bisulfite sequencing (BST) in a normal breast cell line and breast cancer cell lines along with microdissected epithelial and stromal cells of normal and breast cancer tissues. ER/PR expression was analyzed by immunohistochemistry. Results: 1. We found 1584 genes hypermethylated in ER+ breast cancer whereas 1640 genes hypermethylated in ER- breast cancer. 312 genes were methylated in both. Among which, PAX2 was found aberrant methylated in ER- cancer. Further verification revealed PAX2 hypomethylation in breast cancer cell lines(68%) and epithelium of breast cancer tissues(55%) compared with the normal cell line(72%) and epithelium of normal breast tissues(69%), which was especially lower in ER- cell line and cancers (43%). PAX2 hypermethylation was found in stroma of breast cancer tissues compared with that of normal breast tissues (69% versus 51%), which was even higher in ER- cancers (77%). Conclusions: Distinct methylation pattern was found in breast cancers with different hormone receptor status. Hypomethylation in epithelium and hypermethylation in stroma of PAX2 may be related to ER- breast cancer.

The importance of cervical cytological screening combined with immunohistochemical tests

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Malignant pathology of the cervix has a prevalence rate of morbidity and mortality. Undoubtedly, screening programs for cervical cancer and HPV vaccination are welcome certainty by enabling drastic reduction of the possibilities of developing and validating precancerous and cancerous cervical lesions. Therefore, we consider very important the screening for cervical cancer, including the cytological examination and the immunohistochemical markers. Combining these two methods, we can get better results for the diagnosis and prognosis of our patients. We used the data bank from the Pathological Laboratory of Clinical Hospital of Obstetrics-Gynecology Oradea, for the patients admitted with cervical precancerous and cancerous pathology between 2005-2006. We used few immunohistochemical markers - Ki-67, p53 and angiogenesis marker on cervical samples from patients diagnosed with cervical precancerous or cancerous lesions. The reactions we got for these immunomarkers, permitted us to have the correct medical management depending on patient needs. Angiogenesis is considered an important factor in evolution of different gynecological disease and also represents a critical step for the growth of solid tumors. Using vascular endothelial growth factor (VEGF) to appreciate angiogenesis, we could diagnose the grade of cervical precancerous or cancerous lesion. Comparing the expression of VEGF in normal epithelium, cervical dysplasia, carcinoma in situ, microinvasive carcinoma and invasive squamous cell carcinoma, we found the VEGF expression significantly greater in CIS and invasive squamous cell carcinoma than in normal specimens or precancerous lesions. Our conclusion was the HPV infection increases the cell proliferation and neovascularization of tissue.
Primary malignant melanoma of vagina - report of a rare condition
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Primary malignant melanoma is a rare neoplasm, representing less than 3% of all vaginal malignancies and 0.3% of malignant melanomas. Vaginal melanoma affects mainly the post-menopausal women and the most common presenting symptoms are vaginal bleeding, vaginal discharge or a palpable mass. Due to early metastatic potential, vaginal melanoma still has a poor prognosis, despite the primary therapy chosen. A 84-year-old woman, gravid 2, para 2, was referred because of abnormal vaginal bleeding with a month of evolution. On medical past she underwent left mastectomy for a breast cancer 5 years ago. Inspection showed an ulcerated irregular, dark pigmented lesion with 3 cm on the middle third of the anterior wall of the vagina with hard consistency; there were no palpable inguinal nodes. Pelvic ultrasound identified a vaginal lesion highly vascularized and fluid intra endometrial cavity. It was performed a uterine curettage and a vaginal biopsy. Pathology revealed a nodular malignant melanoma confirmed by positive immunostaining for S100 and HBM-45; endometrial sample with no atypia. Thoraco-abdomino-pelvic CT scan, colonoscopy and ureterocystoscopy, and examination of the eye were normal. One month later, lesion occupied all anterior vaginal wall. Patient was proposed for radiotherapy. Less than 250 cases of vaginal melanoma are reported at literature, showing the importance of this case report. Because of limited data available recommendations for management of vaginal melanoma are lacking.

Are women with vulvar condylomas more susceptible to have cervical intraepithelial neoplasia?
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Objective: Determine if women with vulvar condylomas are more susceptible to have cervical intraepithelial neoplasia (CIN). Methods: A total of 91 women with vulvar condylomas were included in this two years retrospective study (January 2009 to December 2010). Colposcopy was indicated when cervical cytology showed alterations. Forty-six patients with vulvovaginal condylomas were referred to colposcopy. The diagnosis of cervical intraepithelial neoplasia was based on cervix biopsy under colposcopy. Results: Forty-six of 91 women were referred for colposcopy by changes in cervical cytology (50, 5%), and 25 had abnormal colposcopy (27, 5%). The biopsy revealed CIN 1 in eight women, CIN 2 in two women and CIN 3 in one woman. HPV infection without dysplasia was encountered in six women and cervix condyloma in three women. Conclusions: In this study, nearly 30% of women with vulvar condylomas had abnormal colposcopy, and 12, 1% of biopsies showed CIN. The authors concluded that these women are at high risk of having a cervical intraepithelial neoplasia.
**P07.11**

Ovarian tumor associated with pregnancy: a case report  
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(2) Centro Hospitalar do Porto - Hospital Santo António, Porto, Portugal

Introduction: Ovarian tumors in pregnancy are a diagnostic challenge. The risk of ovarian malignancy is rare in pregnancy. Metastatic ovarian disease from a different primary tumor site is referred as Krukenberg tumor. Gastric cancer is the most frequent malignancy associated with this finding. Its presence indicates widespread disease, and its prognostic is uniformly poor. Case report: A 32-year-old woman with an ovarian tumor diagnosed at 28 weeks of her second pregnancy, was transferred from another hospital at 31 weeks of gestation with considerable abdominal distention and severe abdominal pain. She referred Hodgkin disease when she was 15 and that her sister recently died with gastric cancer. Physical examination revealed marked ascites and a cervix displaced anteriorly by a solid tumor occupying most of the left abdomen. Ultrasonography demonstrated a 31 week fetus without cardiac activity, a large volume of maternal ascites, and a large solid mass of the left ovarian. An exploratory laparotomy was proceeded and showed peritoneal carcinomatosis, ascites and a 23x 21 cm tumor of the left ovarian. The left adnexa was resected. The nonviable fetus was delivered by cesarean. Exploration of the abdomen revealed a primary and unresectable gastric carcinoma with infiltration of neighboring structures. Histopathology confirmed the diagnosis of Krukenberg tumor. Conclusion: The early diagnosis of gastric cancer in pregnancy may be delayed, because early symptoms of this cancer are attributed to pregnancy. The presence of risk factors (such as family history of gastric cancer) might be helpful for the indication of an early diagnostic procedure.

**P07.12**

The role of KETEM about cervical cancer screening in Turkey  
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The aim of this study is to give information about KETEM's (Cancer Early Diagnosis, Screening and Education Center) role for cervical cancer screening in Turkey. Cervical cancer is the leading cause of cancer related death among women in Turkey like the other developing countries. Pap smear has an important value in the early diagnosis of cervical cancer that is a serious problem in women health. It was determined that the number of women who had a Pap smear was increasing with age, duration of marriage, number of birth, knowledge about Pap smear and perception of risk for cervical cancer. Cervical cancer is the 3rd most frequent type of cancers in women, after breast and rectal cancers. As recommended by the World Health Organization (WHO), necessary is the establishment and implementation of a national program on breast cancer and cervical cancer, which are prevalent in Turkey, and in which screening programs are efficient and cost-effective in reducing mortality and morbidity. KETEM conducts screening programs for breast, cervix, and colorectal cancers with "Early detection saves lives" catchword in Turkey. At the end of the 2008, 84 KETEM was established in Turkey. Phsicians, nurses, midwifes, X-ray technicians work in this centers. Aged between 35-65 years women, screen with pap test quinquennially like suggested by the Ministry of Health. Colposkopi is done as a result of suspicious Pap Smear test. Also KETEM organises the public health educations about cancer screening, healthy feeding and physical exercises.
Endometrial carcinoma: regarding a series of 422 patients

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(3) Primary Health Care of Vigo, Spain
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Introduction: We examined the pathological features and prognosis of a series of patients with endometrial cancer.

Methods: A total of 422 patients with endometrial cancer diagnosed in the Vigo University Hospital Complex (Spain) were evaluated histologically and monitored prospectively for over 20 years.

Results and conclusions: Of the total of 422 endometrial cancers in our series: 84.1% (355 patients) were Endometrioid Adenocarcinomas (and its variants), 2.1% (9 patients), Malignant Mixed Mullerian Tumors, 1.1% (5 patients) metastases in the endometrium. We included 4 Endometrial Stromal Sarcomas and 1 Endometrial Adenosarcoma.

Regarding disease-free survival at 5 years: Endometrial Adenocarcinomas showed a better prognosis (p = 0.0001) than other cancers of the uterine corpus (Endometrial Stromal Tumors, Leiomyosarcoma, and TMMM). Endometrial adenocarcinoma of type Cell Clear, Serous, Squamous and Undifferentiated accounted for 7.6% (32 cases) and were associated with a worse prognosis regarding disease-free survival at 5 years when compared with Endometrioid Adenocarcinomas (p = 0.0001). By studying globally endometrioid adenocarcinomas in relation to the disease-free survival at 5 years, we noticed that the histologic grade, FIGO stage and the presence of vascular invasion were excellent prognostic markers (p = 0.0001). However, the different histologic variants of Endometrioid Adenocarcinoma showed no differences between them.

Cytological method as the detection of precancerous changes at the cervix of the uterus

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We analyzed the results of the cytological check-up of the portio vaginalis uteri (PVU) in the patients controled in the Cytological Laboratory of the Hospital for Gynecology and Obstetrics, KBC Zvezdara, Belgrade during the year 2010. In total 452 patients, we founded clinically suspicious findings. The highest number of the examined patients belonged to the age group 30-39 (34,47%) years as well from 40-49 (33,12%) years. The histological results of the revised findings showed the high cytological coincidence in cancer discovering. In the group of suspicious cytological findings, the histological verification of cervical dysplasia was represented with 81,13%. From our results we can conclude that cytological method as an early diagnostic method was very reliable in discovering and monitoring of the initial changes on the cells falling off from the surface of the epitelia and that it is suitable as the screening test.
A report on different gynecological illnesses treated via Faradarmani

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Objectives: Faradarmani, an Iranian complementary medicine is based on “the consciousness bond of the parts” or “parts having consciousness in common”. In Faradarmani it is believed that information of a cell (information of all living creatures and different experiences of life) can be transmitted even without placing it near the cell of an organ. This data transfer is made through consciousness or intelligence. Treatment of problems such as infertility based on this method is made under title of “intelligence conception”. The purpose of this report is to study different types of gynecological illnesses that have been treated via Faradarmani in several patients.

Methods: A report was prepared on 15 volunteers treated via Faradarmani who had confirmed their previous gynecological illnesses. (In the therapy, the patient becomes connected to the interuniversal consciousness, the network of awareness and consciousness governing the universe or divine intelligence, via Faratherapist. Following this procedure he/she undergoes the Scanning process of the universal intelligence. Due to the nature of this connection, some information is conveyed and the defective parts are treated.) The recovery criteria were the patient’s personal reports. Graphics based on age and level of education are presented to illustrate how Faradarmani affects different types of illnesses.

Results: Among the 15 patients, 5 types of gynecological illnesses (infertility, sudden death syndrome of infant boys, ovarian cysts, uterine cysts and high-risk pregnancy) were treated via Faradarmani. (Age range 21 to 50, with high school to bachelor’s degree of education).

Summary: The patients treated via Faradarmani were in a wide range of age, education and gynecological illnesses. Faratherapists were also from different age and levels of expertise in medicine which implies “irrelevance of Faradarmani’s effectiveness to the person or illness”.

Clear cell adenosquamous carcinoma of the cervix

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Clear cell adenosquamous cervical carcinoma is a rare variant of adenosquamous carcinoma described infrequently in the literature. Here we present a case of this rare subtype. A 54 year old nulliparous woman presented with a three month history of abdominal discomfort. On examination she was found to have an irregular shaped mass extending into the left vaginal fornix, imaging suggested a cervical malignancy with pelvic lymphadenopathy. The mass was extensively biopsied. The histology revealed features consistent with a clear cell adenosquamous carcinoma. Following Multi-Disciplinary Team (MDT) discussion it was decided that she should commence a course of radical chemoradiotherapy. Having received most of the course of external beam radiotherapy and one cycle of cisplatin chemotherapy, she clinically deteriorated and was too unwell to receive any further treatment. A CT scan was performed and revealed no response to the treatment she had had thus far. Her case was discussed by the MDT and it was felt that she would not be able to withstand further chemo- or radiotherapy. She was thus assessed for surgical treatment. However pre-surgical assessment showed that she had developed acute hepatitis. She did not recover medically and all active treatment was suspended. Nine months from initial diagnosis she is receiving end of life palliative care. This case demonstrates an extremely rare aggressive carcinoma in which the standard treatments for cervical cancer have failed. This suggests that alternative treatments should be considered in future cases.
Malignant melanoma accounts for less than 3% of all vaginal malignancies and is characterised as an aggressive unpredictable disease. We present a case of vaginal malignant melanoma in a 63 year old woman. The patient presented to the gynaecology clinic with a 4cm hard, irregular vaginal mass. She had no other symptoms. An MRI suggested the mass was isolated to the vagina so she underwent a wide local excision. The histology revealed a complex tumour consisting of highly pleomorphic spindle cells. Immunohistochemistry was consistent with malignant melanoma. The excision margins were not clear. Following this, the patient then had a PET-CT to assess the extent of her disease. This showed no evidence of spread beyond the vagina. In view of this, it was decided by the multidisciplinary team that she should be managed conservatively. Over the next six months she started to experience persistent, offensive vaginal discharge and the tumour tissue increased. She then underwent a course of radiotherapy to alleviate her symptoms. Having completed radiotherapy, she complained of increasing back and chest pain. A CT scan revealed a lytic bone metastasis with T7 collapse and a second bone metastasis at L3. She immediately commenced a further course of palliative radiotherapy for the bone lesions. Fifteen months after presentation she is receiving palliative care. This case demonstrates the typically aggressive nature of malignant melanoma of the vagina and the difficulty in treating it effectively.
The improvement of outpatient diagnostics of benign endometrial polyps

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This is a prospective study of random 55 women of reproductive, peri- and postmenopausal periods with the suspicion of intrauterine pathology. The aim is estimating the diagnostic values of transvaginal ultrasound (TVU), saline infusion sonohysterography (SISH) and diagnostic hysteroscopy (DHS) in outpatient revealing of benign endometrial polyps. As the final diagnosis the results of 89% operative hysteroscopy (OH) and D&C and 11% hysterectomies accepted. The benign endometrial polyps were detected in 47% (n26) patients with the following final histologic conclusions - fibrous-glandular (n21, 80%), glandular (n1, 4%), fibrous-glandular-muscular (n2, 8%) and placental (n2, 8%) polyps. The diagnostic efficiency of conducted methods (blind to each other) presented in table 1. No statistically significant difference between SISH and DHS received (p<1), but the efficiency of SISH in differentiation of endometrial polyps and submucous myomas appeared low. In two cases intracavitary formations of 16 and 21mm in diameters at SISH were erroneously interpreted as 0 type submucous myomas since they sonographically corresponded more to myometrium, than to endometrium. At both DH and OHS they were interpreted as endometrial polyps and were fully removed by D&C without the necessity of resection. The histologic conclusion of both cases was fibrous-glandular-muscular polyp. Conclusion: There is a kind of benign endometrial polyp - histologically fibrous-glandular-muscular polyp - that is not possible to distinguish from 0 type submucous myoma at SISH, because their miometrial component make them sonographically look like miometrial formations. We suppose that careful attention to the integrity of myometrial-endometrial border at SISH may help.

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P08.02
Association of bont pelvis and the mode of delivery in Korea
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Objective: We investigated the structural differences in the pelvic bone architecture of Korean women and their association with the mode of delivery by performing computed tomography (CT) pelvimetry. Methods: This study was conducted on 175 women who underwent CT between March of 2006 and May of 2008. For making an objective assessment, one specialist in obstetrics and gynecology measured the obstetrical conjugate, the true conjugate and the diagonal conjugate on the sagittal plane and the transverse diameter, the intertuberosus diameter and the interspinous diameter on the coronal plane. The patients who underwent total hysterectomy or those who had a disease of the uterus were excluded from the current analysis. Results: A total of 175 Korean women were examined, and their ages ranged from 20 to 50 years. The mean age was 37.6±7.4 years. The interspinous diameter that was measured on CT scans was 94.6±7.8 mm in the vaginal delivery group (n=84) and this was 90.9±6.6mm in the cesarean section group (n=20). This difference reached statistical significance. Conclusions: Our study examined the difference in the pelvic architecture with using CT and we found that the interspinous diameter can be the important determinant that affects normal vaginal delivery. Of these pelvimetric parameters, a wider interspinous diameter was significantly associated with vaginal delivery. Multi-disiplinary approaches are warranted to examine this relation with regard to the various factors that are involved in delivery.

P08.03
Simple ultrasound rules versus Risk of malignancy index to distinguish between benign and malignant adnexal masses before surgery
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Objective: Multiple risk scoring systems have been proposed to differentiate between benign and malignant adnexal masses. The aim of this study was to compare diagnostic performance of simple ultrasound rules from IOTA group and risk of malignancy index to predict benignity/malignancy in adnexal masses managed in our institution between January 2010 and December 2010. Material and Methods: This study included 51 patients women followed in our institution because of a suspicious adnexal mass and were submitted to surgery. All patients were evaluated by transvaginal ultrasonography (TVU) and Ca-125 prior to surgery. Definitive histopathological diagnosis was obtained in each case. Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) were calculated for each score. Results: Simple ultrasound rules yielded a conclusive result in 50 cases, for which they were correct in 45 (88.2%). Four benign masses were classified as malignant and one malignant mass was classified as benign. The risk of malignancy index was positive in two cases, both were malignant. Sensitivity, specificity, PPV and NPV for simple ultrasound rules and risk of malignancy index were 83.3% versus 33.3%, 90.9% versus 100%, 55.6% versus 100% and 97.6% versus 91.8%, respectively. Conclusions: Our results suggest that simple ultrasound rules offer a straightforward approach to correctly characterize adnexal masses, and have a better performance as a triage test than risk of malignancy, because of its higher sensitivity and NPV, but a larger sample is necessary to draw more accurate conclusions.
Objective: to evaluate characteristics in a single umbilical artery (SUA) in a Lebanese population. Methods: SUA is a rather common finding in obstetrical ultrasound. All cases of SUA described by a single physician between 2000 and 2010 were reviewed, along with the follow-up. Gestational age at presentation, side of the absent umbilical artery, antenatal investigation, course of pregnancy and baby’s outcome were assessed. Results: Sixteen cases were found in a population of 1260 babies (1.27%). The left side was absent in 9 cases (56%). Ultrasound diagnosis occurred at 12-13 weeks in twelve cases, 17 weeks in 3 cases, and 32 weeks in one case (this baby had two knots of the cord at delivery). In the sixteen cases found, other abnormal ultrasound findings were detected in two cases: One case occurred in a bichorial biamniotic twin. In one case there was a history of prior baby with SUA, ureteral anomaly, and C21 hydroxylase deficiency. Amniocentesis was performed in 8 cases mainly due to parent’s anxiety, abnormal triple test and in one case for associated choroid plexus cyst. One case had termination of pregnancy for multiple malformations. The fifteen others had a favorable pregnancy outcome. IUGR was detected in 5 cases, with a mean delivery gestational age of 36 weeks. Conclusion: Quality and source of information we deliver to our patients is essential for them to contribute to decisions in the follow-up and prognosis of SUA babies.
P09 High-risk obstetrics

P09.01
Arthrogryposis Multiplex Congenita (AMC)
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Aim: Arthrogryposis multiplex congenita, comprises nonprogressive conditions characterized by multiple joint contractures found throughout the body at birth, specially of the upper limbs and neck and amyoplasia, typically without other serious congenital abnormalities. Intelligence is relatively normal.

Material - Method: Infant with AMC born to 32 years old mother, at the 38 week of gestation. There was any pathogenesis from the pregnancy history like chromosomal abnormalities, myotonic dystrophy, myasthenia gravis, multiple sclerosis, maternal infections, maternal hyperthermia, exposure to teratogens or uterine abnormalities. The placenta was normal and the cord without any envelopment around a limb. Oligohydramnios was presented (AFI=4) without chronic amniotic fluid leakage. Also it was mentioned hyperextensibility from pregnant mother.

Results: Oligohydramnios cause fetal constraint and secondary deformational contractures. However, the condition that causes it (muscular dystrophy) may be. Affected joints are contracted in flexion or extension. Shoulders are usually adducted and internally rotated, the elbows extended, and the wrists and digits flexed. Hips may be dislocated and are usually slightly flexed. Knees are extended; feet are often in the equinovarus position. Leg muscles are usually hypoplastic, and limbs tend to be tubular and featureless. The spine may be scoliotic. Conclusions: AMC is not genetic, although in some genetic disorders (spinal muscular atrophy type I, trisomy 18), incidence of arthrogryposis is increased. AMC can result from neurogenic, myopathic, or connective tissue disorders. The major cause of arthrogryposis is fetal akinesia due to fetal abnormalities or maternal disorders. Arthrogryposis is detectable at birth and in utero only using ultrasonography.

P09.02
Successful pregnancy outcome with two live birth, after spontaneous abortion and selective removal of one placenta from triplet pregnancy
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Introduction : The management of delayed delivery in a triplet pregnancy after spontaneous abortion of the first fetus, is described. Case Report : A 21-year-old woman wit induction ovulation pregnancy aborted the presenting fetus at 17th gestational week. As she decided to carry on, cervical cerclage, tocolysis and antimicrobial prophylaxis were performed. The remaining fetuses survived until 28th gestational week. Conclusion: Prolongation of triplet pregnancies after the abortion of presenting fetuses is a possible approach, which is especially justified in women with a history of infertility.

