Middle East Fertility Society

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6 to 8 November 2013

Abstract Book

Contents

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Oral Presentations

Thursday November 7, 2013

Room: Hall A

KEYNOTE LECTURE I

O-01 High Dose Gonadotropin Stimulation for IVF: Is it necessary and does it have a negative Effect or Outcome?

Suheil Muasher (USA)
Professor of Obstetrics and Gynecology, Duke Fertility Center, Duke University, Durham, NC, USA

Ovarian stimulation for recruitment of multiple fertilizable oocytes is an essential process for successful outcome in IVF.This process adds significantly to the cost of treatment and in certain situations will increase the risk of ovarian hyper stimulation syndrome (OHSS).There is considerable lack of evidence in the literature of increasing success rates in low responders with high dose gonadotropin stimulation. There is also evidence that mild protocols will result in a higher percentage of euploid embryos compared to moderate and traditional gonadotropin dosages.OHSS is one of the most morbid complications of IVF and the risk increases with a higher number of oocytes retrieved,usually over 15.Large data bases from the United Kingdom and USA show clearly that there is no significant benefit on fresh live birth rates with retrieval of more than 15 oocytes.Success rates from IVF should be redefined as the achievement of a singleton live birth with no OHSS.Mild ovarian stimulation protocols should always be attempted in IVF as they are more cost effective, produce a more receptive endometrium for implantation, and minimize the risk of OHSS in patients at risk.

Room: Hall A

CONCURRENT SCIENTIFIC SESSION 1: Poor Ovarian Reserve

O-02 Predictors of Ovarian Function

William Kutteh (USA)

Primary ovarian insufficiency is also known as decreased ovarian reserve. Typically women are of reproductive age and still have regular menstrual cycles and ovulate. The women will have a lower response to ovulation induction than expected and will have recued fecundity when compared to a cohort group. The underlying cause is follicular dysfunction or depletion. The disorder is distinct from menopause or premature ovarian failure. Most cases of decreased ovarian reserve (DOR) are unknown. However, the ultimate cause is either due to rapid atresia of a normal oocyte pool, normal atresia of a small oocyte pool, or the extreme end of a normal population. Known causes of DOR include systemic chemotherapy, pelvic irradiation, certain genetic abnormalities (45, X mosaicism or Fragile X FMR1 premutation), or certain autoimmune syndromes. Classically

maternal age has been used as a marker or ovarian reserve along with the Day 3 FSH level. More recently anti-mullerian hormone (AMH) levels and antral follicle counts have been demonstrated to be the most sensitive and specific measures of ovarian reserve. Certain factors know to reduce the AMH levels are obesity, tobacco use, oophorectomy, alcohol use, and ethnicity. The goal of ovarian reserve testing is to add prognostic information to the counseling and planning so that couples may make informed treatment choices. None of the screening tests are perfect and they should not be used as the sole criteria to deny patients access to ART

O-03 Ovarian aging – how do we assess it and what does it mean?

Marcelle Cedars (USA)

Age is strongest predictor of reproductive success. With increasing maternal age, monthly fertility rates decline and risk for spontaneous pregnancy loss increases. While we do not fully understand the underlying biological mechanisms, this impact is driven by the decline in oocyte numbers, and perhaps more importantly, the increase in oocyte aneuploidy. Thus, assessment of ovarian "age" and its impact on reproduction are critical as we manage patients in the clinic. This presentation will include information regarding the assessment of ovarian age, the usefulness of this information, and how this information impacts patient care. Information suggests time to conception increases with diminished AFC and AMH. Ovarian stimulation and IUI may help but combined fertility factors compromise outcome. IVF, however, seems to compensate for decreased AMH and AFC – at least for young women. Understanding what markers of ovarian reserve do, and do not, predict is critically to appropriately managing women in designing treatment plans for success.