Keywords: Triplet pregnancy- Spontaneous abortion- Pregnancy outcome
P09.03
Study of hematologic parameter change during iron administration for gestational iron deficiency anemia
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General Hospital of Pyrgos 'Andreas Papandreou', Department of Obstetrics & Gynaecology, Pyrgos, Greece

Objective: The study of hematologic indices that correlate with anemic profile of pregnant women, during administration of Fe for gestational iron deficiency anemia. Materials and Methods: We studied 450 pregnant women with iron deficiency anemia between 2004-2011. Diagnostic criteria were Hgb less than 11.5 gr/ml at the first trimester, 10.9 gr/100ml at the second and 10.3 gr/100ml at the third trimester. Anemia's type based on Hgb electrophoresis and MCV, MCH, MCHC, Reticulocyte count, Iron and ferritine. All women were administered supplemental proteinelectric Iron peros 800-1600mg daily dosing (same as 40-80mg Fe). We recorded the changes at every gestation trimester of Hbg, Hct, WBC, RBC, MCV, MCH, MCHC. Data statistic analysis was made with SPSS. Differences p<0.05 were statistical significant. Result: Proteinelectric Iron supplementation improves the hematologic parameters correlated with iron deficiency anemia during pregnancy.

P09.04
Arachnoid cyst during gestation
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Objective: Presentation of Arachnoid cyst Materials and Methods: Arachonoid is called the endocranial cyst, that originates from arachnoid membrane. It is separated at Primary and Secondary and has a small prevalence. Primary arachnoid cysts, are considered as central nervous system malformations and secondary due to infection, inflammation or endocranial hemorrhage. Results: At an ultrasound scanning it resembles to a cystic formation filled with fluid, found at the midline or at asymmetrical position. If the arachnoid cyst does not impact on cerebrospinal fluid circulation no hydrocephalus presents. A differential diagnosis consists of Porencephaly, hydrocephalus, neoplasm, holoprosencephaly, Dandy-Walker syndrome, agenesis of corpus callosum, Galen's vein aneurism. Conclusions: Arachnoid cyst prognosis is excellent with proper Neurosurgical contribution when needed. It Is not related to specific anomalies. Vaginal delivery is suggested on a tertiary facility with neurosurgical department.
P09.05
Unstable angina on a postpartum woman after Cesarian delivery a case report
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Objective: To present a case of chest pain and unstable angina on a postpartum woman 33 years old, after Cesarean delivery at 38 gestational weeks at the OBGYN department of Pirgos General Hospital. Materials and Methods: The woman was 33 years old, para2 that was submitted Cesarean section on 38th gestational week. The patient was an inpatient at OBGYN department from the 33th week due to preterm uterine contractions, receiving tocolytic therapy. She presented chest pain and unstable angina after the Cesarean section. Results: The patient was transferred to the cardiology department after she presented negative T-wave at ECG on I,II, aVL, aVF abductions with subendocardial ischemia, chest pain, sweat, without nausea, vomiting, dizziness, fainting, dyspnea, paleness, tachycardia and normal vital signs. Laboratory testing were 15/06/2006: WBC: 16.480 K/uL, HCT: 38,3, HB: 12.2 g/dl, PLT: 294.000 K/uL, CK: 163 IU/L, CKMB: 15 IU/L, LDH: 267 IU/L, CRP: 16,7 mg/dl, ptSEC:12,1, INR:1,05, a PPT :39,7, D-DIMMERS: positive. 16/062006 WBC: 13.900 K/uL, HCT: 31,1, HB: 10,4 g/dl, PLT: 335000 K/uL, CK: 104 IU/L, LDH: 302 IU/L, ptSEC: 11,9, INR: 1,03, a PPT: 40,2, D-DIMMERS: positive, troponine test: positive. Her treatment consisted of low molecular heparin, aspirin, b-blocker, iv antibiotics with Cefalosporins B-generation. Two days later her clinical situation improved and returned to the OBGYN department. Conclusion: The clinical importance of negative t-waves on ECG is possible fact on full-term pregnancies.

P09.06
Atosiban and ritodrine tocolytic action comparison in therapeutical approach of preterm uterine contractions for preterm labor prevention
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Objectives: Atosibans and Ritodrines tocolytic action effectiveness as a therapeutic option for preterm labor at pregnant women of Department of OBGYN, Pyrgos general Hospital. Materials and methods: In this study, participated 60 women with preterm uterine contractions (a preterm labor symptom) ,aged between 16-44 years, gestation age between 24-37 weeks for the period 2007-2009. Two groups were created by random selection. All pregnancies had intact membranes and had different cervical length. Groups were emulated gestational age and number of labors All pregnancies received cortisone and antibiotic therapy. Group A received Atosiban: 6,75mg bolus, 300mcg/min for 3 hours and 100 mcg/min until 18 hours completed. Group B received Ritodrine 100mcg/lt Dextrose saline 5%. The Primary outcome was labor postponement for 48 hours and we studied the time interval between and side effects of tocolytic therapy. Data were analyzed using ŵ² test. SPSS. Differences p<0.05 were not statistical significant. Results: Preterm labor is a serious clinical issue that increases morbidity. Ritodrine was proven a little more effective than atosiban in 48 hour labor delay (83,5%-81,2%). Mean tocolytic therapy duration was 11,2 days (range 1.8-29) and 10,6 days (range 1.6-28) respectively . Atosiban has minimal side effects (allergy, orthostatic hypotension ) compared to ritodrine (allergy, hyperkalemia, hyperglycemia, pulmonary edema) (5,4% compared to 46,2%) Conclusion: Despite different tocolytic therapies have been used for preterm labor prevention, none of it is absolutely effective. Atosiban's tocolytic therapy compared to Ritodrine's is not statistical significant regarding actions effectiveness but has less side effects.
The effect of *Ureaplasma urealyticum* and *Mycoplasma Hominis* on pregnancy outcome

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Ureaplasma urealyticum and Mycoplasma hominis are common commensals of the urogenital tract of sexually mature humans, which are gaining recognition as an important opportunistic pathogen during pregnancy. While their etiologic significance in many aspects of adverse pregnancy remains controversial, recent evidence indicates that *U. urealyticum* and *M. hominis* in the absence of other organisms are a cause of chorioamnionitis. Furthermore, ureaplasmal and mycoplasmal infection of the chorioamnion is significantly associated with premature spontaneous labor and delivery. Present evidence indicates that *U. urealyticum* and *M. hominis* are a cause of septicemia, meningitis, and pneumonia in newborn infants, particularly those born prematurely. Although risk factors for colonization of the lower genitourinary tract have been identified, little information is available concerning risk factors for intrauterine infection and host immune responses to invasive infection. Our study found that *Ureaplasma* and *Mycoplasma* were present in the vaginal smear of 15.4% of the 263 asymptomatic pregnant women between 24 and 34 weeks of gestation which were examined in our clinic in Tirana. Of the women who tested positive, 62.5% had preterm birth, compared to 5.4% of women who tested negative. This situation is caused by the pro-inflammatory effects of *Ureaplasma* and *Mycoplasma* on the endothelium. As result, the maternal lower genital tract colonization by *Ureaplasma* and *Mycoplasma* increases the rate of preterm birth. The complications that lead to preterm birth due to infection by *Ureaplasma* and *Mycoplasma* were the premature rupture of the membrane and the precocious maturation of the uterine cervix.

Facial dysmorphisms associated with holoprosencephaly

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Objective: The purpose of this study is to determine and classify the associated facial abnormalities with holoprosencephaly. Methods: We reviewed the sonographic findings in correlation with the clinical and pathologic data from 12 consecutive fetuses or neonates identified with alobar, semilobar or lobar holoprosencephaly during 12-year period (1995-2007) at the Department of Obstetrics and Gynecology of the Catholic university Hospital. Results: Mean gestational age at diagnosis and delivery was 28 weeks of pregnancy (range from 14 to 41 weeks). Modes of delivery were 1 case of normal fullterm spontaneous delivery, 1 case of fullterm cesarean delivery, 8 cases of preterm delivery and 2 cases of missed abortion. The frequency of associated anomaly was follows; 9 cases of facial anomaly (75%) which were cyclopia, proboscis, cleft lip and palate, otocephaly. Abnoraml karyotypes were 3 of 6 (50%) cases. Conclusions: It is concluded that when a midline brain anomaly is detected, prenatal sonographic analysis of midline facial defect may allow more definitive diagnosis of holoprosencephaly: affected fetuses often have other major structural abnormalities, and the outcome is nearly always fatal. Key words: Holoprosencephaly, Facial Dysmorphism, Cyclopia, Ethmocephaly
P09.09
Infections risk factors of premature labor
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Study of features of current and outcomes at virus and bacterial infections at the women, development of rational tactics of running of pregnancy, delivery at the women and newborn. We have revealed 2900 pregnant women with virus and bacterial infections: virus hepatitis B and C, herpes, cytomegalovirus, chlamydia, HIV infection and followed them during pregnancy. The verification of the diagnosis was carried out in view of the data clinical and special methods of researches. The medical therapy directed on removal of symptoms most frequently to an observed pathology, with the account thus of a degree of weight and stage virus hepatitis, has allowed to keep pregnancy at all women. To prevent development of virus hepatitis B all newborns were introduced vaccine and immunoglobulin during the first hours after delivery, and following vaccination of 1, 2 and 12 months of life. With the purpose of preventive maintenance virus hepatitis C applied immunoglobulin. At display of clinical symptoms of an infection to children carried out antivirus and symptom therapy, detailed virology research, with the subsequent supervision in dynamics. Chemoprophylaxis HIV infection at pregnant women descend frequency transmission HIV to newborn with 50% to 5%. Realization hemostatic cesarean section permit descend frequency transmission HIV to newborn with 10% to 2%. Thus, the creation of women dispensary system and organisation of newborn help and the choice of optimum obstetrics tactics with the virus-bacterial infections pregnant women are the necessary condition for the decrease of perinatal mortality and morbidity.

P09.10
The impact of preeclampsia at mother’s and child’s health
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Preeclampsia still remains one of the main causes of morbidity and mortality for both mother and child. In most cases, pathology demonstrates evidence of placental insufficiency with associated abnormalities such as diffuse placental thrombosis, an inflammatory placental decidual vasculopathy, and/or abnormal trophoblastic invasion of the endometrium. Endothelial damage leads to pathologic capillary leak that can present in the mother as rapid weight gain, nondependent edema, pulmonary edema, hemoconcentration. The diseased placenta can also affect the fetus via decreased utero-placental blood flow. This decrease in perfusion can manifest clinically as nonreassuring fetal heart rate testing, low scores on a biophysical profile, oligohydramnios, or as fetal growth restriction. The hypertension occurring in preeclampsia is due primarily to vasospasm, with arterial constriction and relatively reduced intravascular volume compared to normal pregnancy. Our objective is to observe the influence of preeclampsia in pregnancy. 5817 cartels of 2009 and 5689 cartels for the 2010 of Obstetric/Gynecologic hospital ‘Queen Geraldina’ have been consulted. We have made a careful diagnose of inducted hypertension of pregnancy and nephropathia. All patients had marked elevation of blood pressure and of serum uric acid levels. The incidence of preeclampsia in the population was 6.87% on 2009 and 6.68% on 2010. On the observed population on 2009, 3.5% (n=205) suffered more by hypertension and 3.3% (n=195) suffered by nephropathia. During 2010 we noticed that 3.0% (n=173) had hypertension and 3.7% had nephropathia. Prematurity, severe hypotrophia and babies mortality were the major complications of preeclampsia. Women with preeclampsia were especially the youngest.
Objective: To evaluate the role of Color Doppler in predicting the fetal outcome in cases of pregnancy induced hypertension (PIH). Materials, Methods: We studied 759 cases of PIH 28-37 weeks during February 2007-February 2011. A Color DOPPLER 3 - 5 MHz curvilinear probe was used for studying umbilical & fetal middle cerebral arteries. We used the value of PI as the indicator to evaluate perinatal outcome. The results of first doppler examination were taken into consideration for the study. The value of PI more than 95 th percentile in umbilical artery & AEDV or REDV and the ratio C/P <1 was considered abnormal. The results were correlated with parameters of fetal outcome. Results: In our study of 759 hypertensive cases 58% had abnormal PI in umbilical art 62% of these patients delivered IUGR babies. In patients with absent end diastolic velocity (AEDV) & reversed end diastolic velocity (REDV) perinatal mortality was 48% & had IUGR babies. The fetuses with problems showed increased diastolic flow in fetal MCA suggestive of brain sparing effect. The results of abnormal umbilical artery were more significant than brain sparing in predicting perinatal outcome. Conclusion: Color Doppler is an important tool for monitoring of PIH patients. It helps to identify the fetuses at risk and predict perinatal morbidity and mortality. Doppler velocimetry helps us in the treatment of these pregnancies & prevention of high mortality and morbidity in hypertensive patients.

Keywords: Pregnancy induced hypertension, IUGR, Colour Doppler

Conservative management of cervical ectopic pregnancy

Introduction: The incidence of cervical ectopic pregnancy is less than 1% of all the ectopic gestations. Overall incidence is 1/1000-95000 of pregnancies. Methods: We present two cases of cervical ectopic gestation. Patients were admitted in our centre because of intensive vaginal bleeding. Diagnosed of cervical ectopic pregnancy was performed by the presence of a gestational sac with a 7 mm and 3 mm embryos with fetal cardiac activity, below the uterine arteries in transvaginal sonography. Both women received a single dose of methotrexate (50 mg/m2) with folinic acid rescue. Initial inpatient management was conducted, and serum hCG levels were followed up until they were below 10 IU/L. Conclusion: Historically, hysterectomy has been one of the most frequent options for the treatment of cervical ectopic pregnancy. Nowadays, management options for cervical ectopic pregnancy range from conservative drug therapies to radical surgical procedures. Whilst conservative surgical approaches such as dilatation and curettage and uterine artery ligation have been shown to be successful in certain cases, the antimetabolite cytotoxic drug methotrexate now plays a pivotal role in the conservative management of ectopic pregnancy. In our experience, we would advocate to use of methotrexate as first-line management for cervical ectopic pregnancies in all cases if women is hemodynamicaly stable. Surgical procedures as angio graphic uterine artery embolization followed by curettage could be used as a second-line treatment option.
Human papillomavirus infection of the lower genital tract: a possible cause of placental dysfunction

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Objective: We sought to determine the reproductive outcome of human papillomavirus (HPV) infection of the lower genital tract during pregnancy. Material and methods: We conducted a retrospective cohort study. Exposed cohort was defined as pregnant women who had abnormal pap-test, and/or positive HPV PCR determination of the lower genital tract. We constructed an historical non-exposed cohort of consecutive singleton pregnancies without signs of lower genital tract infection born between 2008-2010. Results: Sixty patients were included in the exposed cohort and compare with 8595 patients. A non significant trend for a lower mean gestational age at birth was found for the exposed cohort (38.9 weeks vs 39.2 weeks; p=0.051). The exposed cohort had and increased risks for small for gestational age newborns (9.7% vs 3.3%; p=0.121). There were no differences in arterial cord pH, neonatal intensive care unit admission, serious puerperal complications, preterm deliveries, preeclampsia and gestational diabetes. Conclusions Lower genital tract HPV infection during pregnancy may cause placental dysfunction and could be associated with potential decreased of fetal growth. Further studies with a higher sample size are needed.

Effect of changing the strategy about maternal age in offering the invasive prenatal diagnostic technique for genetic study

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Objective: To determine the true impact of changing from 38 to 40 years the age to offer directly the invasive prenatal diagnostic technique for genetic study (IPTGS) when performing the first trimester combined screening and changing from 35 to 38 when performing the second trimester biochemical screening. Methods: between January 2009 and May 2011, the indications of IPTGS were analyzed. There were accepted the IPTGS for maternal anxiety (risk $\geq 1/300$) following the information about the specific risk. The change of maternal age from 38 to 40 and from 35 to 38 was introduced in January 2011. Results: during 2009 there were performed 22 IPTGS by maternal anxiety over a total of 400 (5,5%), in 2010, 26 over 374 (7,0%) and 43 over 145 (29,7%) in the first 5 months of 2011. Significant differences were observed between the percentages of 2009-2010 compared with 2011 (Chi-square = 57,003; P< 0,001). Conclusions: despite a global decrement in IPTGS, it is much lower than expected probably due to the increment of IPTGS performed without indication (maternal anxiety). Changes in strategies in sanitary areas should be introduced together with information for the general population, family physicians and clinical obstetrics; this will allow the progressive change of attitude in the couples.
Objective: to assess whether the performed indications for Invasive Prenatal Diagnostic Technique for Genetic Study (PDTGS) are assumed by the pregnant. Methods: 1,242 PDTGS were indicated over a population of 7,805. It was analyzed the percentage of indications that finally were performed and the ones that were refused by the pregnant. Results: 828 PDGTS were accepted and performed over 1,242 (66.7%); 414 were not performed by refusal of the patient. There were accepted all the cases of pathological ultrasound week 11 to 13+6 and chromosomal/genetic alteration carriers. The highest percentages of refusal are the soft markers in ultrasound week 20th (39%) and mainly the maternal-age group ≥35, 38 o 40 years, without screening or with low risk screening (risk <1/300) (59.3%, 40% and 30.1% respectively). A 9.9% of women with First Trimester Combined Screening and a 24.8% of women with Second Trimester Biochemical Screening, did not accept performing the PDTGS. Only 8 over 61 indications for fetal malformation refuse the procedure (13.1%). Conclusions: Our results let us analyze the factors that are determinant for the take of decisions of the pregnant and her couple. The true risk of indication of PDTGS, the given advice, as well as the ethnic origin and the sociocultural status of the couple should be further analyzed to determine the influence that these factors can have.
Practical application of the first trimester combined screening: positive test according to maternal age.

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Objective: To assess the probability of obtaining a positive test (risk ≥1/300) with the first trimester combined screening (FTCS), according to the maternal age groups at birth. Methods: 4354 cases of FTCS were included in the study; the percentage of women in each age group was calculated, also the percentage of positive test (PT) and the relative risk according to the group with the lower risk (maternal age at birth <30 years). Results: Women younger than 30 years (27.8%) had a risk ≥1/300 in 0.9% of the cases. In women over or equal 40 years, the PT was present in 24% of the cases (probability x26,3 respect the group <30 years). The age-group 30 to 34,9 years (42,1%) PT was present in 2% of the cases (probability x2). The age-group 35 to 37,9 years (18%) PT was present in 5.5% (probability x6) and the age-group 38 to 39,9 (6,5%) PT was present in 12,1% with a relative risk of x12,1. Conclusions: The global percentage of PT with FTCS in our study is 3.8% and depends on the maternal age at birth. The mean age was high, 30.8 years. These results can help with the couple orientation, and with an adequate planning that allows the optimal use of the available sanitary sources.
P09.17
Vessel subinvolution of the placental site as the cause of recurrent postpartum hemorrhage
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Objective: Postpartum hemorrhage is serious problem in obstetrics. If untreated, it can lead to death. Apart of many reasons for uterine bleeding after labor, rarely is due to placental bed subinvolution.
Aim: To present unusual case of recurrent postpartum hemorrhage due to abnormal physiology of uteroplacental arterial postpartum involution.
Methods: Case report.
Results: A 24-years-aged primiparous women presented with regular contractions and breech presentation in 40+3 g.w. was due to weak labor progression and signs of intrauterine hypoxia scheduled for caesarean section. Antenatal screening tests in pregnancy were all negative except untreated maternal anemia (Hb 102g/l). Patient was discharged home on 5th postoperative day with Hb 91g/l. On 27th day postpartum she was hospitalized for massive uterine bleeding with hemoglobin 70g/l. Several blood transfusions together with uterotonics (oxytocin/methylergometrine) helped to stop the bleeding and patient was discharged home. On 43rd day postpartum was patient admitted again with severe uterine bleeding (Hb 86 g/l). After blood transfusions and medication a hysteroscopy was performed without detection of uterus scar dehiscence. The hormonal therapy (oestrogen/gestagen) was recommended. On 63rd day postpartum was patient again re-admitted with signs of hemorrhagic shock and uterine bleeding (Hb 61 g/l). Because of massive life-threatening uterine hemorrhage, the supravaginal hysterectomy was performed. Histological examination did not confirmed scar rupture, however the signs of placental bed site vessel subinvolution was revealed with the presence of chronic inflammation.
Conclusion: Early recognition of placental bed vessel subinvolution allows the use of treatment options allowing preservation the uterus and fertility of patients.
Aim: The purpose of this study is to estimate the incidence of placenta accreta in our clinic and the pregnancy outcomes for the mother and the baby. Method: It was a retrospective study and we evaluated the medical records of the patients between 2006 and 2010. Results: There were a total number of 25 cases from 15683 deliveries, all with delivery by cesarean section. From 15 cases with abnormally implanted placenta from hysterectomy specimens showed that 7 were accreta, 5 - increta, and 3 - percreta. But we had also other 10 cases with placenta accreta praevia confirmed visually, resolved by suturing of the placenta bed. From cases with cesarean hysterectomy 8 cases had previous cesarean section and 7 women were with grand multiparity. At all these 15 cases we practiced internal iliac artery ligation for decrease the hemorrhage during surgery. We had bladder lacerations at 7 cases and 2 of them with bladder fistule. It was a case with cesarean section without removal of the placenta and the hysterectomy was made after 2 months. We used only ultrasonography for diagnostic. Any of our patients died. Conclusions: In our study placenta accreta affects 1 in 627 pregnancies. The marked increase in incidence is attributed to the dramatic increased prevalence of cesarean delivery in recent years. The transvaginal scanning is helpful better visualization of the lower uterine segment and cervix, when transabdominal findings are inconclusive. It is important to diagnose placenta accreta prenatally and prepare for the probable complications during delivery.
B-type natriuretic peptide measurement for early diagnosis of acute pulmonary oedema during pregnancy

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Statement of the study's objectives: Acute pulmonary oedema (APO) induced by Calcium–channel blockers (CCB) is a situation not enough recognized by clinicians, despite several publications in literature. The first signs of this severe complication can be atypical and thus delay introduction of appropriate therapy. The role of B-type natriuretic peptide measurement in the early detection of APO in pregnant women has not been previously reported. Summary of the results: We describe three new cases of APO induced by CCB in whom B-type natriuretic peptide measurements proved to be relevant in early diagnosis and monitoring of APO in pregnant women (fig1). Statement of the conclusions: B-type natriuretic peptide measurement in this setting could contribute to timely diagnosis and improve follow up.