O-04 IVF stimulation in the low ovarian reserve patient

Rony Elias (USA)

Abstract not received

Room: Hall B

CONCURRENT SCIENTIFIC SESSION 2: Menopause

O-05 Menopause- an update on management consensus and controversies*

Lubna Pal (USA)

Menopausal management has transformed over the past decade, with an obvious shift from a relatively liberal use of exogenous hormones in the pre-WHI era, to a more cautious stance regarding the place of menopausal hormone therapy in the management of menopause related symptoms. Concerns regarding long term implications of menopausal hormone therapy appear to underlie this change in clinical practice. Although today's clinicians are sensitized to the unique needs of an individual menopausal woman, and are better aware of the expanding spectrum of therapeutic options, the management paradigms still remain ambiguous for many and the dichotomy

of findings from observational studies and randomized trials continue to confuse patients and providers alike. Easy access to “proverbial” and “anecdotal” information via the internet has magnified the complexity of clinician-patient discussions and frequently influences patient choices and decisions related to menopause management. The goal of this session is to offer a critical review of evidence based recommendations that will provide clinicians with the skill set that assures provision of comprehensive care to women making the transition into menopause.

Learning Objectives

At the conclusion of this presentation, participants should be able to:

1. Appreciate the spectrum of menopause related symptom burden and health concerns
2. Identify the unique needs, and risks of women experiencing unnatural menopause
   (premature, surgical or following chemo-radiation)
3. Compare and contrast the efficacy, safety and side effects of available therapies (hormonal and non-hormonal) for common menopausal disorders
4. Individualize risk assessment and management strategies.

O-06 Progestins in hormonal therapy: Options and consequences

Raja Sayegh (USA)

The discovery that progestins eliminate the increased risk of endometrial cancer caused by unopposed estrogen therapy has made them a cornerstone of menopausal hormonal therapies (HT) for non-hysterectomized women since the early 1980’s. Because of this important benefit, the nuisance side effects of progestins eg. premenstrual tensions, vaginal bleeding, androgenic side effects, and increased mammographic density, have been accepted and tolerated for decades. In the past decade however, the Womens Health Initiative (WHI) and the Million Woman Study (MWS) have both revealed more serious risks of progestins (breast cancer and cardiovascular disease), mostly associated with long term oral use. While the search intensifies for an alternative to progestins in menopausal HT, practice strategies have evolved to minimize exposure and risks and maximize uterine protection. The range of options available today will be discussed along with some promising and novel investigational therapies.

O-07 Symptom management in the menopause

Raja Sayegh (USA)

Eleven years since the Women’s Health Initiative (WHI), the use of menopausal hormone therapy (HT) remains low and prescribing patterns continue to be limited to short term and low dose therapies for alleviation of hot flashes and atrophic vaginal changes. This despite good news about cardiovascular and breast cancer risks which have emerged from stratified reanalysis of WHI, and more recently from the KEEPS trial. The emerging body of evidence suggests that HT is not a singular entity and that risks are much more nuanced than originally thought. Type, dose, route, duration, timing, and patient selection for HT may all influence various risks. Individualized careful and thoughful risk/benefit analysis is essential for optimal clinical outcomes.

O-08 Delayed Puberty: Update

Richard Reindollar (USA)

In 1981 a large series of patients presenting with delayed puberty at a single institution was published. That series separated patients into those presenting with absent pubertal development (hypogonadism) and those who had initiated puberty but presented with delayed menarche. A number of clinical pearls were gleaned from that study including the fact that absent pubarche rarely accompanies absent thelarche and suggests a more serious etiology such as hypopituitarism. The most common causes of pubertal abnormalities in that series were premature ovarian insufficiency (commonly Turner syndrome), constitutional delay of puberty, and hypogonadotropic hypogonadism, then called idiopathic. Nearly two thirds of the patients had a defect with implications for future fertility. This presentation discusses salient points about the major etiologies and updates that series with information important to the current practice of reproductive care, including ART. Today molecular etiologies are now known for patients with premature ovarian insufficiency and hypogonadotropic hypogonadism. Importantly, data presented here point to the risk of death during and following pregnancy in women with Turner syndrome who go through donor oocyte IVF, a risk 100 fold greater that all-cause mortality for pregnancy. Appropriate screening, counseling, and guidelines for care are presented here.

O-09 The role of LH in ovarian stimulation

Professor Ioannis E. Messinis, MD, PhD, FRCOG
Obstetrics and Gynaecology, Faculty of Medicine, School of Health Sciences, University of Thessaly, Larissa, Greece

The two gonadotrophins are important regulators of folliculogenesis in humans. In IVF programmes, the ovarian stimulation results in the development of multiple follicles and in supraphysiological levels of estradiol and inhibin in blood leading to the suppression of endogenous gonadotrophin secretion. It is possible that, under stimulating conditions there is adequate residual LH in the circulation for the production of high amounts of estradiol. The suppression can be greater when a GnRH agonist is given in a long protocol. To maintain adequate amounts of LH in the circulation, milder ovarian stimulation protocols, lower dosages of the GnRH agonists or LH supplementation are recommended. Recent studies have not shown that the use of exogenous rLH improves the treatment outcome in terms of live birth rate. An absolute indication for the use of rLH in combination with rFSH is infertile women with hypogonadotrophic hypogonadism. Possible benefit is also provided by the supplementation of FSH with exogenous rLH in poor responder women. Further prospective randomized trials are required to study the role of rLH supplementation during ovarian stimulation.

O-10 Genetics and Phenotypes in Hypothalamic Amenorrhea: Future Use of Databases for Personalized Care

Richard Reindollar (USA)

Patients with hypothalamic amenorrhea may present with delayed puberty (previously labeled with idiopathic hypogonadotropic hypogonadism) or later in adult years after prior cyclic menses. Previously these two conditions were felt to represent very different disorders, although they both seemed to involve suppressed GnRH or gonadotropin secretion. Evidence is presented here that a subset of these patients may actually have a form of the same disorder. It is now known that a number of genes are involved in GnRH production, processing, neuronal development, secretion, and effect at the pituitary. In addition, other genes are involved only at the pituitary for gonadotropin secretion and yet another set of genes have effects at both the hypothalamus and pituitary, simultaneously. The evidence for mutations in each of these genes is presented. While usuallythese mutations cause delay of the onset of puberty, recent evidence demonstrates that (1) some of these mutations may cause reversible defects; (2) adult onset hypogonadism can occur in both males and females previously reproductively normal and be associated with the same mutations; and (3) specifically, some women harbor these mutations which predispose them to onset of hypothalamic amenorrhea. Evidence is presented here how knowledge about these mutations and similar disorders of reproduction will be useful for personalized medical management in the future for evaluation, counseling, and treatment.

Room: Hall A
KEYNOTE LECTURE II (The Professor Aboulghar lecture)

O-11 Implications From The NIH-funded FASTT And FORT-T Trials For Future Infertility Care*

Richard Reindollar (USA)

Couples presenting with unexplained infertility who have a reasonable chance for pregnancy (as evidenced by normal ovarian reserve) have been variably managed with observation, controlled ovarian hyperstimulation (COH) (with clomiphene or gonadotropins) and IUI, and IVF. Data are presented here as background supporting or raising questions about the rationale for these treatments. Two large NIH funded randomized controlled trials are presented that examine different treatment paradigms for couples found to have unexplained infertility. The FASTT Trial randomized 503 couples, the female partner under age 40 years, to one of two arms: Conventional Therapy (up to 3 cycles of clomiphene/IUI, followed by 3 cycles of gonadotropins/IUI, then up to 6 cycles of IVF) vs. a Fast-Track to IVF (up to 3 cycles of clomiphene/IUI followed by up to 6 cycles of IVF). The FASTT trial demonstrated that gonadotropin/IUI did not add value to a contemporary treatment paradigm: time to pregnancy was shorter and $10,000 less costly per delivery with the fast approach. The FORT-T Trial randomized 154 couples, the female partner 38 – 43, to one of 3 arms: 2 cycles of clomiphene/IUI then up to 6 cycles of IVF, 2 cycles of gonadotropins/IUI then up to 6 cycles of IVF, or immediate IVF with up to 6 cycles. The FORT-T trial demonstrated that the most effective treatment for women at the end of reproduction was immediate IVF. In addition, for those couples who begin treatment with COH and proceed on to IVF, the vast majority of babies born will be conceived through IVF.