<table>
<thead>
<tr>
<th></th>
<th>Case 1</th>
<th>Case 2</th>
<th>Case 3</th>
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<tbody>
<tr>
<td>Age (years old)</td>
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<td>38 (1 ; 1)</td>
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<tr>
<td>Pathologies</td>
<td>Conization</td>
<td>Curetage, RPP</td>
<td>IUGR, EC</td>
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<tr>
<td>Term at initiation of per os Nicardipine (weeks)</td>
<td>24</td>
<td>21</td>
<td>21</td>
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<tr>
<td>Indication of oral treatment (50mg*2/day)</td>
<td>Early cervical changes</td>
<td>Constrictions + RPP</td>
<td>IC</td>
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<td>32</td>
<td>30</td>
<td>30</td>
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<tr>
<td>Term of APO (weeks)</td>
<td>32</td>
<td>30</td>
<td>30</td>
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<td>Nicardipine : maximal flow-rate (mg/h)</td>
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<tr>
<td>Nicardipine : maximal dose (mg per day)</td>
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<td>539</td>
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<tr>
<td>Associated treatment</td>
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<tr>
<td>Interval intravenous treatment/APO (hours)</td>
<td>72</td>
<td>96</td>
<td>none</td>
</tr>
<tr>
<td>Term of delivery (weeks)</td>
<td>34</td>
<td>36</td>
<td>33</td>
</tr>
</tbody>
</table>

A: Amoxicillin, APO: acute pulmonary oedema, B: betamethasone (12mg per day during 2 days), BNP: B-type natriuretic peptide, EC: emergency cervical cerclage at 21 weeks, IUGR: intra-uterine growth retardation, RPP: Recovering placenta previa.

Figure 1:
A: Clinical data and therapeutic modalities of three cases of acute pulmonary oedema induced by calcium-channel blockers.
B: Change in blood B-type natriuretic peptide levels (multiple of cut-off value: 100 ng/l) after discontinuation of nicardipine treatment

- Case 1
- Case 2
- Case 3
P09.20
The induced labour: features of a clinical current
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We analyzed a clinical current induced labour and its influence on a newborn. The conclusion. The induced labour is more painful and more traumatic labour for mother and fetus, thus more careful preparation methods and indications should be used.

P09.21
Cystic adenomatoid malformation or pulmonary disease CRAIG
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Introduction: the MAKP is a rare congenital malformation characterized by glandular hyperplasia and bronchiolar pseudo cystic dilatation of terminal bronchioles Unilateral. Comment: Mrs. KF 20 years old primigravida, was referred to our service 31Her for fetal malformation discovered 18SA . Support: The ultrasound showed the presence of a cystic image in the left lung displacing the heart to the right, a hypoplastic right pulmonary. Elective Caesarean section 38SA allowed to extract a living child weighing 3300g female APGAR 7 / 10 and 8/10 qui was immediately supported by ICC. A scanner postnatal confirmed the diagnosis. Operation found a cystic adenomatoid malformation with left superior pulmonary lower lobe retracted but intact. The newborn received a left upper lobectomy was sent the anapath. Discussion: The frequency is 1 / 25000a 35000 grossesses Sporadic no risk factor or genetic origin known.  There 3 types according to the classification of stock: Type 1: macrocystic> 20mm displacing the mediastinum . Type 2: multiple cysts often has other associated malformations (esophageal atresia ...) Type3: microcystic lesion is often extended. Subsequent monitoring will be done by regular ultrasound scans, A medical termination of pregnancy can be offered in cases of malformation associated with and / or hydrops without the possibility of drainage. Observations of spontaneous resolution have been observed. Otherwise the treatment is surgical birth. The conclusion: The MAKP represents 25% of lung malformations. Discovered during an ultrasound of the 2nd quarter. Its management should be early post partum by excision of the lesion.

P09.22
Unusual presentation of true knot of umbilical cord: a case report
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Summary: We report a case of sudden fetal bradycardia due to a tight knot and thrombosis of the umbilical cord vessels. Abstract: A 35- year –old gravida III para II , at 38 weeks gestation ,was admitted for spontaneous labor and suspected fluid leakage . 5 hours after admission, she suddenly leaked a big amount of amniotic fluid . The cardiotocography which was completely normal presented then an abrupt onset of bradycardia that did not return to the normal heart rate . An emergent cesarean section with general anesthesia was performed 20 to 25 minutes after the onset of the severe bradycardia and at some point a possible loss of the detected heartbeat . A 2kg 337 g male new born was delivered 60 seconds after incision in a state of apparent death, and reanimated forcefully by the pediatric team. The umbilical cord was examined in the operating room and presented a tight knot with two thromboses showing as bluish, hard zones of about 10mm. Conclusion: True knot of the umbilical cord could be involved in adverse outcomes. When
suspected on antenatal ultrasound, care should be taken for labor surveillance, mostly after membrane rupture.
P09.23
Nitric oxide up-regulation in fetal growth restriction: a compensatory process with potential adverse sequelae
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Feto-placental vascular dysfunction is a key feature of fetal growth restriction (FGR) and nitric oxide (NO) may be involved in its course. We measured blood nitrite (NO2), nitroso-hemoglobin (NOHb) and asymmetric dimethylarginine (ADMA) from umbilical vessels at delivery and from skin capillaries of newborns after birth. Doppler velocimetric analysis of umbilical arteries was also assessed. Study included 60 term pregnancies with normal or small-for-gestational age (SGA; <2.5 Kg at term or <10th percentile body weight) newborns, 20 preterm pregnancies with SGA infant, and 12 twin pregnancies with discordant growth of offspring. Umbilical vein endothelial cells (HUVEC) were also used to examine NO function and a relevant gene profile. NO2 and NOHb were increased in umbilical blood of SGA pregnancies, while ADMA was decreased. NO2 change coincided with an abnormal umbilical Doppler velocimetry (systolic/diastolic ratio exceeding 2 SD over the mean or absent or reversed end-diastolic flow). HUVEC from the same pregnancies presented a more active endothelial NO synthase (eNOS), resulting in greater yield of NO2, and a mini-array profile characterized by up-regulation and down-regulation of, respectively, vasodilator (e.g. NO-related) and vasoconstrictor (e.g. angiotensin-related) transcripts. NO2 and NOHb were elevated in SGA newborns. Pregnancies with a SGA fetus present signs of NO activation in umbilical blood and locally in HUVEC. This change coincides with an abnormal Doppler profile for the umbilical arteries. NO activation may represent an adaptive process to sustain placental blood flow. Its persistence in the newborn, however, may cause potential adverse consequences later in life.

P09.24
Fetal hydrotorax - new case report
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Objective: To determine whether or not a fetus with hydrothorax has Down syndrome. Background: Fetal hydrothorax refers to a collection of fluid within the fetal thoracic cavity as a result of leakage or generalized fluid retention from a variety of causes. Case report: A 27-year-old Caucasian female, pregnant for the first time, was referred at 27 weeks' gestation for a routine prenatal ultrasound. The couple had normal general health and was not consanguineous. There was no family history of genetic disorders. Routine ultrasonography, triple test (AFP, uE3, hCG), selective ultrasonography for detection of fetal abnormalities, thoracocentesis and amniocentesis were performed. Results: Ultrasound examination at 27 weeks of gestation revealed a single fetus with a large hydrothorax (~200ccm) on the left side compressing the lung and pushing down the diaphragm. A sample of 70ccm pleural fluid was obtained at 28 weeks of gestation through fetal thoracocentesis by ultrasound guided puncture. Post procedural ultrasound examination revealed positive lung expansion. A sample of 40ccm amniotic fluid was also obtained for further analysis. The cesarean section was scheduled at 33 weeks of gestation after treatment with dexamethasone. Triple test was not sensitive to the presence of a possible trisomy. Genetic investigations were recommended because fetal hydrothorax is frequently associated with Down Syndrome. Karyotype and QF-PCR from both amniotic fluid and thoracic fluid indicated the presence of Trisomy 21.
Conclusion: Prenatal diagnosis was useful in management, prognosis and detection of Down Syndrome through analysis of thoracic and amniotic fluid, in a fetus with hydrothorax.
Investigation the opinions of pregnant women about entonex gas for painless delivery

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Background and Objective: With attention to different nondrug and drug methods of painless delivery such as entonex gas, but unfortunately, the most people have fear and concern about it. The purpose of this study was to assess the opinions of pregnant women about the entonex gas for painless delivery. Methods: In a clinical trial study a total of 98 pregnant women in active phase was studied randomly in intervention group=49, and control group=49. Opinions about entonex gas compared with two groups and also in intervention group in before and after using gas. Finding: Opinions of the majority of pregnant women in intervention group (before receiving gas) and control group was poor. Percentage of positive opinions had increased after receiving gas (p<0.05). Between opinions scores mean of intervention group in before and after receiving gas with control group had statistically significant difference. Positive opinions in intervention group had been the more than the control group. Most differences in mean scores of opinions of intervention group in before and after receiving the gas there was in: previous intolerance labor pain (p<0.05), less information about gas (p<0.05), more effective analgesic with using gas (p<0.05), less complications (p<0.05), and more satisfaction(p<0.05). The amount of suffering of complication gas was mild in most intervention group (60/5%). Percentage of positive opinions women about gas had increased in after receiving gas grossly and negative opinions had decreased. Conclusion: This study had shown that using entonex gas had caused more positive opinion, less labor pain, more satisfaction.
P10 Adolescent gynecology

P10.01
Adolescent pregnancy in Pyrgos and ancient Olympia, Ilia, Greece
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Aim: the emergence of adolescent pregnancy as major gynecologic and social problem of adolescence. The investigation of factors that encourage it, the pointing out of its complications in the bodily and mental health of adolescent as the presentation of methods of prevention and support. Material - Method: from 2001 until 2008 in the Obstetrical - Gynecological clinic of General Hospital of Pirgos were recorded 438 adolescent pregnancies of age 13 until 19 years. Results: 254 pregnancies (58%) led to natural delivery, 92 (21%) to Caesarean section, 52 (12%) regressed while 40 (9%) were led to interruption for therapeutic reasons. From the adolescents who were led to delivery, 264 (76%) were bachelors, 82 (24%) married, 99 (29%) with insurance and 247 (71%) non insured. 157 (43%) were Greek, 79 (34%) gypsies and 70 (23%) foreigners. Conclusions: The adolescent pregnancies are not infrequent phenomenon although it is complicated to be accepted. There is sickliness so much in the fertility what in the mental and personal maturation of adolescents. Adolescent usually desires unconsciousness and consciously to try the possibility of her reproductive function and does not lose the opportunity to underline the right in experience. It is important to understand, to respect her and don't convict her decisions.

P10.02
Final year medical students’ attitudes towards parenthood and awareness on reproductive aging: study from Nigeria
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Objective: Age–related fertility decline is an important aspect to be given due recognition in the strive to prevent infertility, especially in developing countries where there is a trend towards delay childbearing due to economic reasons and career attainment. The aim was to investigate attitude towards parenthood and factors that might influence their decisions. Design: A self report survey amongst final year medical students. Material & Methods: A cross sectional survey carried out among final year medical students in the year 2010. Setting: Ahmadu Bello University, Zaria, Nigeria. Results: A total of 103 students completed the survey. All (100%) have the desire to have children with a mean average of 3.8 children desired. Desired age of having the first child was mainly between 25 to 30 years ( 85.4%) and for the last child was 35-39 years ( 72.8%). A total of 93.2% view having children as extremely important. Their awareness on age-related fertility decline showed that age 20 to 24 years was viewed as most fertile by 91.3% of students and age 35-39 years was seen as age range with marked fertility decline by 90.3% of respondents. However there was under estimation (63.1%) of when slight fertility potential occurs in women. Factors like good economy, completion of study, stable relationship secured job and having children before ‘old age’ are among factors that influence when to start childbearing. CONCLUSION: Attitude towards parenthood was extremely favourable; however there are many variables that will affect the timing for childbearing.
Introduction - Sexual practice in young ages can result in teenage pregnancy; after UK, Portugal has the highest rate of teenage pregnancy in Western Europe - 15.6%. Teenage pregnancies have often been reported to be associated with adverse outcomes, specifically with low birth weight, small for gestational age (SGA) infants, prematurity, and higher rates of neonatal and postneonatal mortality. Some investigators have found that the younger mothers (aged less than 16 years) have particularly high risk. These risks are likely to reflect a complex interplay between socio-demographic variables, gynaecological immaturity and the growth and nutritional status of the mother. While there is no evidence that medical interventions can specifically improve pregnancy outcome, antenatal care should be tailored to the individual needs of this group. Objectives – review the teenage pregnancy in last 10 years at our hospital. Conclusion - we studied the rate of teenage pregnancy which was between 4.01% and 4.79%. We found 105 recurrent pregnancies, the median between pregnancies was about 1-2 years and 3 girls became pregnant twice in the same year. During this time, 2 girls had 3 pregnancies during teenage period. The majority of cases occurred in lower socioeconomic populations, with a high rate of recurrence. Very important are preventive programmes: education improving access to contraception, education for parents and their families, multicomponent prevention and youth development. Physical and emotional changes, psychosocial questions and the high maternal-fetal risk associated can transform the teenage pregnancy in a very traumatic experience.
**P11 Incontinence**

**P11.01**
Symptoms and quality of life before and after urogynecological surgery for pelvic organ prolapse - an analysis of the Danish urogynecological database


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Objective: To describe the changes in symptoms and interference on everyday life among women undergoing surgery for pelvic organ prolapse (POP) in Denmark. Methods: The Danish Urogynecological Database (DugaBase) was established in 2006. By 30 June 2010 there were 12832 surgical procedures recorded in the database of which 9083 were procedures of POP. Women were included if they had filled out a questionnaire both before and after surgery on the frequency of vaginal symptoms (symptoms-score) and how much this interfered with their everyday life (VAS-score 1 to 10). Results: A total of 2810 (31%) had answered symptoms-score. Overall their symptoms-score were reduced from ‘more than once per day of vaginal symptoms’ before surgery to “no symptoms” after surgery. A total of 2571 (28%) had filled out the VAS-score. Overall their VAS-score were reduced after surgery. The median VAS-score changed from 8 (10th-90th percentiles: 3-10) before surgery to 0 (10th-90th percentiles: 0-5) after surgery. Conclusions: This study shows that women do benefit from surgery for POP according to self-reported frequency of vaginal symptoms and their interferences on everyday life. DugaBase is an important and valuable tool in future studies on women with surgery for POP. There is inconsistency on follow-up visits after urogynecological surgery in Denmark which can explain that follow-up was missing for over 60% of the women in Dugabase.

**P11.02**
Urogynecological procedures and TVT-O, is it safe to associate two type of surgeries?

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Ageing is responsible for anatomical and functional modifications in the lower urinary tract. Menopausal women are more susceptible to these changes due to lack of estrogen and prior surgical procedures that contribute to pelvic dysfunction. The association of miduretral sling procedures and urogynecological procedures is linked with an increase in morbility. In the other hand there are fewer data regarding the use of transobturator route in this association and in these group of patient. Objective: The objective of our study is to characterize the population that attended our department and were submitted to TVT-O in the context of another urogynecological procedure. Methods: Retrospective study of the cases of women followed in our hospital due to stress incontinence that was submitted to urogynacological surgery in Denmark which can explain that follow-up was missing for over 60% of the women in Dugabase.
Objective: to offer the diagnostic-treatment approach of urinary incontinence prevention in women of late reproductive period based on the compensation of estrogen deficiency. Were examined 30 women of late reproductive age (38, 5 ± 2, 36 years) with low ovarian reserve (LOR). The control consisted of 30 women of late reproductive age with a high ovarian reserve. Results. In women with LOR frequency of overactive bladder was 27%, stress urinary incontinence 60% (p <0.01), mixed incontinence 13%. Women with LOR have vaginal ph initially 4,42 ± 0,36, while taking COCs - 4,40 ± 0,15 (p> 0,05, r = 0,495). Colpocervicoscopy found morphological confirmation signs estrogen deficiency; after COCs estrogen deficiency signs were absent. For women with LOR thamuria, nocturia and urgency to urinate were identified at rate of 40%; after COCs completely stopped, thamuria preserved in only 10% (p <0.05), sexual dysfunction decreased by 37%. According to the diary of urinary bladder volume corresponded to the normal range: from 1400± 32 ml to 1650 ± 25 ml (p< 0.05). In evaluating the relationship between the initial numbers of episodes of urgency to urinate and the number of urination in women with LOR was 1,5 ± 0,12, at the end of treatment revealed the absence of urgency. Conclusions. LOR is the risk factor for the development of uro vaginal disorders and urinary incontinence. Estrogen deficiency compensation by COCs, the fitness of pelvic floor muscles, behavioral therapy, normalization of weight are a measure of prevention of urinary incontinence in women of reproductive age with LOR.

There are at least four categories of XY females: Androgen Insensitivity Syndrome (AIS) and pure, mixed and partial dysgenesis. AIS was first described by Morris in 1953. Although this syndrome has been known for many years, information is still limited and there are no evidence-based recommendations available. It is inherited in an X-linked recessive fashion and results from a nonfunctional androgen receptor. Depending on the degree of insensitivity to androgens, the phenotypes will range from complete female (complete AIS) to ambiguous genitalia (partial AIS) to infertile male (minor AIS). The female characteristics are due to the transformation of excessive androgens to estrogens. It occurs with a frequency of approximately 1-5 of 100,000. Most of the patients are first diagnosed at puberty, when they present with primary amenorrhea. Our 18 year-old-patient presented with primary amenorrhea and after clinical inspection we noticed that she had normal breast development, sparse pubic and axillary hair and female external genitalia. She had a pure XY karyotype and the hormonal analysis showed androgen elevated to male levels. After pelvic ultrasound and diagnostic laparoscopy and hysteroscopy, we found out a 5-cm blind vagina pouch and absence of uterus, ovaries or fallopian tubes and the testes were localized at the internal inguinal canal. The gonads were removed by bilateral inguinal section because of the risk of neoplasm and a continuous estrogen replacement therapy and psychological counseling was prescribed and a non-surgical vagina dilatation was started.
A controlled, open label study in postmenopausal women to assess the safety and the efficacy of a vaginal moisturizer: an instrumental approach

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A controlled, open label study in postmenopausal women was performed to evaluate by clinical assessments and instrumental measurements the efficacy and safety profile of a medical device in the treatment of vaginal dryness. Postmenopausal women (n=40) with mild/moderate symptoms and signs of vaginal atrophy, were randomly assigned to either the treatment or the untreated control group. Treatment group women applied the product in the vagina over a 12wk period as follows: once a day for the first week and twice a week for the following 11wks. Five visits were scheduled: baseline, 1wk, 4wks, 8wks, 12wks. The primary objective of the study was to evaluate, clinically and instrumentally, the effect of the product on vaginal moisture. A thermometer-hygrometer equipped with a disposable sterile probe, previously set up and validated, was used to measure vaginal moisture. Clinical signs were scored for severity. Overall, the mean percentage relative humidity (RH%) + SD, recorded at baseline in postmenopausal women with vaginal dryness was 68.84 ± 8.41. A significant increase in vaginal moisture was already observed after 1wk treatment and persisted for the whole treatment period (p<0.05). Significant differences were observed also compared to the control group (p<0.05). Erythema significantly improved after 8wks in the treated group vs. baseline and after 4wks vs. control group (p<0.05). No statistically significant variations were detected in the vulvar oedema. No worsening events occurred. The vaginal moisturizer proved to be safe and to increase vaginal moisture short after treatment initiation; moreover, its humectant effect proved to be long lasting.

Set up and validation of a hygrometric method to assess vaginal moisture

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Up to now, diagnosis of vaginal dryness has been based on clinical assessments. In this study, a thermometer-hygrometer equipped with a disposable sterile probe supplied with a sensor was set up to objectively monitor vaginal moisture changes following vaginal moisturizer application. The calibration of the instrument was performed in a temperature and humidity controlled environment, using as reference instrument a digital thermo-hygrometer. To validate the method, a pilot study on 5 postmenopausal women was performed. Vaginal moisture was measured before (T0) and 30 minutes (T30min) after the application of the vaginal moisturizer. For each woman, 5 replicates of the measurements were performed at each time point. Results are expressed as mean percentage relative humidity (RH%) ± SD. In addition, vaginal moisture was measured in 40 women of childbearing potential. Results obtained in the pilot study demonstrate that the method is reliable, reproducible (mean standard deviation <2% and mean standard error <1% both before and after treatment) and sensitive to the moisture changes induced by the product application: a mean percentage moisture increase, of 37% versus baseline, was observed (mean RH%T0 ± SD = 49.3 ± 1.31 vs mean RH%T30min + SD = 67.58 ± 1.71). Moreover, the increase in vaginal moisture observed 30 minutes after product application demonstrated a direct humectant effect due to the presence of the product in the vagina. As expected, a higher moisture degree was recorded in
women of childbearing potential, grouped according to the menstrual phase: mean RH\%luteinic 95.45% and mean RH\%follicular 92.96%.
0.005% Estriol vaginal gel is a new formulation for the local treatment of postmenopausal vaginal atrophy, which delivers an ultra-low dose of estriol per application (50 µg), ten times lower than the current dose of this hormone used in clinical practice. An initial pharmacokinetic study compared the systemic absorption of estriol of the new formulation vs the reference product (Ovestinon vaginal cream 0.1%). After three weeks daily treatment, it was shown that 0.005% Estriol vaginal gel produced negligible plasma estriol levels and significantly lower than those produced by Ovestinon (p<0.0001). In addition, 0.005% estriol formulation did not change serum FSH or LH while a significant decline of serum FSH was observed in women that received Ovestinon (p=0.0425). In the phase III pivotal study, adverse events (AEs) suspected to be related to the study medication were experienced by 10/114 patients (8.8%) in the estriol group and 7/53 patients (13.2%) in the placebo group (p NS) after daily administration for three weeks and then twice weekly up to 12 weeks. Most of them were mild, and the most frequently reported was pruritus. No treatment related endometrial adverse events were observed, and one treatment related breast adverse event (breast pain) was reported in the placebo group. In summary, 0.005% Estriol vaginal gel presents a highly favorable safety profile as the systemic exposure to estriol after repeated administration is almost negligible, no significant biologic effect on gonadotropins has been found and the incidence of adverse events reported is low and mild in nature.