O-12 DNA fragmentation in sperm

Fernando Sánchez (Spain)

DNA fragmentation is controversial today, but certainly, if we can choose, we prefer low DNA fragmentation index (DFI).
There are methodological problems related to the technique used to evaluate DNA fragmentation, SCD, SCSA, TUNEL, and even it's no consensus in the moment to do the test (hours from ejaculate). Another issue that arises is whether it is enough to do an isolated determination or if we must make a dynamic test. Also we must assess the age of the egg, because the greater the age the less their capacity to repair the DNA. For this reason in an egg donor program the DFI is of minor importance
We analyze different options in case of a high DFI level (> 30% using SCD):
Pre-treatment cycles in the male:
Antioxidants,
Diclofenac
Antibiotics
Changes in the way of collecting the sample
Repeated ejaculations (4 days prior to egg recovery)
Fractional ejaculation (using only the first portion)
Laboratory techniques:
Annexin V columns (MACS).
ICSI with sperm from a testicular biopsy.
The results of different techniques used in GINEMED are presented. In our hands, the most effective treatments have been as simple as the change in the way to collect the sample (5% more chance of pregnancy). For bad samples the best option is MACS (10% more PR in cases with high DFI) and, as a last resort, the use of testicular sperm. Treatment with antioxidants is of no harm, but of little value.

O-13 Are we ready to vitrify all blastocysts in eSET practice? Clinical outcomes derived from closed vitrification system.

Elias M. Dahdouh[1,2,3], Francisco L. A. Ferreira Gomes[1],Belina Carranza-Mamane[1,2,4], Louis Granger[1,2,3], Tiao-Virirak Kattygnarath[1], Faez Faruqi[1] and Pierre St-Michel[1].
1- PROCREA Clinics Montreal, Canada.
2- ART-PGD Center, CHU Sainte-Justine, Montreal, Canada.
3- University of Montreal, Department of Obstetrics-Gynecology, Montreal, Canada.4University of Sherbrooke, Department of Obstetrics-Gynecology, Sherbrooke, Canada.

Introduction: A closed blastocyst vitrification system is used to minimize the risk of contamination. In order to achieve good implantation and pregnancy rates, frozen blastocysts should maintain high developmental competency after warming.
Methods: This is a prospective cohort control study performed in a tertiary private infertility clinic. It includes 564 women who underwent a single embryo transfer at the blastocyst stage (SBT) fresh or frozen in an 11 months period in 2012. Blastocyst development was obtained either on culture day-5 or day-6. Women undergoing a single

frozen blastocyst transfer cycle (Frozen, n=138) were matched and compared to women undergoing fresh elective single blastocyst transfer cycle (Fresh, n=426). Only high-quality embryos were frozen, and all blastocysts were cryopreserved using the standard vitrification protocol from Irvine Scientific with CBS High Security Straws.

Results: Patients in both groups were homogeneous for age, and for duration, type and cause of infertility. In the Fresh group, the biochemical pregnancy rate was 42.7% while in the Frozen group it was 28.3% (P=0.0026). Implantation rate was higher in Fresh compared to Frozen (38.7% and 24.6% respectively, P=0.0029). Ongoing implantation rates (32.2% and 21.7% respectively, P=0.024) were also significantly higher in the Fresh group. Patients who underwent a fresh SBT had a mean of 1.2 ±1.8 surplus blastocysts cryopreserved. Multiple pregnancy rates were very low, 0.5% and 0.7% for the fresh SBT group and for the frozen SBT group, respectively. An overall morphological survival rate of 81.1% ± 26.5 was obtained after warming of all vitrified blastocysts.

Conclusion: Though less effective than fresh SBT, frozen SBT derived from a closed vitrification system yields adequate clinical outcomes. This will further contribute in increasing safety in ART, decreasing multiple pregnancy rates, and improving the cumulative pregnancy rate in the setting of a SET policy. Moreover, blastocysts can be vitrified in patients for whom fresh embryo transfer is unsuitable, such as patients at risk of OHSS, or those in need for preimplantation genetic diagnosis.

O-14 Natural Cycle in frozen cycles

Fernando Sanchez

The use of natural cycles is becoming a common fact. Natural ICSI cycle is now an alternative to classical ICSI to select the best possible egg.

In vitrified cycles, the natural option is increasingly versus substituted cycle The reasons for this are several:

- Women's fear to hormonal treatments
- The idea that the endometrium is more receptive.

In ovulatory patients with impaired or those without regular cycles technique is not usable.

The technique used in GINEMED to set the day of the transfer in natural cycles is described

- The patient starts to do urine LH test every 12 hours from the 9th day .
- With positive test, she has to come to the clinic for an ultrasound
- Endometrial thickness (must be greater than 7)
- The echo structure of the endometrium (trilaminar) If not, the cycle is canceled and is transferred to a replaced cycle.
- We set the day of ovulation and in LH (+) day +2
- Repeat ultrasound 48 hours after the patient's first to check follicular rupture. If there is no follicular rupture, cycle is canceled.
- Set the transfer day according to the freezing day, synchronizing it with the ovulation day.
- After the transfer we support with vaginal micronized progesterone, 200 mg/12 h, since the night of the transfer until the BHCG day or the day of the ultrasound to confirm the pregnancy.

In our hands pregnancy rates obtained in natural cycle and replaced cycle are equal.

Room: Hall B

CONCURRENT SCIENTIFIC SESSION 5: Fertility Preservation

O-15 Fertility preservation in female cancer patients: why, when and how.

Dimitrios Loutradis
Professor of Obstetrics and Gynecology, Head of 1st Department of Obstetrics and Gynecology
University of Athens Medical School, Alexandra Hospital

During the last few decades, survival of young female cancer patients keeps rising and thus fertility preservation options increasingly gain popularity. In this context, surgical management of malignancy in reproductive organs, should be offered in well organized Gynaecologic Oncology Centres in view of a more conservative surgical approach. Hormone protection of gonads during chemo- and/or radiotherapy with GnRH-analogues and ovarian transposition (oophorepexy) before neo-adjuvant or adjuvant treatment in gynaecologic malignancies, which do not require oophorectomyor non-gynaecological malignancies are considered of paramount importance in order to spare fertility in young cancer patients. Furthermore, controlled ovarian stimulation designed for cryopreservation of oocytes, embryos or ovarian tissue for future applications may provide a chance of childbearingin the young patient. Especially, in hormone dependent tumors, such as breast cancer, the incidence of which constantly increases among young females, controlled ovarian stimulation implementstamoxifene, aromatase inhibitors or a combination of tamoxifene or aromatase inhibitors with gonadotropins in an effort to achieve as low estrogen levels as possible.Given that fertility preservation options are available nowadays, clinicians are encouraged to refer the young patient to the fertility subspecialistfor appropriate reproductive counseling and possible controlled ovarian stimulation for fertility preservation as soon as diagnosis of cancer is made.

O-16 Hormonally sensitive Cancer: Fertility preservation stimulation protocols*

Rony Elias (USA)

Abstract not received

O-17 Oocyte vitrification and egg banking*

Xavier Santamaria Costa (Spain)

Abstract not received

Room: Hall C

CONCURRENT SCIENTIFIC SESSION 6 : Endometriosis

O-18 Endometrial Changes of Endometriosis. Do they affect in Implantation?