P12.04  
Antimullerian hormone as a marker for ovarian aging  
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Background and aims: Serum antimullerian hormone has been suggested to best reflect the reproductive decline with age. Method: Published literature review. Results: Increasing age results in decrease of women's reproductive function due to a decline in both size of the ovarian follicle pool and oocyte quality. Since chronological age is a relatively poor indicator of the stage of reproductive aging, various endocrinological markers like early follicular phase serum levels of FSH, inhibin B and estradiol and sonographic markers like AFC have been used to assess an individual's ovarian reserve. Because these factors are not independent of each other and substantial changes in their levels occur relatively late in the reproductive aging process, when cycles are already irregular, the reproductive capacity already impaired and the measurement of AFC requires additional transvaginal ultrasound examination during the early follicular phase, AMH seems to be a promising predictor. Serum levels of AMH, which is secreted by nonselected growing follicles, decreases with age in premenopausal women and reflects the size of the primordial follicle pool, before any change in FSH levels occur, thus allowing better identification of women with declining fertility and providing better insight into the number of fertile years a woman has left. Recent studies show AMH to have the highest accuracy in predicting menopausal transition and to be the only marker showing a mean longitudinal decline over time. Conclusion: Serum AMH levels seem to be the best marker reflecting the decline of reproductive aging.
Comparing Chinese medicine with hormone therapy in the treatment of menopausal symptoms in perimenopausal versus post menopausal women

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Objective: To compare the therapeutic effect of Chinese herbal medicine (KBW), acupuncture and hormone therapy (HT) on symptoms of peri- and postmenopausal women. Methods: Fifty seven Chinese women completed 2 months of treatment with either KBW (5 gr BID, n=22), acupuncture + KBW (KBW 5 gr BID + 10 sessions of acupuncture, n=20) or HT (n=15). Clinical symptoms according to Kupperman index, levels of FSH and Estradiol, and the number of symptoms were measured before and after the treatment. Results: KBW, acupuncture+ KBW and HT significantly decreased Kupperman score (P<0.001) and number of symptoms (p<0.05). The mean difference in Kupperman score between baseline and 2 months among the 3 groups was significantly varied (P= 0.02) with better results for acupuncture+KBW compared with KBW alone. Acupuncture+ KBW, and HT significantly reduced the level of FSH (P<0.05). The mean difference in the level of FSH between baseline and 2 months among the 3 groups was significantly different (P=0.02) with significantly better results by HT than KBW. In postmenopausal women, the effect of HT and acupuncture +KBW were significantly better than KBW alone (P<0.05) whilst in perimenopausal women they were the same. There was no significant difference between peri- and postmenopausal patients in changes of the FSH, E2 and LH levels before and after the treatment by any of 3 treatments (P>0.05). Conclusion: Application of the combination of Chinese herbal medicine and acupuncture proved as effective as HT in menopause, and it achieved better outcome than herbal medicine alone, especially in postmenopausal women.
P13.01 Prevention of postoperative seroma formation after complete axillary clearance for breast cancer

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Objective: Axillary seroma (collection of serous fluid) is frequent after breast surgery with complete axillary lymph node dissection. Aim: To evaluate the effect of mechanical close of death space on seroma formation after surgery for breast cancer. Methods: A prospective randomized study including 85 patients with breast cancer who underwent mastectomy/quadrantectomy with complete axillary lymph-node dissection (level I-III) by electrocautery. Two groups of patients were conducted. Group A (n=46) included women where death space was closed (m.latissimus dorsi fixation on fascia of m.serratus anterior and skin flaps sutures) with additional 72-hours compression by external pressure and suction drainage. Group B (n=39) was left only on suction drains without external compression and death space closure. Drains were removed as postoperative draining was <50 ml/24 hours. All patients received 48-hours antibiotic prophylaxis. Results: The incidence of seroma formation in group A was lower (18% vs. 36%) compared to group B (p<0.01). Furthermore, there was observed shorter interval for drainage time (3.8 vs. 5.6 days; p<0.05), lower 34SD ml;p±56SD vs. 782±total volume of drainaged fluid (563<0.01), number of aspirations after removal of drains (1.8 vs. 3.2; p<0.01) and shorter hospital stay (4.5 vs. 6.2 days; p<0.05) in group A compared to group B, respectively. The risk of infection was for both groups insignificant, OR=0.53 vs. OR=0.67; p=0.263. The specific finding was higher frequency of seromas in obese women (BMI >30). Conclusion: There is evidence that flap fixation together with external axillary compression can reduce seroma formation, allow early removal of suction drains and discharge without increasing risk of infection.
Introduction: Primary ovarian insufficiency is a major infertility cause. Studies show that ovarian failure in these cases has strong genetic components. Methods: Published literature review. Results: X chromosome monosomy, deletions, mutations and translocations are known to cause premature ovarian failure, by disrupting normal meiosis or position effect. Xq13-q26 and Xq13.3-q21.1 are regions harboring genes whose alterations are primordial in the disease pathogenesis, as translocations disrupt XPNPEP2, a gene that at least partially escapes X inactivation. Early menopause in fragile X carriers is well documented and carriers of FRAXA premutations have 70-fold increased likelihood of ovarian failure. Inactivating mutations of FSH receptor gene cause ovarian dysgenesis, as do mutations in the LH receptor genes, chromosome 3q containing the blepharophimosis gene, the ATM gene (Ataxia-telangiectasia gene) and the AIRE gene (APECED syndrome). BMP15 and GDF9 are oocyte-derived growth factors in maintenance of folliculogenesis, granulosa cell proliferation and overall fertility. BMP15, as member of the TGF-superfamily specifically expressed in oocytes, essential for female fertility, whose mutations cause both increased ovulation rate and infertility phenotypes in dosage-sensitive manner. Missense variants of the GDF9 gene are associated with ovarian failure. Finally, changes in DNA binding proteins and transcription factors like NOBOX and LHX8, and RNA binding proteins like NANOS, lead to lack of germ cell formation. Conclusion: Alterations in genes implicated in folliculogenesis and ovarian maturation lead to primary ovarian insufficiency. In the future genetic testing may allow detection of susceptible women so as to assist them before the failure becomes clinically irreversible.

Effect of antral follicle count and ovarian stromal blood flow in cycles stimulated with clomiphene citrate

Objective: To evaluate whether basal antral follicle count (AFC), ovarian stromal blood flow parameters are useful markers to predict pregnancy and ovarian response in cycles stimulated with clomiphene citrate. Materials and Methods: A prospective study including 60 patients undergoing clomiphene citrate treatment with or without intrauterine insemination (IUI) at the reproductive endocrinology unit of a tertiary, research and education hospital was designed. Basal AFC, ovarian stromal blood flow were detected on cycle day 3. Main outcome measures were ovarian response and clinical pregnancy rate. Result(s): AFC was significantly higher in pregnant patients and with increasing age, AFC was significantly lower. Ovarian stromal blood flow indices did not differ between pregnant and non-pregnant women. The results from multiple logistic regression analysis showed that basal AFC was the factor to predict pregnancy. The area under the curve for AFC was 0.68 with 95% confidence interval (0.52-0.85). Conclusion(s): These data suggest that basal AFC remains of greater value in predicting the clinical pregnancy rate rather than the blood flow parameters evaluation in the early follicular phase.
**P13.04**  
*Ru486(Mifepristone)- new paradigm in the treatment of uterine fibroids*  
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Objective: To evaluate the effects of selective PR receptor modulator RU-486 on cell proliferation and apoptosis in cultured human uterine leiomyoma smooth muscle (LSM) cells and control myometrial smooth muscle (MSM) cells in matched uteri. Intervention(s): treatment of primary LSM and MSM cells with Ru-486 (premenopausal women undergoing hysterectomy for leiomyoma-related symptoms) Result(s): Treatment significantly decreased levels of Bcl-2, increased levels of P53, in LSM cells. Conclusion: 1) RU-486 agonist/antagonist reaction in leiomyoma smooth muscle's PR receptors; 2) U-486 selectively inhibits proliferation and induces apoptosis in LSM, but not in MSM cells; 3) R and ER receptors decrease and recovery of Balance on (LSM); 4) for decrease of PR Bcl-2 decrease, for decrease of ER, P53 is increase; 5) Inhibition of proliferation (PCNA 67) Apoptosis gets stronger; 6) Fibroids decrease in size and supresia of new generation fibroids happens.

**P13.05**  
*Diagnosis of polycystic ovary syndrome (PCOS): revisiting the threshold values of follicle count on ultrasound and of the serum AMH level for the definition of the polycystic ovary (PCO)*  
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Objective: The threshold value of antral follicle count (AFC) at 12/ovary for the definition of the Polycystic Ovary (PCO) seems no more appropriate and should be revisited. This assessment is hampered by the "contamination" of the control group by asymptomatic women with PCO. Materials and methods: From 2008 to 2010, 167 patients were referred to our center for hyperandrogenism (HA), menstrual disorders (MD) and/or infertility. All these patients had a measurement of serum anti-Müllerian hormone (AMH) and AFC. This population was divided into 2 groups without using the AMH or the AFC: the group 1 "control" including women with neither HA or MD (n = 105) and the group 2, "PCOS" with both HA and MD (n = 62) (after exclusion of other diagnosis). Results: Statistical method of clusters confirmed the heterogeneity of the group 1 by isolating objectively two homogeneous subgroups 1A and 1B. Group 1B (n = 39) very likely consisted of asymptomatic women with PCO since they had higher values of AMH and AFC than in group 1A. The ROC analysis including control group 1A exclusively (n = 66) and group 2 (PCOS) yielded a discriminant threshold at 19 for AFC (Se = 81%, Spe = 92%) and at 5 ng/ml for the AMH level (Se = 92%, Spe = 97%). Conclusion: The former threshold for AFC (>12) is no longer valid and should be revised upwards (>19). For the definition of PCO, serum AMH appears more sensitive and specific than the AFC.
Background: Cervical cancer is one of the most common malignancies in pregnancy. According to the importance of screening, we use in routine, cytology and colposcopic examinations like a part of prenatal care. The cervix appears different during pregnancy which can make it difficult to determine if abnormality is due to pregnancy or to precancerous change. Colposcopy and directed biopsi are safe to perform during pregnancy. Aim: The evaluation of the prevalence and the evolution of cervical lesions during pregnancy and postpartum, to exclude the presence of cervical cancer. Method: a retrospective study of 754 pregnant women during the year 2010. We performed Pap smears, colposcopy and biopsi. The patients with lesions were reevaluated six weeks post partum. We collected these data: kind of lesions, age of patients and parity. Results: The main age of patients was 27 years old. 401 (53.18%) patients were primigravida, 353 (46.82%) were plurigravida. 480 (63.66%) women had normal cytology, 274 (36.34%) had abnormal smears. The prevalence of lesions during pregnancy was: 82 (29.92%) with ASCUS, 109 (39.78%) with LSIL, 83 (30.29%) with HSIL. No case with cancer was reported. In the postpartum follow up, the spontaneous regression of LSIL was in 72% of cases, the regression of HSIL in 23% of cases. We didn't noticed any case with HSIL that progressed during pregnancy. The mode of delivery, have no influence in the evolution of lesions. Conclusion: The likelihood of disease progression during pregnancy is small. Regression is more likely. Key wards; ASCUS, HSIL, LSIL
Detection of P16\textsuperscript{INK4A} and HPV E6/E7 mRNA In cervical smears for cervical cancer screening

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Objective: Cervical cancer is the second most common malignancy in women. Worldwide, the disease prevalence differs mainly due to ineffective screening programs based on cytology, which accuracy is hampered by high false negativity, low specificity and observer reproducibility. Therefore, detection of markers involved in active carcinogenesis is becoming crucial for selection of high-risk lesions. Aims: To test the synchronous detection of p16\textsuperscript{INK4A} and E6 transcripts hrHPV (16,18) mRNA expression as a novel diagnostic approach for CIN2+ lesions. Methods: The DNA and RNA extracted from cervical smears in 45 women were genotyped for hrHPV type, expression of CDKN2A (p16\textsuperscript{INK4A}) and type-specific hrHPV E6 mRNA transcripts using ∆∆C\textsubscript{T} real-time PCR method and TaqMan Gene Expression Assay for assessment of p16\textsuperscript{INK4A}. For E6 mRNA expression was used SYBR green real-time PCR approach. Results were compared to histological findings from cervical biopsies. Results: The feasibility rate of mRNA extraction from cervical smears for synchronous analysis was 93.9%. A significant (p<0.001) correlation was observed between p16\textsuperscript{INK4A} mRNA expression and increased severity of histological findings. In CIN2+ lesions there was 4-times and in invasive carcinomas 79-times higher expression of p16\textsuperscript{INK4A} compared to CIN1. Furthermore, this association was confirmed by the high expression of E6 mRNA transcripts in CIN2+ lesions. Conclusions: Synchronous assessment of p16\textsuperscript{INK4A} and hrHPV E6 mRNA transcripts by real-time PCR in cervical smears may serve as quick and sensitive tool for the determination between latent and active lesions with potential of High-grade CIN, independently of onco-cytology and colposcopy findings in cervical cancer screening programs.
A prospective study of random 66 women of reproductive, peri- and postmenopausal period who were planned for operative hysteroscopy (OH) and D&C with the suspicion of intrauterine pathology. The instrumental examination of patients conducted in 2 stages. All the technologies were used blindly by different gynecologists. On the first stage outpatient endometrial aspiration biopsy (EAB) (n64), transvaginal ultrasound (TVU) (n66), saline infusion sonohysterography (SISH) (n55), diagnostic hysteroscopy (DH) (n64) and combined DH and SISH (n64) performed. The second stage included inpatient OH and D&C (n66). As the final diagnosis we accepted the results of 89% OH and D&C and 11% hysterectomies. Results. The intrauterine pathology was detected in 75.8% (n50) patients, in 12% (n8) - were revealed more than one pathology. The final diagnoses: submucous myoma 18.2% (n12), uterine anomaly 3% (n2), intrauterine sinechia 4.5% (n3), endometrial hyperplasia without atypia 13.6% (n9), endometrial polyp 45.5% (n30) and endometrial adenocarcinoma 7.6% (n5). The diagnostic efficiency of the isolated and combined use of TVUS, SISH, EAB, DHS in revealing of the intrauterine pathology is presented in the table 1.

Table 1

<table>
<thead>
<tr>
<th></th>
<th>Sn (%)</th>
<th>Sp (%)</th>
<th>PPV (%)</th>
<th>NPV (%)</th>
<th>DA (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAB</td>
<td>19</td>
<td>100</td>
<td>100</td>
<td>28</td>
<td>38</td>
</tr>
<tr>
<td>TVU</td>
<td>93</td>
<td>54</td>
<td>87</td>
<td>70</td>
<td>84</td>
</tr>
<tr>
<td>TVU + EAB</td>
<td>93</td>
<td>85</td>
<td>95</td>
<td>79</td>
<td>91</td>
</tr>
<tr>
<td>SISH</td>
<td>98</td>
<td>77</td>
<td>93</td>
<td>91</td>
<td>93</td>
</tr>
<tr>
<td>SISH + EAB</td>
<td>98</td>
<td>85</td>
<td>95</td>
<td>92</td>
<td>95</td>
</tr>
<tr>
<td>DH</td>
<td>100</td>
<td>46</td>
<td>86</td>
<td>100</td>
<td>87</td>
</tr>
<tr>
<td>DH + EAB</td>
<td>100</td>
<td>69</td>
<td>91</td>
<td>100</td>
<td>93</td>
</tr>
<tr>
<td>DH + SISH</td>
<td>100</td>
<td>92</td>
<td>98</td>
<td>100</td>
<td>98</td>
</tr>
<tr>
<td>DH+SISH+EAB</td>
<td>100</td>
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<td>100</td>
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</tr>
</tbody>
</table>

Sn – sensitivity, Sp – specificity, PPV – positive predictive value, NPV – negative predictive value, DA – diagnostic accuracy

Conclusion. The qualitative outpatient diagnostics of intrauterine pathology is the combination of EAB, SISH and DH with 100% Sn, Sp, PPV, NPV and DA. It is especially useful when plural intrauterine pathology is suspected.
P13.09
Side differences of uterine artery blood flow in mid-trimester
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Objectives: The aim of this study was to assess side differences of uterine artery (UtA) blood flow in mid-trimester, and to compare uterine artery score (UAS) with blood flow parameters of fetal vessels. Methods: We assessed 141 non-risk pregnant women in 18+1 to 22+3 gestational weeks with Doppler ultrasound. We evaluated side differences of pulsatility index (PI), resistance index (RI) and proto-diastolic notch in UtA, and we compared UAS with blood flow parameters of fetal vessels. Results: We did not find significant side differences in UtA PI (p=0.1205), UtA RI (p=0.1342), and notch (p=0.3160), respectively. We did not find significant correlation among UAS and umbilical artery PI and RI, ductus venosus PI, Vmax in intraabdominal part of umbilical vein, and middle cerebral artery PI and RI, respectively. However, the only significant correlation was found between UAS and Vmax in the free loop of umbilical vein (p=0.0424). Conclusions: According to the results, side differences of UtA blood flow in non-risk pregnant women were not significant in mid-trimester. This result evokes the impression that both uterine arteries participate in uterine blood supply in mid-trimester, equally. One should simplify evaluation of uterine artery velocimetry and to eliminate potential side differences using the UAS.

P13.10
Uterine artery velocimetry during spontaneous contractions
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Objectives: Uterine artery (UtA) blood flow is determined by intrauterine pressure following higher vascular resistance. Quantification of UtA blood flow is based on quantitative parameters (RI-resistance index, PI-pulsatility index), and on qualitative parameters (proto-diastolic notch, BFC-blood flow class), also. We evaluated changes in UtA blood flow during the first stage of labor. Methods: From a total cohort of 32 non-risk women with singleton pregnancy in term, we excluded 8 patients. We assessed blood flow parameters in both UtA during the resting phase, and on the top of contractions. Three measurements were provided in every patient. Statistics: Wilcoxon, Fischer's exact, McNemar, and Mann-Whitney test; level of significance: p<0.05). Results: We found significant differences of UtA blood flow during resting phase and on the top of contractions in both UtA (right UtA: p<0.0001; left UtA: p=0.0001, resp.). We mostly found normal PI during resting phase (<1.20). PI elevation during contractions was significant bilaterally (p=0.0066; p=0.004945, resp.). Proto-diastolic notch in right UtA was not present in 22 patients during resting phase, and in 7 patients during contractions, respectively (p=0.001). Proto-diastolic notch in left UtA was not present in 22 patients during resting phase, and in 6 patients during contractions, respectively (p=0.0034). We found no side differences in both UtA during resting phase, and during contractions, respectively (p=0.5499; p=0.8609, resp.). Conclusions: In accordance with our results, we showed significant impact of spontaneous contractions on blood flow in UtA with the increased vascular resistance. The main outcome is the elevation of PI, and higher BFC during contractions, respectively.
Objective: To investigate the role of cytokines in normal term and preterm labor in the absence of intrauterine infection. Methods: Cytokine (interleukin [IL]-1 beta, IL-6 and tumor necrosis factor-alpha [TNF-alpha]) release was estimated from placental and decidual cell cultures from 22 nonlaboring women at term with cesarean deliveries, 18 women with spontaneous labor at term, and 21 women with preterm labor (19-36 weeks gestation) who delivered vaginally or by cesarean, according to gestational age. Eight of 21 women delivering preterm had clinical evidence of intrauterine infection, and 13 were not infected. Results: Placental cell cultures obtained from women with spontaneous term labor released significantly larger amounts of cytokines (median: IL-1 beta 6450 pg/mL, IL-6 1821 ng/mL, and TNF-alpha 13,506 pg/mL) compared with placental cell cultures from nonlaboring women at term (median: IL-1 beta 2602 pg/mL, IL-6 993 ng/mL, TNF-alpha 3475 pg/mL; P < .02). Placental cells from women delivering preterm with intrauterine infection did not produce significantly different amounts of cytokines (median: IL-1 beta 3929 pg/mL, IL-6 1084 ng/mL, TNF-alpha 2847 pg/mL) when compared with those of nonlaboring women at term, whereas placental cells from uninfected women delivering preterm produced significantly larger amounts of cytokines (median: IL-1 beta 22,903 pg/mL, IL-6 1899 ng/mL, TNF-alpha 15,005 pg/mL; P < .01) than cells from nonlaboring women at term. Cytokine release from decidual cell cultures was similar in all groups tested. Conclusion: In the absence of intrauterine infection, preterm labor was associated with elevated placental cytokine release.