Professor Antonis Makrigiannakis, MD, PhD
Department of Obstetrics and Gynecology, Medical School, University of Crete, Greece

Endometriosis is a benign estrogen-dependent chronic disease affecting the 10% of women of reproductive age. It is characterised by the presence of endometrial – like tissue, including
stroma and epithelium, in multiple sites outside the uterine cavity. The most common clinical
symptoms of this chronic condition are pelvic pain and infertility. There are several theories concerning its pathogenesis which still remain to be elucidated. As endometriosis is not only a sex hormone dependent but inflammatory disease as well, endocrine / paracrine influences, immunological aspects and the function of eutopic endometrium are involved. As a result, the expression of growth factors, cytokines, several immune cells and hormones in eutopic and ectopic endometrium, are implicated in infertility profile of endometriosis patients. Ectopic and eutopic endometrium are histologically similar but have biochemical differences. A very interesting approach of this disease is the differences between the eutopic endometrium of women with and without endometriosis. Eutopic endometrium of women with endometriosis shows crucial changes in structure, proliferation, apoptosis, immunity, adhesion molecules, steroid, cytokine, gene and protein production, but there is also a controversy concerning the data that is available for these aspects. The alterations of eutopic endometrium of women with endometriosis are of great importance as they can possibly explain the pathogenesis and infertility profile of endometriotic women, taking into account that endometrial decidualization and embryo implantation are the fundamental processes leading to an effective pregnancy.
Key words: endometrium, endometriosis

O-19 Dinogest for the treatment of endometriosis

Hesham El-Inany (Egypt)

Abstract not received

O-20 Evidence-based management of endometriosis-associated infertility

Hassan N. Sallam, MD, FRCOG, PhD (London)
Professor of Obstetrics and Gynaecology, the University of Alexandria,
Clinical and Scientific Director of the Alexandria Fertility Center, Alexandria, Egypt

Various therapies have been used in the management of endometriosis-associated infertility. These include surgical therapy, medical therapy, combined medical and surgical therapy, controlled ovarian hyperstimulation as well as assisted reproductive techniques. Observational studies have shown that expectant management for 18 months is associated with about 50% cumulative pregnancy rate in patients with stage I and II endometriosis, while patients with severe degrees of endometriosis rarely become pregnant (Olive et al, 1985). Surgical management of endometriosis includes ablation and/or resection of laparoscopic lesions as well as the drainage of endometriomas. In a meta-analysis, Hughes et al found that surgical intervention in general was associated with a higher pregnancy rate compared to either medical therapy or no therapy, but the studies were heterogeneous making this conclusion doubtful (Hughes et al, 1993). In a study by Jones and Sutton, drainage of endometriomas with ablation or resection of their walls was associated with a high pregnancy rate but there are no randomized trials to

confirm these findings (Jones and Sutton, 2002). In women with minimal-to-mild endometriosis, pregnancy rates following laparoscopic ablation and/or resection were found to be significantly higher than in women who had diagnostic laparoscopy in a multi-center randomized study conducted in North America (Marcoux et al, 1998), but these results could not be confirmed in another multi-center study conducted in Italy (Parazzini, 1999). On the other hand, meta-analyses of randomised studies have shown that danazol, gestrinone, medroxyprogesterone acetate and GnRH agonists do not enhance pregnancy rates over placebo or no treatment (Hughes et al, 1993). Similarly, the combination of laparoscopic surgery and medical therapies did not improve pregnancy rates over danazol-only therapy (Yap et al, 2004). Controlled ovarian hyperstimulation combined with intrauterine insemination (COH+IUI) improves the pregnancy rates significantly compared to expectant management (Tummon et al, 1997). Finally, in-vitro fertilization (IVF) is associated with a high pregnancy rate in women with endometriosis, although this is lower than in those with tubal factor infertility (Barnhart et al, 2002). In a recent meta-analysis, we have shown that long-term (3 to 6 months) administration of GnRH agonists prior to IVF in these patients improves the pregnancy rate significantly (Sallam et al, 2005).