Cytokine profile features in multiparous women with persistent miscarriages
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The purpose of this research was to study the role cytokine profile changes in the pathogenesis of persistent miscarriages in multiparous women. Study design: 110 multiparous women with persistent miscarriages were subjected into the experimental group and 25 multiparous women without persistent miscarriages into control group. Age of patients was between (21-35) with average age 27.8±1.2 years. Excluding criteria’s were autoimmune diseases, pelvic inflammatory diseases, recently sickness with viral infections as well as recent use of immune modulating medications, induction of ovulation and protocols of assisted reproductive technologies. Cytokine profile was assayed in the peripheral blood of patients, including values of TNF-α, IL-1β, IL-6, IL-4, IL-10, IL-2. Results: Our results presented that multiparous women with persistent miscarriages had a significantly increased Th1 profile linked proinflammatory cytokines (TNF-α, IL-1β, IL-6), inversely decreased Th2 profile linked cytokines such as IL-4 and IL-10. So, Th2 profile linked cytokines were seen only in a half of multiparous women with persistent miscarriages, whereas these cytokines were existed in all women without symptoms of persistent miscarriages. Conclusion: Increased concentrations of proinflammatory cytokines linked to Th1 profile (TNF-α, IL-6) have a crucial impact on pathogenesis of persistent miscarriages in multiparous women.
P13.13
Effects of exposure to cigarette smoke on the ovarian response to ovarian stimulation in infertile couples, refereed to the Isfahan Reproductive Fertility Center 2008
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Introduction: An adequate ovarian response to ovarian stimulation is the first step and a prerequisite for successful treatment of infertility. One of the peripheral factors considered in the recent studies on infertility is exposure to cigarette smoke. This study compares the ovarian responses to ovarian stimulation in infertile couples exposed and not exposed to cigarette smoke. Method: It is a retrospective cohort study on 144 infertile women refereed to the Isfahan Reproductive Fertility Center. Data were collected using a questionnaire, patient’s medical files, tape measure and scale. Content validity and test re test were used for validity and reliability and SPSS software used for data analysis. Results: Findings showed that exposure to cigarette smoke decreases the number of mature follicles (P=0.001) and increases poor response to ovulation induction (P=0.02) in women under assisted reproduction treatment. However, it doesn't increase the number of injections necessary for ovarian stimulation and has no effect on the duration to achieve follicular maturity. Discussion and Conclusion: The findings showed that exposure to cigarette smoke decreases the number of mature follicles and increases poor response to ovarian stimulation injections. Therefore, volunteers for the assisted reproduction techniques should be educated about the harmful effects of exposure to cigarette smoke on fertility.

P13.14
Hysteroscopic tubal sterilization: our experience with the Essure system
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Hospital Universitario Doctor Peset, Valencia, Spain

This study was initiated to evaluate the results of hysteroscopic placement of Essure microinserts, including its efficacy and safety. We recruited 200 reproductive age women who underwent hysteroscopic sterilization by the Essure method between June 2005 and July 2009 in our Hospital. Confirmation of tubal occlusion was demonstrated at 3 months on hysterosalpingogram (HSG) or pelvic X-ray. Mean patient age was 37.1 years. Previous hormonal contraceptives were taken by 78.5% of the women. Main outcome measures were: insertion results, success and failure rates of device implantation, women tolerance during procedure, document adverse events and special cases, and report the completion rate of postplacement monitorization. Successful placement was achieved in 95.3%, including 8 cases of two-step procedure, 5 uterine septa, and 11 women with unilateral placement in which HSG revealed contralateral tubal obstruction. However, impossibility of insertion because of cervical stenosis or impossibility for cannulating ostiums(4.5%)weren’t included in the failure rate. Neither lack of postplacement monitoring(5.5%). The failure rate was 4.7% including unilateral placement and failure in the second procedure(2.9%), and 1.8% (3 cases)unintended pregnancies, two of them were due to unilateral placement and HSG informing bilateral tubal occlusion. Discomfort during procedure was described as mild-moderate in 50.5% and severe in 17.5%. No data was recorded for the remaining. Adverse events were reported in 6%, mainly bleeding. The Essure system appears to be safe, convenient, irreversible and a less invasive contraceptive method than laparoscopic sterilization. It can be performed on an outpatient basis without anaesthesia. The tolerance is acceptable.
The study purpose was to evaluate the impact of suture type (ST) and suture size (SS) on postsurgical adhesion frequency (AF) & dimensions. An experimental protocol was approved by the University Review Board and Animal Care Committee. Study design consists 160 rats divided into 4 groups by suture size (3/0, 4/0, 6/0 & 8/0). Each suture (vicryl, PDS & prolene) with size 3/0, 4/0 & 6/0 was used in 10 rats, while PDS & prolene - size 8/0 were used in 20 rats. AF & dimensions scored by calculating the percentage of wound parietal peritoneum covered by adhesions as 0, 25, 50, 75 & 100% of the total wounded area. Firstly, an impact of ST on AF profile was analyzed. A catgut resulted in 97%, a vicryl in 81.3% and a prolene in 75% of cases of adhesions. Therewith 64.1% of wound surfaces were covered by adhesions in the catgut group in comparison with 38.3% of wound surfaces - in both synthetic sutures (PDS & prolene) groups (p<0.01). Secondly, an impact of SS on AF profile was described. Macrosutures resulted more pronounced AF degrees (3/0 in 90-92.5% of cases, 4/0 - in 80-87%), whereas microsutures - less pronounced AF values (6/0 - in 68-72% & 8/0 - in 58-60%). Subsequently a significantly higher AF was found after macrosutures in comparison with those after microsutures (p 3/0 vs 6/0 <0.01, 3/0 vs 8/0 <0.001, 4/0 vs 6/0 <0.05, 4/0 vs 8/0 <0.01). In conclusion, a suture type & size has a crucial impact on postsurgical adhesion formation.
Secreted adipokines by visceral fat - risk factor for endometrial cancer

P13.16

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Introduction: The traditional view of adipose tissue as a passive reservoir for energy storage is no longer valid. Adipose tissue is now known to express and secrete a variety of bioactive peptides, known as adipokines, which act at both the local and systemic level. In the context of endometrial cancer, visceral obesity as a risk factor, is associated with elevated adipokines.

Method: The study is a case-control analysis including 2 groups of patients: group I – 50 patients diagnosed with endometrial cancer, group II – 50 patients without gynecological pathology. The diagnosis of endometrial cancer was made following histopathological examination that evaluated the tissue material obtained through endometrial biopsy. After clinical examination and anthropometric measurements, these patients underwent ultrasound and computer tomography examination by which intraperitoneal fat was determined. Leptin and adiponectin level was determined for each patient.

Results: The intra-abdominal fat area evaluated by ultrasound (251.37±59.78 cm²) at patients diagnosed with endometrial cancer, is significantly larger (p<0.0001) compared to the control group (159.14±42.5cm²). The plasmatic level of leptin in endometrial cancer group (40675.50±27912.73 pg/ml) is significantly elevated (p<0.0001) compared to the control group (17103.79±12002.64pg/ml). Adiponectin is significantly elevated (p<0.0001) in control group (11045.68±4920.93 ng/ml) compared to endometrial cancer group (7374.17±4701.35 ng/ml).

Conclusion: The plasmatic level of leptin and adiponectin have a linear positive respectively negative correlation with the visceral fat. Determination of intra-peritoneal fat in association with the adipokines level may be a predictive factor for endometrial cancer.

Keyword: visceral obesity, adipokines, endometrial cancer
P13.17
Fatal alcohol intoxication in women
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Objective: A plenty of information related to alcoholism can be find in the literature, however studies mostly dealt with predominance of male alcoholism and data related to women’s addiction are desperately scarce. Especially, basic demographic data focusing on impact of the acute alcohol intoxication on the death circumstances and social behavior in alcohol addicted feminine population are needed in the prevention of alcohol related mortality. Aims: To performed analysis related to fatal accidental alcohol intoxication in women in order to evaluate the locations, circumstances, mechanism and causes of death. Methods: A retrospective forensic autopsy study during a 12-year period. Results: 171 cases of intoxicated women who died due to blood alcohol concentration (BAC) equal to or higher than 2 g/kg were selected. Among them 36.26% (62/171) women died due to acute alcohol intoxication (AAI). We noted an increase number of deaths in women died due to AAI (rise in 250% between the years 1994-2005). The age structure of women died due to BAC and AAI followed the Gaussian distribution with a dominant group of women aged 40-50 years (45.16% and 35.09, respectively). The most frequent location of death place (98%) among women intoxicated by alcohol was their own home. Study considerably proves a close connection between acute alcohol intoxication and violence against women. Conclusions: Increasing cases of death of women suffering from acute alcohol intoxication have drawn attention to a serious problem of alcoholism of women in the Slovak republic during the process of integration into 'western' lifestyle and culture.

P13.18
Peculiarities of mental and emotional state of women of late reproductive age with complicated pregnancy course
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The goal of our study was to investigate the interconnection between negative psychological states of pregnant women of late reproductive age (WLRA) and complications during pregnancy. 134 women took part in examinations. The investigation results suggest that in pregnant women in case of complications of pregnancy in the first trimester to considerable anxiety is observed (U = 78.5; p = 0.004), accompanied with mainly vegetative disorders (U = 76; p = 0.003), reaction of anxious waiting (U = 83.5; p = 0.006) and sleep disturbances (U = 81; p = 0.005). Also, higher rates of hysteria (U = 99; p = 0.02) were noted among the women of this group. WLRA show more dominance (U = 248.5; p = 0.007). If problems arise during the second trimester, women with complicated pregnancies show less awareness only (U = 288.5; p = 0.03). WLRA with disturbances show greater anxiety (U = 275; p = 0.05), while the main component of this anxiety is a vegetative violation (U = 221.5; p = 0.006). In the third trimester, women tend to highly appreciate the desirability of pregnancy (U = 235.5; p = 0.031). They experience less emotional discomfort (U = 704; p = 0.04), and are more committed to continue professional activity after childbirth (U = 389.5; p = 0.043), but on the same time are more anxious (U = 395; p = 0.056), with the sleep disturbance as a main manifestation of this anxiety (U = 335.5; p = 0.007).
P13.19
Effects of surgical menopause and estrogen/progesteron therapy on circulating progenitor cells
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Endothelial progenitor cells (EPCs) are circulating mononuclear cells that participate in angiogenesis. The aim of this study was to determine the influence of HRT on the number and function of EPCs, and to investigate their relationship with circulating concentrations of sex steroids. Twelve healthy, premenopausal, non-smoking women with menstrual cycle were studied over a total abdominal hysterectomy with bilateral salpingo-oophorectomy. Venepuncture was performed in twelve patients the day before surgery and every one month for three months. EPCs were quantified by flow cytometry and the colony-forming unit (CFU-EPC) functional assay. Circulating concentrations of steroids hormones were measured by immunoassays. The number of circulating EPCs is decreased after bilateral salpingo-oophorectomy, and increased in those with hormone replacement therapy compared to women without HRT. There is a significant positive correlation between serum steroid levels and number of circulating EPCs in postmenopausal women. EPCs are important for the repairing of vascular injury; HRT induce an increase of this progenitor cells. There is a synergistic relationship between estrogen replacement therapy and progesterone replacement therapy.

P13.20
Analysis of susceptibilities of recurrent and non recurrent vulvovaginal candidiasis to fluconazole in Kashan, Iran
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Vulvovaginal candidiasis is a mucosal infection of vagina that is produced with candida species and 75% of women experience vulvovaginal candidiasis in their Lifelong. Vulvovaginal candidiasis shows a high resistance to vogue drugs and in other hand this treatment is failed in recurrent vulvovaginal candidiasis. This study was designed to investigate the susceptibilities of recurrent & single vulvovaginal candidiasis to fluconazole in Kashan, Iran. This cross-sectional study carried out on 93 patients with vulvovaginal candidiasis that referred to women and obstetric clinic in 2007-2008. Disease was diagnosed by women and obstetric specialist and certain in antifungal laboratory. Drug sensitivity was evaluated with micro dilution broth method. 74.2% of patients had non recurrent vulvovaginal candidiasis and 25.8% had recurrent vulvovaginal candidiasis. Candida albicans was the most candida species (83.9%) and 15.1% of species were candida glabrata. 41.7% of patients with recurrent vulvovaginal candidiasis had diabetes mellitus. Pruritus (83.9%) was the most symptom and dysuria (71%), discharge (63.4%) and dyspareunia (30.1%) were observed after it. 8.8% of candida species were resistant to fluconazole, 41.8% were sensitive and 49.4% had intermediate sensitivity. 35.7% of candida glabrata species were resistant to fluconazole, 21.4% were sensitive and 42.9% had intermediate sensitivity. In all species the resistance rate was 12.9%. The mean of vagina pH in recurrent vulvovaginal candidiasis was 5.4 and in non recurrent vulvovaginal candidiasis was 5. According to increasing vulvovaginal candidiasis with non-albicans species and their relative resistance to fluconazole, sample culture and evaluation of drug sensitivity in all the patients is recommended.
Introduction: Female sexual dysfunctions, e.g. sexual desire disorder, have a high prevalence. The aim of this study is to evaluate the approach of Swiss gynaecologists towards patients with sexual problems in their out patient service. Method: After a pilot study at the Department of Gynaecology of the University Hospital of Basel, Switzerland, an adapted self administered 19-items questionnaire was sent to 856 Swiss gynaecologists to evaluate their current care for patients with sexual issues and their attitude towards this topic. Results: While 40.4% of the 341 responding gynaecologists (39.8% response rate) quoted to have at least 1-2 days of training in sexual medicine, 7.9% of the respondents routinely explore sexual issues in more than 80% of their patients. 28.2% of the respondents offer specific appointments for sexual issues, 85% propose a referral. Lacking therapy motivation was mentioned as the most common cause for persisting symptoms (63.3%). Dyspareunia was quoted as the most or second most prevalent diagnosis of female sexual dysfunction in 77.1% of the questionnaires. Discussion: Swiss gynaecologists rarely report to be uncomfortable to address sexual problems and 40.4% have at least a basic additional training in sexual medicine. Nevertheless this issue is seldom part of the routine in the gynaecological out patient care. This could be partly due to their assumption, that many patients have only scarce therapy motivation. Another finding is the high subjective prevalence of dyspareunia compared to sexual desire or arousal disorders, which is not consistent with results of epidemiologic studies.

P13.22

100 cases of HPV infection – random study at the Hospital of Faro-EPE

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As known, more than 30 types of HPV have the affinity to infect and provoke lower anogenital and cervical disease. Subclinical infection may persist for years before becoming clinically apparent as genital warts or malignancy. We random selected 100 women followed in our Colposcopy Unit with: ASC-US; LSIL with more than 50 years old and follow up after treatments, namely conization, for CIN lesions. Some variables taken in count were: age; sexual behavior; tobacco smoking; cytological and histological alterations; type of HPV detected, among others. We came to the conclusion that more than 80% of these women were infected with high risk HPV, some of them with more than one type, obliging us to change our follow up strategies.
Ovarian torsion is an uncommon problem in late pregnancy. Surgical management of ovarian torsion in third trimester of pregnancy usually involves a large midline laparotomy as the gravid uterus would obstruct surgical access. In this case report, we will describe a successful laparoscopic assisted management of ovarian torsion at 33rd week of pregnancy. In this case, laparoscopy allows the confirmation of the diagnosis and allows the surgeon to plan a mini-laparotomy directly over the pathology thereby minimising the patients post-operative morbidity.

Infertility is a disability intercourse pregnancy after one year without using any contraceptive method is defined. Statement of problem: infertility and sterility in different parts of the world with different figures have been reported and one of the important problems of human life that in many cases even rupture and subsequent complications and problems in social life is. Since comprehensive information about the prevalence of infertility and sterility reviews the causes and effects, so it is the first step in planning treatment in sterility. This Study is the causes and frequency of these disorders in men and women referred to urologist and gynecologists Neyshabur city deals.

Relaxation technique is one of the methods which reduce stress and balance human emotions. The purpose of this study was determination of relaxation effect on stress score in the infertile women and pregnancy test as outcome of their treatment. Methods: This study was an experimental and clinical trial study. Participants were selected by simple randomize sampling (n=66) in two groups (intervention group=32 and control group=34). At first, the stress score was determined in both groups by Newton's infertility stress questionnaire. Stress score was evaluated in participants and then relaxation technique was administered in the intervention group. This technique performed in 12 sessions. Participants answered questionnaires under supervision of the researcher after embryo transfer to the uterus (after 2 weeks) and before pregnancy test administering. Results: Analytic tests showed total stress score does not have significant difference in the groups before intervention (P<0.05). Whereas, independent t-test indicated significant difference in stress scores between the two groups after intervention (P<0.05). Stress score was higher in the control group than the intervention group. Chi-square test also showed that positive pregnancy test was significantly higher in the intervention group (P<0.05). Discussion: Relaxation technique as a complementary and alternative medicine (CAM) method can reduce stress score in infertile women and effect on treatment outcome.
Prenatal and perinatal complications of in vitro fertilization  
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This article attempts to perform a review of the literature and examine whether pregnancies after in vitro fertilization (IVF) possess a higher ratio of complications, during the pregnancy or the perinatal period. Recent research (25 papers reviewed, 2000-2011) has shown that IVF pregnancies are more frequently complicated with maternal and fetal complications, and are associated with higher obstetrics risk and poorer perinatal results. These complications may lead even to the failure of the pregnancy to continue, due to the higher odds of miscarriages and ectopic pregnancy. Others may lead to increased maternal risk, like placenta previa (4-6fold risk), placental abruption (2,4fold), gestational diabetes (2fold) and preeclampsia (2fold). But hazards threat the embryo as well. Almost all papers demonstrate a higher risk of prematurity, low birth weight (LBW) and caesarean section in IVF, both in multiple and singleton pregnancies. Another serious yet underestimated complication is multiple pregnancy. The established way of prevention today is Double Embryo Transfer (DET) but there is another option proposed by 3 recent studies and the European society of Human reproduction & Embryology: the elective Single Embryo Transfer (eSET) with lower rates of prematurity and LBW. IVF is undeniable a significant option for infertile couples who want to reproduce, however IVF pregnancies are more probable to cause problems to the mother during the pregnancy and to lead to the birth of a premature or LBW newborn. The prenatal and perinatal complications are not only associated, as formerly believed, with multiple pregnancies, but occur also in singletons.

<table>
<thead>
<tr>
<th>Comparison of eSET vs DET:</th>
<th>eSET</th>
<th>DET</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Successful pregnancies</td>
<td>38,8%</td>
<td>42,9%</td>
<td>Thurin et al., 2004</td>
</tr>
<tr>
<td>(Pregnancies that result to the birth of at least one live newborn)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premature newborns &lt;37w</td>
<td>9,3</td>
<td>24,8</td>
<td>Kjellberg et al., 2006</td>
</tr>
<tr>
<td>Low Birth Weight &lt;2500gr</td>
<td>7,8</td>
<td>22,8</td>
<td></td>
</tr>
<tr>
<td>Caesarean section</td>
<td>24,2</td>
<td>49,3</td>
<td></td>
</tr>
</tbody>
</table>
P14.05
Comparison of transvaginal ultrasound after diagnostic hysteroscopy and laparoscopic chromopertubation for the assessment of tubal patency in infertile women
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(2) University Hospital Center 'Mother Theresa', Tirana, Albania

Purpose. Diagnostic hysteroscopy has become a well-established modality to evaluate the uterine cavity, but gives no information about the tubal patency. The aim of this study is to investigate the use of transvaginal ultrasound, directly after diagnostic hysteroscopy in infertile women compared with laparoscopic chromopertubation to assess the tubal patency. Methods. A total of 56 infertile patients, were referred to our endoscopic unit for laparoscopic chromopertubation in the period September 2008 - January 2010. Diagnostic hysteroscopy followed by a transvaginal ultrasound were carried out prior to laparoscopic chromopertubation. The collection of free fluid imaged in the pouch of Douglas was accepted as the evidence of tubal patency. Diagnostic laparoscopy with chromopertubation was performed on the following days. The findings of transvaginal ultrasound and laparoscopic chromopertubation were compared. The data were analyzed in order to calculate sensitivity, specificity, and accuracy, positive predictive value and negative predictive value of the combination of hysteroscopy and transvaginal ultrasound for detecting unilateral or bilateral tubal patency. Results. The presence of fluid in Douglas was noticed in 37 out of 56 cases. Laparoscopic chromopertubation confirmed 36 out of 37 cases with unilateral or bilateral tubal patency. 17 out of 19 cases without fluid in Douglas was confirmed by laparoscopic chromopertubation with bilateral tubal occlusion. Diagnostic hysteroscopy followed by transvaginal ultrasound has a high sensitivity and specificity for assessment of tubal patency. Conclusions. The transvaginal ultrasound directly after diagnostic hysteroscopy in infertile patients provides additional information regarding the tubal patency.

P14.06
The clinical profile of adnexal torsion. A experience with 45 patients
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Objective: To evaluate clinical findings, predisposition risk factors, therapeutic surgery approach and fertility after episode of the adnexal torsion. Material and methods: We recruited 45 patients with an adnexal torsion between 2000 and 2010 who were prospectively evaluated in our hospital. Predominant age of debut, twisted component of the adnex, risk factors (pregnancy, cysts or neoplasms, ovarian stimulation…), clinical picture and duration between the clinical onset and the surgical resolution were collected. All patients were surgically treated, conservatively or radically. Results: The mean onset age was 31.6 years. The right side was the most affected. Encouraging factors detected were: 4.4% under ovarian stimulation, 11.1% pregnant and 55.5% adnexal cyst carriers (25 cases). We reported 28% teratomas, 24% cystoadenoma, 8% endometriomas, 8% hydrosalpinx, 4% hyperstimulated ovaries and 4% fallopian tube linfoepihelial carcinoma. Previous pelvic surgery was found in 28.9%. Thirty-two underwent laparoscopy and 13 laparotomy. Different surgical procedures were: 2.2% partial oophorectomy, 6.7% hysterectomy with BSO, 6.7% tubectomy, 24.4% adnexectomy, 24.4% cystectomy (and untwisting) and 35.6% untwisting adnex. Intrasurgical heparin was administered in 20%. No case of thrombophlebitis was reported. After the episode, 52.4% of women with unmet fertility achieved pregnancy: 18.2% ended in abortion, 18.2% were obtained by ART and 63.6% were successful term pregnancies. Recurrence occurred in 6.7% and in one case up to 3 times. Conclusions: Adnexal torsion is more frequent in young women with adnexal pathology. A prompt surgical intervention is required to avoid irreversible ovarian damage. Conservative therapy by laparoscopy has gained increasing preference and is recommended to preserve ovarian function in young women. The results of our study are consistent and show more than 50% pregnancy after treatment.
Assisted reproduction techniques for HIV serodiscordant couples
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National & Capodistrean University of Athens Medical School, Athens, Greece

Introduction: In the age of HAART, with age expectancy and life quality of HIV-infected patients greatly improved, many HIV-serodiscordant couples choose to procreate. This is challenging for gynecologists, as the only safe conception method for them is via assisted reproduction (AR), while HIV infection and treatment render conception and pregnancy both especially difficult. This review summarizes AR data on HIV-serodiscordant couples. Methods: Published literature review. Results: For serodiscordant couples with male infected partners, real-time PCR for HIV-RNA detection after sperm washing is standard procedure regardless of the AR technique finally used. Other methods include density gradient centrifugation and the swim-up technique, but have been proven suboptimal. The likelihood of HIV maternal infection is higher for intrauterine artificial insemination due to the amount of sperm used, whereas for IVF and especially ICSI this likelihood is almost non-existent. In serodiscordant couples with female affected partners, treatment with zidovudine and caesarean section minimize embryo infection to 1% in women with low viral loads. Here the greatest challenge remains pregnancy achievement, as both HIV-infection- by causing genitourinary infections and cervical lesions - and HAART have negative impact on fertility, with successful IVF/ICSI-embryo transfer cycles slightly lower than controls in many studies. Overall, ICSI is the method that combines lowest infection possibility with highest percentages of achieved pregnancies. Conclusion: Couple-specific factors determine the most appropriate method to be implemented for HIV-serodiscordant partners. In spite of the difficulties, many couples achieve pregnancy without jeopardizing the health of the HIV-negative partner or the baby.

A comparison between ZIFT and IVF procedures to overcome infertility: a clinical case study in Iran
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Fertility Clinic, Tehran, Iran

IVF and ZIFT are two methods for achieving a successful pregnancy. The goals of this study were two-fold: (1) to investigate the role of endometrial thickness and pattern in the pregnancy rate during IVF and ZIFT transfer cycles, (2) to compare treatment options between IVF and ZIFT. Records of 169 infertile women who underwent IVF and ZIFT were evaluated at the infertility clinic in Tehran, Iran during June 2008 to January 2010. In this study, we analyzed recorded data of endometrial thickness and pattern on the day of human chronic gonadotrophin (HCG). Endometrial pattern was divided into two categories: triple and non-triple line, and endometrial thickness was divided into three categories (A: < 10 mm, B: 10-13 mm, C: > 13 mm). ZIFT was used for 105 patients and IVF for 64 patients. We observed patients with triple-line endometrial pattern showed a better pregnancy outcome in IVF and ZIFT treatments (68.6%) compared to non-triple-line (31.4%). Triple-line endometrial pattern appeared significantly 71.9% in younger women (age < 35 yrs) compared to the older one 28.1% (age > 35 yrs). Endometrial thickness has no influence on the pregnancy rates in IVF and ZIFT cycles, but patients with triple-line pattern showed a better pregnancy outcome in both treatments. The results indicate 72.9% of success in patients below 35 yrs, while only 27.1% positive response has achieved in patients above 35. Based on this study we suggest that patients above 35 years old with non-triple-line endometrial pattern should consider ZIFT as a treatment option.
P14.09
An experience of complex ultrasonic diagnostic in women with infertility
Valentyana Sklyarova
Danylo Halytskyi National Medical University of Lviv, Policlinic and Family Medicine Department, Lviv, Ukraine

Application of ultrasound diagnostic in the practice of gynecologist is a routine test method, which gives detailed visualisation of diseases. However, when examining patients with infertility, there are additional questions that require qualitative examination not only of uterus, ovarian and tubes, but possibly the entire body. We have since 2008 used a comprehensive ultrasound screening of all patients with infertility who turned in Lviv City Center for Family Planning and Human Reproduction. Review conducted by 7-10 day cycle after pre-treatment to evaluate intestinal. Thyroid glands, breast, gall bladder, liver, pancreas, spleen, kidney, adrenal gland, ovarian and uterus were investigated. During 3 years were examined 118 patients, and were found the frequency of detection of autoimmune thyroiditis, fibrous cystic breast, biliary tract dyskinesia, chronic pancreatitis. Ultrasound is particularly marked changes in the form of chronic liver intoxication combined with features of autoimmune thyroiditis and clinical and laboratory signs of parasite invasion in the body. This approach greatly speeds up and treatment of infertility, details the following algorithm more specific investigation and consultation of professionals.

P14.10
Psychological stress causes relative infertility through direct change in the frequency pattern of GnRH release from the hypothalamus
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Objectives: Evaluation of oscillation pattern of GnRH release by the hypothalamus in different mental states. Materials and Methods: Twenty two patients were evaluated by a computer algorithm to find oscillation of LH/GnRH pulsation measured on four sessions (day 6 and 14) every 10 minutes within two consecutive cycles in addition to the MCMI-III and Hamilton test. Results: The pattern of oscillation was indirectly correlated with Hamilton scale and the anxiety state and showed statistically significant lowering of frequency during anxiety and depression states. Besides, the slope of GnRH between two consecutive sessions (d0GnRH0/GnRH1dt) showed also a prominent reduction and even flattening. In addition the time to ovulation was also postponed in cycles with prominent anxiety. Conclusions:
1. Psychological stress exerts its effect through a reduction of pulsation frequency in GnRH release.
2. Pattern of GnRH pulsation changes in the range of 1/4 to 1/15 of the baseline and external stimuli have strength of changing hormonal milieu in this range.
3. MCMI-III is an excellent tool for evaluating psychological state of the patient.
4. Patients with borderline, schizoid, dependent, depressed and passive aggressive personality suffer most from irregularity of menstruation cycles.
5. Patients with chronic major depression are subject to menstrual irregularity highest during stabilization of disease and in the early phases of recovery after treatment with SSRI.
6. Treatment of depression/anxiety causes a reduction of menstrual cycles length.
7. Measurement of GnRH, FSH, LH and Estradiol on two sessions one week apart is a nice marker for regularity and ovulation.
P14.11
Twenty four hours urinary Prolactin (24UP) is the best marker to differentiate normal from micro/macroadenoma: prolactinoma is a natural family planning not a disease entity
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Mehr Medical Group, Department of Internal Medicine/Gynecology, Tehran, Iran

Objective: To define the clinical significance of Prolactinoma and find more reliable laboratory markers we tried to use the 24 hours urinary Prolactin. Materials and Methods:
Seventy four normal volunteers were compared with 12 hyperprolactinemia of unknown significance (HPUS) and 38 confirmed Prolactinoma for 24UP corrected for volume and Creatinin clearance. Hyperprolactinemia of unknown significance and confirmed Prolactinoma were defined as elevated blood Prolactin level with 0-1 and all three criteria of amenorrhea, galactorrhea and headache respectively.

Blood and urine samples were evaluated with highly sensitive ICT. Prolactinoma was evaluated with dynamic MRI of the sella turcica. Results: The mean and range of 24UP (as such and corrected) were completely different among the three groups with 11-17, 14-38 and 26-49 microgram/d respectively.

Conclusions:
1. 24UP is the best marker for differentiating spurious hyperprolactinemia from prolactinoma.
2. It can differentiate micro from macro adenoma.
3. It abolishes the need for MRI.
4. Glomerular filtration and tubular excretion cause extreme aberration in serum prolactin dynamics.
5. Taking the high prevalence of prolactinoma in unselected autopsy series (6-28%) and the spontaneous remission in 90% on follow up of 5-7.5 years microadenoma is neither an autonomous tumor growth nor a disease but a natural adaptive reaction in terms of a sophisticated family planning and contraception system of the nature.
6. Long acting Prolactin preparations, its derivatives and Prolactin mimetic agents are currently under intensive study for being used as a novel group of contraceptives with least side effects and high efficacy.
Endocrine and clinical effects of MYO-Inositol administration in polycystic ovary syndrome. A randomized study

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(2) University of Modena and Reggio Emilia, Department of Obstetrics & Gynecology, Modena, Italy

Context: Some abnormal actions of insulin are dependent by inositol phosphoglycan (IPG) mediators, and a deficiency in D-chiro-inositol-containing-inositol phosphoglycan (DCI-IPG) may underlie insulin resistance in women affected by polycystic ovary syndrome (PCOS). Myo-Inositol (MYO), was reported to be correlated to ovarian function, oocyte quality and pregnancy rate. Objective: To evaluate, in a group of fifty PCOS patients according to some inclusion criteria, in an assisted reproductive technology (ART) center, the endocrine and clinical effects of MYO administration. Intervention(s): Hormonal measurement and an OGTT were performed in all patients at the baseline and after 12 weeks of treatment (Group A: myo-inositol 2 gr. plus folic acid 200 µg daily; Group B: folic acid 200 µg daily). After the treatment an ovarian hyperstimulation, oocytes pick-up and embryo transfer were performed. Results: After the treatment, significant changes were observed in the Group A since LH, PRL, A and insulin concentration significantly decreased, as well as LH/FSH ratio, insulin sensitivity glucose/insulin ratio and the HOMA index. Insulin response was significantly reduced in the MYO treated group as well as the AUC of insulin with respect to baseline conditions. No changes were observed in the Group B. Moreover, r-FSH units, 17β -E2 levels was lower than in Group B. We found a lower number of oocytes in the Group A, but they were of top-quality than the Group B. Finally, pregnancy rate was higher in the Group A. Conclusions. MYO administration in PCOS patients modifies reproductive axis function, tank to a reducing of the hyperinsulinemic state that affects LH secretion. It could also improve oocytes quality and pregnancy rates.

A case report on infertility treatment via faradarmani after 8 years

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Purpose: More than 20% of infertile women with unspecified cause of infertility become pregnant within a 3 year period even without treatment. But for couples older than 30, normally IVF or GIFT is applied immediately after the diagnosis. These ultimate methods are expensive and painful and in case of failure will have devastating and irreparable psychological consequences. Method: The patient is a 33-year old female, with a consanguineous marriage and a history of two spontaneous abortions with unknown cause. Her husband was diagnosed with oligospermia. The couple was introduced to Faradarmani in 2008 and had a child in 2009 (after 8 years of marriage). In Faradarmani the patient is asked to close her eyes (optional) and examine the sensations. The patient becomes connected to the interuniversal consciousness (the network of awareness and consciousness governing the universe) via Fara-therapist and undergoes the Scanning process of the universal intelligence. Due to the nature of this connection, some information is conveyed and the defective parts are treated. Conclusion: As the patient did not take medication or use any other treatment method other than Faradarmani and considering that other issues such as Hypothyroidism and Hyperprolactinemia were also treated within a year of Faradarmani, we can claim that Faradarmani can be regarded as an optimum complementary and alternative treatment for several diseases. Although some of the treatment results of Faradarmani on this patient may be attributed to treatments such as IVF, microinjection etc, however contrary to common treatments that come with side effects, Faradarmani has none and is time-saving (for this patient about a year).
P15 Contraception

P15.01
Uptake and continuation rates of the intrauterine system (IUS) in a university student general practice population in the United Kingdom
Catherine Armitage, C Mitchell, C Wigan, D Smith
Leeds Student Medical Practice, Leeds, UK

Objective: The experience within this university based general practice in a large city in the UK is that the IUS is an increasingly popular and acceptable contraceptive choice in young nulliparous women. This is a prospective case series to establish if commonly held beliefs within our practice could be substantiated.

Design: A series of 100 consecutive women attending for fitting of the IUS were questioned at the time of fitting on reason for choice. Telephone follow up is at 6 weeks, 6 months and 9-12 months after fitting to check satisfaction with method and continuation.

Results: Number of adult women registered at Practice=20,131, age range=18-58 years Mean age of female patients in practice=22.7, median=22 and mode=21 Age range for patients within study =19-39 years. Mean age =22.5, median =29, mode=21 96 women were nulliparous, 95 women nulligravida. Reasons for initial choice will be explored in more detail. One attempted insertion failed and three devices were removed within hours of fitting due to pain. 6 weeks=89 devices insitu 6 months=84 devices insitu. Follow up at 9-12 months is ongoing, 63 devices insitu, 10 women lost to follow up and 15 women yet to reach 9-12 months post insertion. Reasons for discontinuation will be explored in more detail. 4 expulsions were reported within 9 months of insertion.

Conclusions: There have been few studies on the use of the IUS in young women in the UK. Data supports our impression that the IUS is acceptable in young nulliparous women.

P15.02
Qualitative survey on perception of emergency contraception (EC) in France
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(2) BVA Healthcare, Research Institute, Paris, France

France has been the first country to authorize OTC access of emergency contraception (EC). However, official reports suggest EC is still broadly underused in France. This survey sought to explore attitudes towards EC among patients and physicians, with the goal of understanding potential barriers to systematic use by women, as well as its prescription by physicians.

Methods: Qualitative in depth interviews with gynecologists (n=910) and GPs (n=10) and women group interviews (n=30) in 4 french cities (Paris, Marseille, Nantes, Lyon).

Results: Women and Health provider’s attitudes in this field are strongly influenced by moral standards, and EC use has an impressive guilt-provoking image similar to that of unplanned unprotected sex. The study shows that women and doctors feel uncomfortable with the topic of EC as it directly refers to patients’ sexual life in its more intimate details, particularly in the often panicking circumstances of EC need. Despite a seemingly general agreement that physicians should take a proactive role in prescribing EC in advance, both women and doctors fear that it might encourage irresponsible contraceptive behaviors.

Conclusion: Findings suggest EC should be reinstated as part of the global field of contraception, as a complementary set of contraceptive tools. Repositioning advance and/or concomitant prescription as “a responsible prescription for a responsible woman” may increase acceptance of a more systematic prescription and use of EC.
P15.03
Bleeding profile of a novel oral contraceptive containing estradiol valerate/dienogest
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(2) David Geffen School of Medicine at UCLA, Department of Obstetrics & Gynecology, Torrance, CA, USA
(3) Hôpital Caremeau CHU Nîmes, Nîmes, France
(4) Bayer Healthcare Pharmaceuticals, Women’s Healthcare, Berlin, Germany

Objective: To further characterise the cycle control achieved with an oral contraceptive (OC) containing estradiol valerate/dienogest (E₂V/DNG; Qlaira®), including the time to onset of withdrawal bleeding and the effect of patient characteristics (smoking/parity) on intracyclic bleeding. Methods: Post-hoc analysis of a randomised, double-blind study that compared the bleeding pattern and cycle control of E₂V/DNG with a monophasic OC containing ethinylestradiol/levonorgestrel (EE/LNG; Miranova®) over seven cycles in healthy women aged 18–50 years. Results: 784 women were analysed (392 per group). During cycle 1, the proportion of women with onset of withdrawal bleeding 1–4 days before progestogen withdrawal (treatment cycle days 21–24 [E₂V/DNG]/18–21 [EE/LNG]) was 5.9% and 5.2% in the E₂V/DNG and EE/LNG groups, respectively; 54.1% and 57.9% experienced onset of withdrawal bleeding 1–4 days after progestogen withdrawal (treatment cycle days 25–28/22–25). During cycle 7, 7.5% and 10.8%, respectively, experienced withdrawal bleeding 1–4 days before progestogen withdrawal, and 54.8% and 55.2% 1–4 days after progestogen withdrawal. A greater proportion of smokers than non-smokers experienced intracyclic bleeding with E₂V/DNG (58.9% vs. 36.1% of women with ≥1 intracyclic bleeding episode [cycles 2–6]). No such differences were observed in the EE/LNG group. Parity appeared to have no effect on bleeding profile. Conclusions: E₂V/DNG exhibits a consistent bleeding profile comparable with that of EE/LNG, with the majority of women experiencing onset of withdrawal bleeding 1–4 days after progestogen withdrawal. Smoking appears to increase the frequency of intracyclic bleeding with E₂V/DNG.

P15.04
Normalization of blood loss in women with heavy menstrual bleeding treated with a novel oral contraceptive containing estradiol valerate/dienogest
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(3) Bayer Healthcare Pharmaceuticals, Women’s Healthcare, Berlin, Germany

Introduction: Two identically-designed randomized, double-blind studies (one in North America and one in Europe and Australia) showed that an oral contraceptive containing estradiol valerate/dienogest (E₂V/DNG) was effective in women with heavy, frequent and/or prolonged menstrual bleeding without organic pathology. Both studies applied a strict definition of treatment success, based on a composite of eight stringent criteria. To make these results comparable with published data, data were pooled and re-analyzed using a definition of treatment success applied in a recent study comparing the efficacy and safety of the levonorgestrel-releasing intrauterine system and oral medroxyprogesterone acetate in women with heavy menstrual bleeding (HMB). Methods: Women ≥18 years with objectively-confirmed HMB (defined as menstrual blood loss [MBL] ≥80mL/cycle in two cycles during a 90-day run-in period) without organic pathology were randomized to E₂V/DNG (n=220) or placebo (n=135) for 7 treatment cycles. The primary variables were absolute change in MBL from baseline to treatment cycle 7, proportion of women successfully treated (MBL <80mL and ≥50% MBL reduction from baseline), proportion of women with MBL <80mL, and proportion with MBL reduction ≥50% from baseline. Results: At treatment cycle 7, 63.6% and 11.9% of women were successfully treated with E₂V/DNG and placebo, respectively. MBL <80mL was observed in 68.2% and 15.6% of women, with MBL reduction ≥50% in 70.0% and 17.0%. Furthermore, median MBL reduced from 179.8mL to 35.7mL with E₂V/DNG, and from 174.9mL to 163.7mL with placebo (all p<0.001). Conclusions: E₂V/DNG is highly effective for HMB and is associated with a high treatment success rate.
Exploring the effect of oral contraceptives on female sexual function
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(2) University, Melbourne, School of Public Health, Women's Health Research Program, Monash Australia
(3) Universitäts-Frauenpital, Basel, Switzerland
(4) Rigshospitalet University Hospital, Sexological Clinic, Psychiatric Centre, Copenhagen, Denmark
(5) Palacios Institute of Women's Health, Madrid, Spain
(6) Bayer HealthCare, Berlin, Germany

Objective: Androgen suppression has been the dominant theory underpinning female sexual dysfunction (FSD) over the last 20 years. In clinical practice, women with acquired oral contraceptive (OC)-associated FSD can be switched to ethinylestradiol (EE) pills containing levonorgestrel (LNG), an androgenic progestin. This multi-center, double-blind, randomized, non-inferiority study compared estradiol valerate (E2V)/dienogest (DNG) to EE (0.03 mg)/LNG (0.15 mg) with respect to the effect(s) they had on markers of sexual function in women with acquired OC-associated FSD. Methods: Healthy combined OC (COC) users with acquired OC-associated FSD (defined as combined female sexual function index [FSFI] sexual desire and sexual arousal component score ≤18) for ≥3 months but ≤1 year were randomized to E2V/DNG or EE/LNG for six cycles. The primary efficacy outcome was change in the sum of FSFI sexual desire and sexual arousal component scores between baseline and Cycle 6. Secondary efficacy outcomes included individual domains of FSFI, Vaginal Health Assessment (VHA) and the Atrophy Symptom Questionnaire (ASQ). Results: Overall, 191 women completed the study. The mean increase in the FSFI desire and arousal component score was 6.45 (standard deviation [SD]: 5.33) for E2/V/DNG and 5.98 (SD: 6.22) for EE/LNG (p<0.0001 for both groups). The COCs were equally effective at improving the FSFI scores. Both treatments also improved VHA and ASQ scores, indicating improved vaginal status. Conclusion: Both E2V/DNG and EE/LNG improved acquired OC-associated FSD severity-assessment scale scores. Given the multifactorial nature of OC-associated FSD, an effect due to improvement of vaginal status cannot be excluded.

Possible influence of long term using of COCs on cervixes of 30-42 years old women
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The aim of investigation was to assess the changes of cervixes of 30-42 years old women using COCs. 92 women were checked out and their medical cards were analyzed, among them 46 used OC’s during 5 and more years, the others 46 used no hormonal contraception. Methods used: PCR, colposcopy, Pap smears Results. Mean age of patients in both groups was equal, 34,2±3,2 years old in the 1st group and 34,7±3,5 years old in the 2nd one. There were no differences on parity, number of abortions and gynecological diseases. Investigation of STDs were conducted by PCR and some of them were found: C. Trachomatis (8,7% - 26,1%); U. Urealiticum (8,7% - 21,7%); M. Hominis (4,3% - 10,9%); CMV (21% - 26,1%); HSV (26,1% - 15,2%); HPV 16, 18 (2,2% - 4,3%). Pap smears of 70% women in the 1st group were normal. Inflammation was found among 30% of women; any type of dysplasia was not indicated. In the 2nd group in 71,7% cases dysplasia was not found, among them in 32,6% additional inflammation was discovered, in 13,1% smears was ASCUS, and 10,9% – CIN I-II, 4,3% – CIN II-III. Conclusions Our clinical analysis indicated that COCs have executed protective role in relation to bacterial infections but could not protect from viruses the women in active reproductive period. In our investigation we did not find increasing risks of cervical cancer connected to long term using of COCs for these age groups.
**P15.07**

**Knowledge consistency in women about benefits and risks of COCs**

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Objectives: Pilot study to compare perceived and actual knowledge about benefits and risks of combined oral contraceptives (COCs) among young women. Method: Thirty women aged 18 to 24 completed an online questionnaire capturing COC knowledge by a self-assessment on a general and detailed level. In addition, participants were asked to test their knowledge on 25 medical conditions related to the use of COCs. Results: Participants rated their level of knowledge about benefits and risks in general predominantly (n=19) as ‘rather well’ or ‘very well’. On item level, only seven women reported a positive self-assessment. With regard to actual knowledge, high ratios of ‘don’t know’ (on average 10/25 conditions) and incorrect (237 incorrect, 176 correct) answers showed that eleven women overestimated their knowledge. Only four women had consistent positive self-assessment translating into correct answers (>50% correct answers), nine women correctly assessed their knowledge as poor, while five women underestimated it. The remaining woman had an indifferent self-assessment. Self-assessment on a detailed level and the number of ‘don’t know’ answers showed no statistically significant differences between current COC users and non users or according to educational level. The majority of correct answers were due to an accurate identification of potential side-effects of COCs. Conclusion: While most participants were confident of being knowledgeable about benefits and risks of COCs, this was actually true only for a minority. There was an inconsistency in the self-assessment between the general and detailed level.

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**P15.08**

**Management of patients with mislocated intracavitary IUDs. A 10 year experience**

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Intrauterine devices (IUDs) are important contraceptive methods available for patients. Insertion of IUD is a frequent procedure in a Gynecological office. One complication due to the use of IUDs is the risk of uterine perforation with migration of IUD to the pelvis, abdominal cavity or into adjacent organs. The incidence of perforation range 0.87 per 1000 insertions. The gold standard treatment for misplaced IUDs is surgical removal. Objective: Report our 10 year experience in surgical treatment of patients with mislocated IUDs. Methods: A total of 29 patients were submitted to surgery due to mislocated IUD were retrospectively analyzed. Diagnosis was based on gynecologic examination, transvaginal ultrasound and pelvis X-Ray. Results: All of the IUDs were inserted by well trained professionals. The mean time for diagnosis of mislocation was 13 months after insertion. 23(80%) patients were submitted to evaluation after one month and the IUD was in situ. 6 (20%) were diagnosed with mislocated intrauterine devices before one month. 17 (58%) patients referred abdominal and pelvic pain, 11 patients were asymptomatic. 20 (68%) patients were managed by laparoscopy, 4 started as laparoscopy and were converted to laparotomy and laparotomy was required in five. The postoperative course was uneventful in all patients. Conclusion: To minimize the risk of uterine perforation adequate training must be provided. During pelvic examination the absence of IUD string requires immediate ultrasound (US) to diagnose IUD location. X-ray is necessary when US is not able to locate IUD. Laparoscopic surgical approach should be the first choice for IUD removal.
Emergency contraception (EC) in the past two decades had been proven to be effective and well tolerated. Advance provision and prescription of emergency contraception have been postulated to reduce the number of unintended pregnancies and abortions. A recent meta-analysis of the available trials were unable to show any significant impact of increased access to EC on clinically relevant outcomes such as pregnancy or abortion. The status of EC access appears to be the main determinant for the level of use in a given population. In Italy and Germany, EC has always been prescribed, in France and UK EC has been switched to before-the-counter (BTC) access very early on, finally in Spain the BTC status for the levonorgestrel product was granted at the end of 2009 and seems to already impact greatly the level of EC use. In the countries where EC is prescribed, the penetration rates (number of units per women) remain under 3%. In the countries where EC is BTC, the levels are over 10%. In Spain, penetration rates are now growing rapidly since the BTC switch. EC level of use has changed over the last 10 years, according to the access status. Neither the abortion rates nor the oral contraceptive use percentage have been changed over the time. Probably, as reported by others the rate of unintended pregnancy is due to a lack of patient information, ineffective contraceptive methods use, unplanned sexual activity and ambivalence towards pregnancy.

Levonorgestrel IUS: women profile and Satisfaction in Contraception. Private consultations experience in Zaragoza (Spain)

Objectives: Our main objective was a better understanding of our LNG-IUS patients, to know their profile and level of satisfaction in order to improve our contraceptive counseling. Methodology: This is a retrospective study done in Spain during 2011. A specific 10 minutes questionnaire was designed for the study. It was answered by the patient in consultancy or at home, and then sent by email. The main variables asked were sociodemographic data, obstetric&gynecologic and contraceptive history. LNG-IUS was obtained: 1) the reason for choosing LNG-IUS as a contraceptive method, 2) main driver to choose LNG-IUS, 3) if it fulfilled the expectations, 4) level of satisfaction 5) side effects, 6)whether they would recommend LNG-IUS to other women. Results: 139 patients were evaluated. The age of users ranged between 29 and 55. 89.9% of them were married and 57.6% had university education. 23.7% had 1 child, 59% 2 children, 10.8% 3 or more children and 6.5% were nulliparous. The contraceptive method used before the election of LNG-IUS was: 61.1% hormonal contraceptives, 30.2% used male condoms, 13.7% IUD, and 4.3% natural methods. Conclusions: LNG-IUS users are in a high percentage (90.6%) satisfied, and would recommend the method to other contraceptive users.
P15.11
Abortion in Europe: are the laws and practices patient centred?
Christian Fiala
Gynmed Clinic, Vienna, Austria

For most women the diagnosis of an unwanted pregnancy is unexpected. The women are therefore unprepared, be it for carrying the pregnancy to term or having an abortion. They need a great deal of information within a very short space of time. In case they have taken the decision to terminate the pregnancy, it is crucial for them to get fast access to medical facilities. It is interesting to analyse legal requirements and regulations in European countries, as to how far they support the women in this crisis situation in finding a solution. Societies react differently to the needs of the women, although the past was dominated by a rigid paternalism, coupled with beliefs that pregnant women could not responsibly make decisions regarding their own pregnancy. Society therefore “had” to intervene in order to ensure that the “right” decision was taken. A huge progress has been made over the last decades to overcome this approach and the legalisation of abortion has been a corner stone. However there are still many remnants of the old thinking like obligatory waiting (“cool off”) periods of an arbitrary number of days or an obligatory counselling. So far there is no evidence that these restrictions are of any benefit. They do, however, lead to a delay in the provision of the treatment and have negative effects on the physical and psychological experience of those affected. Examples and comparions of european countries are given in the presentation.

P15.12
Contraception pre- and post- abortion: lessons to learn
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An undesired pregnancy is the result of a contraceptive failure in most cases and leads to a strong motivation to prevent a recurrence. The majority of women/couples are therefore strongly motivated to rethink their contraception. Previous contraception should be analysed in detail. Frequently a less reliable method has been used or a reliable method has not been applied correctly. A review of past experience will lead to improved efficacy. It is important to start a reliable contraception immediately after the abortion or as soon as possible. Wrong beliefs are still widespread and frequently prevent women from effectively preventing another unwanted pregnancy. We also need to keep in mind the psychological aspect of this very special situation. Most women are absorbed with the decision to end a pregnancy. It is a challenge for them to think about protecting themself from fertility in the next cycle even before the abortion has taken place. Our patients therefore need psychological guidance as well as practical information and provision of an effective method.
Knowledge about emergency contraception among women referred for treatment at Hospital de Clínicas de Porto Alegre

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Introduction: Despite the benefits of Emergency Contraception (EC), the knowledge about the method and their use remain quite restricted. Objectives: To assess the knowledge about EC in sexually active women, to measure prevalence of their use and of their correct usage. Material and Methods: 134 women referred for treatment at the HCPA were evaluated through a questionnaire. All of them are sexually active and aged between 18 and 50 years old. Demographic data, gynecological and obstetric history were gathered, and questions about EC were asked. After the questionnaire, the patients received written information about the use of EC. For analysis, simple frequencies of numerical variables were expressed as mean and standard deviation and compared using the Student t test. Categorical variables and comparison between different ratios were analyzed using chi-square. Results: The average age of women was 27.61 years old (SD ± 6.67), with a minimum age of 18 and maximum of 47. Among the patients who were interviewed, 61.01% (n = 82) used as a contraceptive method a combined oral contraceptive, 18.7% (n = 25) used condoms and 8.2% (n = 11) did not use any method. When asked about the EC, 85.9% (n = 116) reported knowing about the method, but only 43% (n = 50) of those said they would know how to use it. Among 50 patients who reported using the EC, 28% (n = 14) reported using the method correctly. The prevalence of use of EC in the sample was 19.4% (n = 26). Conclusion: We found a relatively high use of some contraception method. Although emergency contraception was known by a high percentage of patients (85.9%), the method was perfectly known by only 43% of the patients.

The role of the contraceptive strategy in reproductive health of Ukrainian and Russian students

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Objectives. To assess the state of reproductive health of Ukrainian and Russian students, their awareness of safe sexual behavior and efficiency of various methods of contraception. Methods. In 2009-2011 an anonymous questionnaire was distributed among 569 adolescents and young people aged 16-26 residing in Kharkiv (Ukraine) and Moscow (Russia). Among them: 100 high school students, 80 vocational school students, 389 university students. The frequency of adolescent pregnancies and the effectiveness of different methods of contraception have been considered. Results. 62% have had sexual contacts (the older ones – more often). The average age of the sexual debut was 15.4 years old (Ukraine), 16.1 years old (Russia). The majority of them are vocational school and university students. Only 22% used contraceptives, mostly condoms (without reliable difference in Ukraine and Russia). The analysis of the effectiveness of oral contraceptives (COC) in 80 young women showed that the use of COC (30-20 mkg ethinylestradiol+gestodene) caused the lowest level of complications and side effects. In order to raise the quality of informing young people, elective courses on the healthy way of living and contraception have been introduced; the syllabus includes lectures and seminars for students and lectures for parents of high school students. Conclusion. The high efficiency of using COC has demonstrated not only a good contraceptive effect but has also helped in the therapy of acne and menstrual disorders. Activities on raising the awareness of Ukrainian and Russian students of safe sexual practices provides for preserving the reproductive potential of the young people.
P16 Gynecological surgery

P16.01 The use of antiadhesive material in Gynecological surgical procedures as a preventive measure for peritoneal postoperative adhesions
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Objective: The purpose of this study was to evaluate the use of absorbant anti adhesive material produced by regulated oxidized regenerated cellulose in gynecological surgical. Materials-Methods: This study concerns 52 women 42-81 years old, implicated in gynelocological surgical procedures. In those procedures we used absorbant anti adhesive material produced by regulated oxidized regenerated cellulose which was stabilized for topical use. According to reference 60-90% of patients develop postsurgical intraperitoneal adhesions for various abdominal diseases. Postsurgical intraperitoneal adhesions is the major cause of intestinal occlusion and it is the 30-41% of all the surgical procedures that demand a new surgery for removing adhesions. Although 65-75% of all cases they cause small bowel occlusion, adhesions appear to cause chronic pelvic pain and female infertility. Other factors that play a role in adhesion formation are, mechanical wound of tissues, infection or inflammation, blood clot, ischemia, non absorbable stitches, rubber gloves, dry pads and the use of diathermy. Results: There was a dramatic reduction by 50% and 96% in first appearance and reappearance of postsurgical intraperitoneal adhesions. Clinical studies show improvement in the severity 38% and extension 33% of surgical adhesions. Possible complications of the use of this material are acute infection or inflammation (the use for the first time surgical transplantation materials can cause transient mild inflammation), allergic reaction. The results of the use of absorbant anti adhesive material are statistically important. Conclusion: The clinical importance of the use of absorbant anti adhesive material in the prevention of postsurgical intraperitoneal adhesions is statistically

P16.02 Autologous blood transfusion on selected gynecological operations
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Objectives: To present an alternative transfusion method without the danger for infection and by parallel spare blood. Materials and Methods: Autologous blood transfusion is an alternative method for patients that are on the way for a programmed surgery. Autologous transfusion is the process of collection and conservation of blood or its products from a donor and administration to the same person. The candidates for this are not obligated to meet all the criteria of homologous donors. The protocol followed is:

1) Age 20-70 years old.
2) Lower hemoglobin count 12g/dL
3) Time interval between donation is 8-10 days
4) The last donation is 3-5 days before scheduled operation date
5) Donation is checked for infectious diseases and is kept separately in case of seropositivity
6) People with infections, malignancy, cardiopathies, diabetes are excluded

Results: At patients scheduled for an operation we administer 2 to 4 blood units preoperatively and 1 to 4 units will be needed during or after the surgery. On OBGYN we use autologous transfusion for: Ovarian cystic mass extraction, abdominal hysterectomy for a myomatous uterus, myomectomy, vaginal hysterectomy for uterine prolapse, breast lipomas, reduction mammaplasty, abdominal hernia repair.

Conclusion: Autologous transfusion is very helpful at prevention of infectious diseases on transfusions, at blood sparing, at prevention of alloimmunization, at patients with previous allergic reactions and others with religious issues.
The role of type of suture material in postsurgical adhesion formation pathogenesis

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The purpose of this research was to study wound-tissue plasminogen activator (tPA) expression changes in parietal peritoneum and clarify acute postsurgical inflammation features as well as frequency and severity of adhesion formation depending on type of used sutures (plain catgut & prolene) and fibrin glue technique for wound repair in rats. Our experimental protocol was approved by the University Review Board and Animal Care Committee. The design of this study is consisted surgical procedures in rat parietal peritoneum model, and investigation of wound tPA expression by Todd’s histochemical technique, as well as macroscopic and histopathological monitoring of wound healing for 3 weeks. Endpoints of our experiments were evaluation of adhesion formation frequency and severity by scoring scale. Statistical analysis was performed by GraphPad Prism software by one/two-way ANOVA using Tukey-Cramer / Bonferroni post-tests and finalized by Spearman nonparametric correlation. Mean±SD is indicated unless stated otherwise. More pronounced residual peritoneal tissue inflammatory reaction parameters with drastically depressed tPA activity followed by formation of multiple and severe adhesions were registered after plain catgut in comparison with those after prolene (p<0.01). A quantity of all postsurgical wound healing changes and a degree of adhesion frequency and severity values of both suturing techniques were significantly higher than those fibrin glue (p<0.001). In conclusion, a suturing technique with plain catgut seems to be the most aggressive factor in the pathogenesis of postsurgical adhesion formation by triggering severe inflammatory reactions of the peritoneal tissue surrounding sutures with pronounced inhibition of tPA activity in our experimental model.
The driving mechanism of carbon dioxide pneumoperitoneum-induced systemic changes in respiratory impaired animal models

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Objectives: to evaluate systemic changes in the arterial blood, including pH, blood gases (BG); acid-base balance (ABB) and blood oxygen/oximetry (BOO) parameters and lactate concentrations (LC), during CO2-pneumoperitoneum in rabbits with impaired and optimal respiratory functions. Study design: Protocol approved by university animal care committee. 56 rabbits were divided into 3 series (spontaneous breathing, impaired or optimal ventilation) and 7 groups: 3 control groups with anesthetized rabbits without intubation; 4 experimental groups with anesthetized and intubated rabbits. CO2-pneumoperitoneum was created in rabbits belonging to 6 groups with intraperitoneal pressures (IPP) 6 or 10 mmHg. Arterial pH, BG, ABB, BOO and LC assays were analyzed before and during CO2-pneumoperitoneum every 15 min for 2 hours. ECG, pulse rate, peripheral blood oxygen saturation and respiratory parameters were monitored throughout all experiments. Results: CO2-pneumoperitoneum causes carboxemia, acidemia with respiratory and metabolic acidosis. Systemic disturbances in blood gases and acid-base parameters are accompanied by dramatic changes in the oxygen metabolism with subsequent metabolic hypoxemia. An impact of the CO2-pneumoperitoneum was more pronounced in impaired respiratory function animals with increased IPP, whereas changes were minimal in animals with optimized respiratory functions and with lower IPP. Summary: IPP, acting as a driving mechanism, leads to progressive carboxemia, acidosis with a deficiency of the buffer bases, and subsequent decreased blood oxygen transport ability resulting in metabolic hypoxemia. These effects are pressure related and pronounced in animals with impaired respiratory function affected by increased IPP, inversely less pronounced in animals with optimal respiratory function with decreased IPP.
The driving mechanism of CO(2)pneumoperitoneum-induced local and systemic changes during laparoscopic surgery
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Purpose of this presentation was to formulate an original concept concerning driving mechanisms of carbon dioxide pneumoperitoneum-induced local peritoneal and systemic changes during laparoscopic surgery. A literature review and results of several own original studies were summarized. A large body of literature has been covering studies of the pathophysiologic mechanisms of carbon dioxide pneumoperitoneum-induced systemic alterations, local disturbances in the peritoneum (peritoneal pH and mesothelial hypoxemia) and local blood circulatory deteriorations. Nevertheless, many aspects of these problems remained controversial. It is well known that CO2 always moves in accord with the tension gradient. So, this phenomenon can be explained by the fact that during CO2 insufflation, mesothelial surface CO2 tension is considerably higher than that in both arterial and venous blood. This CO2 tension gap between mesothelial surfaces of peritoneum and the blood makes CO2 pass through the peritoneal tissue and the capillaries into the venous blood. In accord with our conception, the key driving mechanism can be the increased peritoneal tissue-to-venous and venous-to-arterial CO2 tension differences resulting in high-pronounced venous CO2 partial pressure with gradually increased arterial CO2 partial pressure values could be the explanation for all systemic disturbances during laparoscopic surgery. Consequently, it seems, that intraperitoneal pressure is a determining mechanism of carbon dioxide pneumoperitoneum-induced local peritoneal and systemic changes during laparoscopic surgery, whereas other factors, such as gas temperature, impaired respiratory and cardiac functions play contributing role in pathophysiology of this phenomenon.

Results of our Hospital 'Gynecological Outpatient Surgical Unit'
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Objective: To describe and analyze the activity carried out in the Outpatient Surgical Unit (OSU). Material and Methods: A descriptive and retrospective trial is presented. We reviewed the charts of patients who undertook outpatient surgery at our Department of Gynaecology between February 2000 and June 2009. The main outcome measures were: number and types of surgery, overall complication rate, number of hospital admissions and number of cancelled interventions and causes. Inclusion criteria were: ASA (American Society Anesthesiology) I or II, absence of drug addiction, address located less than 30 minutes drive from the hospital and adequate conditions of residence. Procedures performed in OSU were: surgical and diagnostic laparoscopy, diagnostic and surgical hysteroscopy, cerclage, cervical conization, essures insertion and vulva minor surgery. Results: A total of 3780 patients. A mean of 378 women had their surgery performed per year (281-478). The most common procedure was surgical hysterectomy (1827 patients, 48.7% of surgical procedures), followed by surgical laparoscopy (1143 patients, 30.2% of total interventions). Hospital admission was required in 222 women. This means a global admission index of 5.9%. The main hospital admission rate occurred in women who underwent surgical laparoscopy, with an admission index of 16% (188 cases), in comparison to a 1.03% for surgical hysterectomy. Conclusion: Outpatient surgery is an appropriate process for surgical treatment of different gynaecologic pathologies. The rate of, hospital admission may be low, as long as a correct selection of the patients is done.
Evaluation of the improvement of hysteroscopy in a university hospital

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Introduction: hysteroscopy is indicated to treat intrauterine diseases such as endometrial polyps, sub mucous myomas, septet uterus, uterine synechiae and assessment of infertility. The main complications are uterine perforation, laceration of cervix, fluid overload, infection, hemorrhage. Objective: The purpose of this study was to compare the changes that occurred in an operative hysteroscopy unit at a tertiary care university hospital in two different moments, analyzing factors as operative time, procedure complexity and its complications. Methods: a retrospective descriptive study, including women undergoing operative hysteroscopy in two distinct periods (62 patients in 1999 and 100 in 2007), at CAISM/UNICAMP. Factors analyzed were type and length of procedure, type and length of anesthesia, complications during the procedure, collected from medical reports. Results: there were a significant reduction in mean operative time (31.8 minutes to 19.7 minutes; p<0.0001) and mean anesthesia time (160 minutes to 141.7 minutes; p=0.0246). The most common procedure was polipectomy, increasing from 54.8% to 71% (p=0.03). The complication rate was 8.06% and 9%, respectively in 1999 and 2007, with 8% of uterine perforations. Conclusions: there was an improvement throughout the studied period as demonstrated by a decrease in operative time keeping the same complication rate, which is comparable to that in literature. More efforts should be taken to attempt less complications.

Ambulatorial surgical correction of labia minora hypertrophy

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Hypertrophy of the labia minora is a cause of functional and aesthetic discomfort. It’s considered constitutional, but also can come from external trauma, impaired lymphatic drainage and hormonal changes. Surgical repair is performed at the hospital environment, generating additional costs and time for the patient. The ambulatory surgical correction of the deformity was made under local anesthesia, using a modified technique of superior pedicle cutaneous flap. Twenty patients were selected, from 01/01/2005 to 31/12/2010. All patients were submitted to a preoperative evaluation. Everyone was instructed to use topical anesthetic before the procedure. In gynecological position, after antisepsis and asepsis, was administered Lidocaine hydrochloridel with Hemitartarato Norepinephrine, in a gum needle on the right labia minora, then pulled its middle portion, and proceed an incision in “L” of two sections, the first beginning under the clitoris’s prepuce and ending at the inner portion; the second beginning on bottom, near the transition mucocutaneous, toward the internal vertex. Hemostasis and continuous suture were performed with absorbable suture line, using intradermal stitches started on the outside and ended on the inner side, (the same technique was done in the contralateral side). Ambulatory patients were immediate discharged and instructed to use prophylactic antibiotics and analgesics. All results were satisfactory; just one case had a unilateral hematoma. The outpatient surgery with the modified technique of the superior pedicle cutaneous flap proved to be executable, inexpensive, with minimal morbidity and immediate return of the patients to their usual activities, also with functional and aesthetic satisfaction.
P16.09
**Uterine teratoma: report of a rare event**

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Introduction: Mature cystic teratoma are the commonest germ cell tumours, composed of well-differentiated tissue derived from at least two of the three germ cell layers and most frequently found in the testes and ovaries. Extragonadal teratomas are rare and mainly occur in midline structures, including the thyroid, retroperitoneum, mediastinum, pericardium and brain. Uterine teratomas are extremely rare, usually involving mature teratomas of the uterine cervix. Case report: We report a case of a 37-year-old woman that presented at hospital consultation for definitive sterilization. She had prior history of conization because of in situ squamous carcinoma of the cervix eight years ago. The remaining gynecological history was irrelevant and the patient was well at that time. She was proposed for tubal sterilization by mini-laparotomy. During the intervention an irregular and stony nodular formation with 2 cm in diameter was detected in the region of the right uterine horn and completely removed; the remaining pelvic structures were macroscopically normal. The anatomopathological examination surprisingly revealed an uterine teratoma with heterologous (cartilaginous and bony) components. At the present time, she is asymptomatic, except for menorrhagia due to an intramural myoma. Discussion: In the described case, we were faced unexpectedly with a teratoma of the uterine horn diagnosed during laparotomy for definitive sterilization in an asymptomatic woman, being of scientific interest because of its rarity. Preoperative diagnosis can be difficult due to the variable sonographic appearances of uterine teratomas, which frequently lack the characteristic dense echogenic tubercle; moreover, its clinical presentation is usually nonspecific.

P16.10
**Abdominal sacropexy: how safe? A case report**

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Incidence of post hysterectomy vault prolapse is reported as high as 18 % of the cases. Many surgical approaches have been performed to correct apical prolapse; since its introduction at 60’s decade, abdominal sacropexy has been shown to be reliable. Complications are rare and most frequently include hemorrhagic risk and re-operation for prolapse. A 51-year-old woman was referred for abdominal pain, cramping and urinary symptoms with 2 weeks of evolution. She had an abdominal hysterectomy 20 years ago because of fibroids and 6 months before she underwent sacropexy with Mersilene® mesh because of a stage IV vaginal vault prolapse. Vaginal vault was normally placed; a painful vaginal examination and an abdominal distention was noted. CT scan revealed a cystic lesion occupying the pelvic excavation extending to the hypogastric region involving ileal segment and areas of wall thickening suspicious of ovarian malignancy. Leukocytosis with neutrophilia was found. CA 125 was normal. At laparotomy the loops of ileum were markedly thickened and matted together, adherent to the peritoneum and serosa of bladder. In the pre-sacral region an abscess between the intestinal loops was identified. Draining of abscess and segmental bowel resection with end to end anastomosis were performed. Histology showed a foreign body reaction. S. aureus was isolated. This case report illustrates that a graft reaction to the mesh can potentially mimick malignancy or lead to an acute abdomen demanding a major reintervention.
Adnexial pathology - is laparotomy a thing of the past?
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Introduction/aim of study: Adnexial pathology is a common finding in our area and can be addressed through laparotomy or laparoscopic surgery. The purpose of this presentation is to review the most common adnexial problems, the approach used to treat them and to assess if laparotomy is still a frequent option of surgical treatment. Materials and Methods: Systematic review of all cases of adnexial pathology operated in my hospital during the year 2010, surgical option and indication of laparotomy versus laparoscopy. This review will be associated with bibliographic research. Summary of Results: During the year 2010, the gynecologic department operated approximately 830 women with various pathologies. Adnexial pathology accounted for almost 160 of those surgeries. Compared to other hospitals, we still have a considerable share of laparotomic procedures due to lack of experience in this area. Conclusions: Laparoscopic approach for adnexial pathology is indeed the most common way of treatment. Although limited by size of lesions, adherencial processes, availability of the surgical material and experience of the surgeon. The post-operation recovery is better with shorter hospital stay and faster return to normal life. Thus, the learning curve of interns must necessarily involve acquiring capabilities in laparoscopic procedures.

Positive margins after conization, is there a risk?
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Introduction: Cervical cancer is one of the most common gynecologic malignancy in the world. Cervical intraepithelial neoplasia (CIN) is a precursor to cervical cancer. Excisional treatment can be performed using a scalpel, laser, or electrosurgery (electrosurgical excision procedure - LEEP or LLETZ). There is no evidence that one technique is significantly better than another. Studies have consistently shown that patients with positive margins after an excisional procedure are at significantly higher risk for residual disease as determined at subsequent hysterectomy or with repeat excision than patients with clear margins. The combined risk of persistent, recurrent or progressive disease when margins were positive were 17, 21 and 52% of respectively after 6 to 30 years follow up. Objective: To study the relationship between positive and the risk of recurrent or progressive disease, taking into account size of the conization piece and the presence of risk factors for cervical neoplasia. Methods: Retrospective study of the conizations with positive margins performed in our hospital between January 2006 and December 2010. During this period, our units made 6730 colposcopies and 458 conizations were needed. In most cases margins were negative except in 95 cases. In 5% of cases a reconization was needed. Further results will be presented latter. Conclusion: The main objective in the follow-up of patients after conization is the early detection of residual or recurrent cervical disease. The detection of a positive margin is crucial.
Effects of delay to surgery for stable patients with ectopic pregnancy

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Background: CMACE identified 6 maternal deaths for ectopic pregnancies (EP) in the last triennium. “One maternal death was reported whilst an inpatient with suspected EP was waiting for repeated serum HCG readings”. NCEPOD recommendations have led to an avoidance of out of hours operations in stable patients. Currently there is no guidance addressing possible morbidity or mortality relating to delays in surgery for stable patients. Methodology: Retrospective multicentre baseline audit. Cases of EP from 01/07/2008 to 30/06/2009 were included. Exclusion criteria included unstable patients with ectopic pregnancy and where the “decision to surgery time” (DtST) was unknown. Unstable patients were defined as patients with an “admission to decision time” (AtDT) shorter than 4 hours and a DtST shorter than 2hs. Results: 126 cases were analysed. 106 patients had their operation within 24hs of DtST. One patient became unstable after 7 hours whilst awaiting a pelvic ultrasound. She required laparotomy and blood transfusion. The other patient had a live EP on ultrasound and collapsed after 11 hours whilst awaiting surgery. 20 patients had their operation after 24hs from DtST. No significant morbidity was noted. There was a statistically significant increase in the length of stay in hospital (Mann-Whitney U Test p=0.008). Conclusion: Risk of rupture is 1.6% in stable patients and 9% in patients with a live EP. The later group should undergo their operation promptly. Delay in operating more than 24hours is associated with a longer post-operative stay. Despite being statistically significant, this may not be clinically significant.
**P16.14**  
**Single-port access laparoscopic-assisted vaginal hysterectomy: preliminary results**  
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**Objective:** To report the first series of single-port, transumbilical laparoscopic assisted vaginal hysterectomy (LAVH) using a novel operating device. **Material and Methods:** 20 patients affected by pelvic disease and uterine pathology indicating the laparoscopic assistance to vaginal hysterectomy. LAVH was performed using a laparoendoscopic single-site approach with a new multiport reusable trocar (S-Portal X-Cone Storz, Tuttinglen) and novel, specialized instruments, bowed in the shaft for triangulation. **Results:** No conversion to multi-access standard laparoscopic technique or laparotomy and no intraoperative or postoperative complications were observed. Mean operative time was 90 minutes. The patients were discharged the second day after surgery and did not receive any medication after 12 hours. **Conclusion(s):** Single port access for LAVH is feasible safe and effective, with good results in terms of cosmesis, postoperative pain and patients satisfaction.

**P16.15**  
**Recurrence of ectopic pregnancy homolateral after previous surgical treatment**  
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Ectopic pregnancy (EP) occurs in 2% of all pregnancies. Most common in the ampullary portion of the tube (> 80%), the cornual region is a rare implantation site (2%). EP is the leading cause of pregnancy-related death during the first trimester in the United States: 9% of all pregnancy-related deaths. **Clinical case:** In November 2010, women of 36 years old, OI: 3003, without contraception came to our hospital. She had amenorrhea and in the last month metrorrhagia and pelvic pain. Observation in ER: hemodynamically stable, painful abdomen, vaginal blood loss, enlarged uterus and in its lateral and right cornual region a pelvic mass (5cm). Ultrasound: heterogeneous uterus, regular endometrial line, gestational sac with an embryo about 6-7 W located at right cornus She was submitted to laparotomy, with resection of the right cornual pregnancy and salpingectomy. Histology – right salpingectomy with 4.5 cm, uterine right cornus with chorionic villis plus umbilical cord. At January of 2011, she turns to the ER, this time with an EP at right tube. Surgical treatment: right salpingectomy by laparotomy. The cornus was intact with no signal of dehiscence. Histology – right tube with gestational sac and macerated embryo. Can subtotal salpingectomy first performed explain the recurrence of EP in right tube? Ectopic pregnancy presents a major health problem for women: is a life-threatening situation leading to massive hemorrhage, infertility, or death. Laparotomy is usually reserved for patients with cornual ectopic pregnancies - easier haemeostasis of the cornual region.
P17 Sexuality

P17.01
Expression of phosphodiesterase type 1 (PDE1) in the human vagina: relation to calcitonin gene-related peptide (CGRP) and vasoactive intestinal polypeptide (VIP)

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Objectives: An increase in vaginal blood flow is considered a key event in the mechanism of sexual arousal. Recent research has focused mainly on the cyclic GMP pathway and the phosphodiesterase 5 (PDE5, cyclic GMP PDE) in the control of vaginal vascular smooth muscle, whereas little is known on the role of other key mediators of the cyclic nucleotide mediated signaling in this process. The present study aimed to evaluate in the human vagina, by means of immunohistochemistry, the expression and distribution of phosphodiesterase 1 (PDE1, known to hydrolize cyclic AMP and cyclic GMP) in relation to the calcitonin gene-related peptide (CGRP), vasoactive intestinal polypeptide (VIP), and protein gene product 9.5 (PGP 9.5).

Methods: Sections of the human vagina (full wall specimens) were incubated with antibodies directed against PDE1, CGRP, VIP, PGP 9.5 and alpha-actin, followed by exposure to fluorochrome-labelled secondary antibodies. Visualization was commenced by means of laser fluorescence microscopy.

Results: Microscopical examination revealed a meshwork of PGP 9.5-positive nerve fibers innervating the vaginal wall. Small vessels interspersing the tissue presented dense staining for PDE1, while no signals were observed in the non-vascular smooth muscle. The vessels were found innervated by PGP-positive varicose nerve fibers characterized by the expression of CGRP. Some fibers also presented immunosignals for VIP. Conclusions: Mediators of the cyclic AMP and cyclic GMP pathways are co-localized in nerves seen in close proximity to vascular smooth muscle expressing PDE1. These findings give hint that both signaling cascades are involved in the control of vaginal blood flow.

P17.02
Key enzymes of the cyclic GMP signaling in the human clitoris: relation to phosphodiesterase type 5 (PDE5)

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Objectives: The clitoris contributes to the normal female sexual response cycle. The expression of the phosphodiesterase 5 (PDE5) in clitoral erectile tissue has been shown and a significance of cyclic GMP assumed in the control of clitoral vascular and non-vascular smooth muscle. However, only little is known on the mechanisms controlling this particular female genital organ. The present study aimed to evaluate in the human clitoris the expression and distribution of key enzymes of the cyclic GMP pathway, such as the endothelial nitric oxide synthase (eNOS), PDE2 (cyclic GMP-binding PDE) and cyclic GMP-dependent protein kinase GI (cGK1), in relation to PDE5.

Methods: Specimens of the human clitoris (mid to proximal portion) were obtained from four female cadavers (age at death 18 - 42 years). Sections were exposed to antibodies directed against eNOS, PDE2, PDE5 and cGK1, then, fluorochrome-labelled secondary antibodies were added. Visualization was commenced by means of laser fluorescence microscopy.

Results: Immunohistochemistry revealed the presence of PDE2, PDE5 and cGK1 in vascular smooth muscle of vessels transversing the supr epithelial and stromal space. These vessels were characterized by the expression of NOS in endothelial cells. Immunosignals specific for PDE2 were also identified in interstitial-like cells located in the basal epithelial layer. Some of these cells also presented immunoreactivity for vimentin, known a feature of interstitial/neuroendocrine cells. Conclusions: The results are in favor of a role of the cyclic GMP signaling in the control of clitoral blood flow and the mechanism of local (neuro)transmission.
P17.03
The transient receptor potential cation channel type A1 (TRPA1) is expressed in human vaginal tissue
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Objectives: The transient receptor potential cation channel type A1 (TRPA1) belongs to a superfamily of membrane channels. These channels have been suggested to act as mechano- and pain sensors and, thus, to play a role in neurotransmission in various tissues, including the urogenital tract. Up until today, no study has addressed the expression and distribution in female genital tissues. The aim of the present study to evaluate in the human vagina the localization of TRPA1 in relation to neuronal nitric oxide synthase (nNOS) and the signalling peptide calcitonin gene-related peptide (CGRP). Methods: Vaginal tissue was obtained from 5 pre- or post-menopausal women. The expression of messenger RNA encoding for TRPA1 in human vaginal wall and epithelium was investigated by means of molecular biology (RT-PCR analysis). Using immunohistochemical methods, the distribution of TRPA1 in relation to nNOS and CGRP was also examined. Results: RT-PCR analysis demonstrated the expression of mRNA encoding sequences specific for TRPA1 in the vaginal wall and epithelium. Immunosignals related to TRPA1 were observed in the basal epithelium and in slender nerve fibers transversing the subepithelial space of the vagina. These fibers also presented immunoreactivity specific for nNOS and CGRP. The vascular and non-vascular smooth musculature of the vaginal wall did not present signals related to TRPA1. Conclusion: The findings indicate that TRPA1 might be involved in afferent neurotransmission in the vagina and work synergistically together with the NO/cyclic GMP pathway. This might be of significance with regard to the control of the female sexual response cycle.

P17.04
The working woman and mobbing syndrome at Western Greece, Epirus and The Ionian Islands
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Objective: Over the last decade a new phenomenon has shown up in the workplace that threatens the health and safety of employees. Our purpose is to study possible existence of Mobbing syndrome among working women. Materials and Methods: 720 working women at different workplaces of the public and private service. This study was a qualitative analysis based on a questionnaire that was given to those women. Result: We noticed the existence of Mobbing syndrome among working women. That means sexual harassment between working partners or between employer and employee, a systematic and constant attack against a specific victim that finally is pushed towards losing her job. It is important for working women to be treated with appropriate behavior at the working place. Conclusion: The legal framework and the prevention Centers of Occupational Hazard by the European Union was a prerequisite to improve the working circumstances of women and further guarantee their working heath.
Comparison of sexual dysfunctions among female partner of fertile and infertile couples in Iran
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Objectives: Infertility and its related treatments have great somatic and psychological distress for infertile couples. When couples see infertility as a serious threat for their marriage life, their reaction would be intense and will affect their sexual interests. These reactions would be harmful for the individual and family mental health. The aim of this study was to compare various types of sexual dysfunctions among female partner of fertile and infertile couples. Methods: This research was a case–control study in which enrolled 140 female partners of infertile couples, and 140 female partners of fertile couples referred to the health centers for receiving routine services, which were selected by simple sampling. Structured questionnaire by using DSMIV-TR and FSFQ questionnaires was utilized for data collecting. Validity and reliability of questionnaires were determined. Also for data analysis chi-square and t test are used by applying SPSS software. Conclusions: Findings showed that the rate of sexual dysfunctions in the female partner of infertile couples were higher than that of female partner of fertile couples, and significant relationship was found between sexual dysfunctions, and marriage duration and number of delivery in female partner of fertile couples, also between sexual dysfunction in female partner of infertile couples. Infertility influence the various dimension of life infertile couples and may cause psychological sexual dysfunctions. So attention to this dimension of life in these person and institute sexual dysfunctions diagnostic and treatment centers in infertility clinical are necessary to improve the quality of relationship in these persons.

P17.06
Sexual quality of life in patients with Mayer-Rokitansky-Kuster-Hauser Syndrome (MRKHS) or Complete Androgen Insensitivity Syndrome (CAIS) after vaginal substitution treatment
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Vaginal hypo- or aplasia is associated with a number of different diagnoses, e.g. Mayer-Rokitansky-Kuster-Hauser Syndrome (MRKHS) or Complete Androgen Insensitivity Syndrome (CAIS). As the vagina is not or only partly developed sexual intercourse is hampered and many patients will seek treatment. Treatment options are manifold starting with less invasive dilation schemes to surgical transplantation procedures. As medicine has much to offer, how do patients evaluate the outcomes? Can afflicted women hope for a sexual life that is comparable with that of healthy individuals? Questionnaire data were collected within the scope of the Hamburg study on “Androgens, Quality of Life and Femininity” *. Total sample size amounted to n=49 patients with treated (partial) vaginal aplasia. Participants were interviewed about insecurities regarding sexual encounters, interest in sexual activities, sexual practices, sexual function, sex-related problems and satisfaction with their genitalia. Standardized measures were employed along with self-developed scales and open questions. Satisfaction ratings concerning their sexual lives are surprisingly high. Still, participants’ reports about sex-related problems include several somatic as well as psychosexual difficulties. Results will be discussed with regard to healthy controls. Comparisons between treatment groups as well as diagnoses will be presented. Earlier studies report good sexual function after vaginal reconstruction. Yet, our participants describe more distress than healthy controls in certain domains. This supports the notion that vaginal substitution is often effective, but even after treatment problems may occur. This should be a matter to consider when counselling these patient groups.

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Successful treatment of 149 patients with chronic refractory vaginitis with a novel pegylated Vanadium compound
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In a phase I trial based on preclinical and toxicology studies; we treated patients with refractory vaginal discharge of different etiologies with the most active of twelve pegylated Vanadium compound studied. With strict eligibility criteria, patients with vaginal discharge of longer than six months duration who failed to respond to three local and two systemic treatments were enrolled. At beginning, patients with acute or chronic PID or cervical ulcerations were excluded but as the response of the first few patients was excellent they were also included although their data were evaluated separately. Patients were studied with physical exam, routine labs, urinalysis, culture, antibiogram and vaginal culture for bacteria and fungi. In very special cases culture for Trichomonas were also done. Patients received a single session of local vaginal washing with the solution. Re-examination and culture after one week was performed. Clinically, 93, 31 and 7 patients responded after the first, 2nd and third session (complete response rate = 88 %) without major side effects and excellent compliance. Rarely, contact of the anterior urethra caused minor dysuria. Symptoms due to PID improved; cervical ulcers healed in almost all. Bacterial vaginitis responded best while fungal and Trichomonas (probably) vaginitis responded. Evaluation by Nugent criteria was excellent. Rarely, contact of the anterior urethra caused minor dysuria. One patient showed a diffuse symptom free vaginal whitening with fungal superinfection which was successfully treated with the same solution and Itraconazole.

Evaluation of the influence of delivery mode on sexual functioning after childbirth in primiparous women
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Objective: To evaluate the influence of delivery mode on female sexuality 6-9 months after childbirth. Methods: 85 primiparae who delivered vaginally without complication and 67 who underwent elective cesarean section after 37-39 weeks of gestation were included. Sexual function was assessed by a validated self-reported questionnaire, the Female Sexual Function Index (FSFI), 6 and 9 months after birth and compared between groups. The subjects were subdivided into four groups, including: group A, spontaneous vaginal delivery (SVD) without injuries (N = 34); group B, vaginal delivery with episiotomy (VDE) or perineal laceration (N =51 ); group C, operative vaginal delivery (OVD) (instrumental delivery) (N = 4), group D, elective cesarean section (PCS) (N =67). Additionally, subjective stress variables were evaluated. Results: Recall of dyspareunia at 3 months after childbirth was higher in patients who underwent vaginal delivery. Women with vaginal delivery had statistically significant lower FSFI scores as compared with PCS women. Women who experienced a PCS had lowest pain scores, and women who had OVD had highest pain scores at first. The research has shown that QOL parameters for PCS women were generally higher than the other groups, and this concerns almost all categories. Conclusions: Instrumental deliveries are rare, associated with the highest score of maternal sexual disfunction. Perineal lacerations and/or episiotomy are also associated with a high rate that may affect women's sex life with frequent pain and vaginal dryness at intercourse. PCS is associated with the lowest rate of short-term maternal sexual dysfunction. Arousal, orgasm and satisfaction with sex were not affected.
P17.09
Dynamics of change in bone mineral density in women of reproductive age with a drug – depended hypoestrogenia
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The objective: to evaluate the change in bone mineral density in women of reproductive age with a drug – depended hypoestrogenia. Materials: Examination of 110 women of reproductive age (37 ± 2,5 years) with a drug – depended hypoestrogenia was performed. I group - 20 women taking progestogens (Didrogesteron 30 mg / day from 5 th to 25 th days of the menstrual cycle). Group II - 20 women receiving GnRH agonists (goserelin 3.6 mg / month). Group III women - 20 women taking an antagonist of gonadotropin (Gestrinon 2.5 mg twice a week for 6 months). The control, IV, group included 50 women without a drug – depended hypoestrogenia. The study was conducted initially, and 6 months after the drug – depended hypoestrogenia therapy. Results. In group I initial level of the BMD (SD) was -0,7 ± 1,26. After treatment was revealed an increase in BMD: 0,32 ± 1,2; r = 0,49, p <0,5. In group II baseline BMD (SD) was -1,19 ± 1,3. After treatment revealed a significant decrease in BMD: -1,6 ± 1,27;r = 0,98, p <0,001. In group III baseline BMD (SD) was -0,66 ± 1,12. After treatment revealed a significant increase in BMD: -0,97 ± 1,11; r = 0,98, p <0,001. In group IV the initial level of the BMD (SD) was 0,65 ± 1, 21. Revealed no change in BMD evaluated after a year: -0,24 ± 1,14; r = 0,22, p <0,35. Conclusions. Drug – depended hypoestrogenia is at risk of changes in BMD in women of reproductive age.

P17.10
Psycho-physiologic analysis of anxiety condition in pregnancy after use of assisted reproductive technologies
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Priority and the significance of problems associated with perinatal consequences of infertility treatment in marriage are of great importance. Infertility is associated with the psycho-emotional status of patients, resulting in chronic stress. Taking into account the role of mental and somatic state in pathogenesis of various diseases we carried out complex examination of 45 pregnant women after assisted reproductive technologies and 40 women with physiological pregnancy. Infertility ranged from 3 to 12 years. To evaluate the severity and presence of emotional and personality disorders and individual manifestations of anxiety, as one of distress signs, psychometric scales were used. Psychological characteristics and anxiety level in patients were compared with parameters of CNS functioning (brain bioelectrical activity), autonomic nervous system (heart rate variability) and fetoplacental complex (ultrasonography, Doppler, echocardiography). Individual manifestations of stress-induced anxiety reactions in pregnant women were identified after assisted reproductive technologies. This is an actual problem of stress prevention in the given patient group.