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Room: Hall A

KEYNOTE LECTURE III

O-21 New approaches to treat dysfunctional endometrium*

Javier Santamaria Costa (Spain)

Abstract not received

Room: Hall B

CONCURRENT SCIENTIFIC SESSION 7 : Luteal phase in ART

O-22 Impact of ovarian stimulation on the luteal endometrium

Professor Ioannis E. Messinis, MD, PhD, FRCOG
Department of Obstetrics and Gynaecology, Faculty of Medicine, School of Health Sciences, University of Thessaly, Larissa, Greece

Multiple follicular development for IVF results in supraphysiological concentrations of estradiol in blood. This leads to a marked potentiation of the negative feedback mechanism and the suppression of endogenous LH secretion from the pituitary. Markedly reduced serum LH levels have been found not only in the follicular but also in the luteal phase of stimulated cycles. In addition, serum progesterone concentrations on the day of follicle aspiration can be significantly higher in stimulated than in untreated spontaneous cycles. As a result of these endocrine changes, endometrial histology is advanced with fully developed pinopodes two days earlier than in controls. This may have an impact on the implantation rate, which is related to pinopode number. Changes also take place in the steroid receptors as well as in gene transcripts during endometrial receptivity. Clinical outcome is improved after cryopreservation of in vitro fertilized oocytes and cleaved embryos and transfer of thawed embryos in a spontaneous menstrual cycle. Furthermore, the luteal phase of superovulated cycles is compromised and becomes defective. Luteal phase support is required in order to overcome the problem with no difference in the effectiveness between different routes of progesterone administration.

O-23 Progesterone elevation on the day of HCG administration: ongoing debate

Eman A. Elgindy M.D.
Professor Obstetrics and Gynecology, Zagazig University School of Medicine, Egypt.Director Al-Banoon fertility center, Zagagig, Egypt.

There has been an ongoing debate regarding the effect of progesterone rise on the day of HCG administration and IVF/ICSI outcome. The objective of the current presentation is to assess the rising evidence of lower pregnancy rate in presence of progesterone elevation. It also tries to reveal the exact detrimental levels, the mechanism of adverse effect and possible strategies to improve the outcome.

O-24 Simplifying luteal phase supplementation for IVF

Suheil Muasher
Professor of Obstetrics and Gynecology, Duke Fertility Center, Duke University, Durham, NC, USA

Luteal phase support is an essential component for the success of IVF.This is particularly true with modern day stimulation protocols and the achievement of supra physiologic levels of serum estradiol as well as the concomitant use of GnRH- agonists and antagonists.Vaginal progesterone administration is as effective as intramuscular progesterone and is the preferred method at the present.There is no clear evidence on the best day to start treatment, although the consensus is to start before embryo

transfer(one or two days after egg retrieval). Recent evidence has shown that progesterone supplementation is not required in the first trimester, in fresh IVF pregnancies,and supplementation can be safely discontinued after the first positive beta-hCG result.The addition of supplemental estradiol to progesterone is widely practiced without clear evidence of necessity and benefit.Further research need to be conducted to determine the profile of patients and stimulation characteristics, if any,who will benefit from the addition of estradiol.The use of GnRH-agonist as an ovulation trigger, coupled with 1500IU of hCG on the day of retrieval, will correct any luteolysis and achieve comparable success rates to those patients triggered with a traditional dose of hCG.The coupling of GnRH-agonist trigger/low dose hCG on the day of retrieval will not eliminate the risk of OHSS in excessive responders(estradiol at trigger around 5000pg/ml and retrieval of more than 18 oocytes) and consideration should be given to freeze all embryos in these patients.Further research is still needed in order to individualize luteal phase support rather than use a universal protocol for all patients.

Room: Hall C

CONCURRENT SCIENTIFIC SESSION 8 : Improving outcome of ART

O-25 Do polymorphisms have any impact on the outcome in an ART program?

Dimitios Loutradis
Professor of Obstetrics and Gynecology, Head of 1st Department of Obstetrics and Gynecology University of Athens Medical School, Alexandra Hospital

Investigators have focused on identifying a genetic tool that could predict the response to gonadotropin stimulation, by implementation of a patient's genetic profile in the process of ovulation induction.

Pharmacogenetics is the study of the relationship betweenindividual gene variants and variable drug effects .In other words, it contemplates the impact of the differencesin DNA sequence on the drug response, in terms of efficacyand /or adverse events. Pharmacogenetics is a rapidly evolvingfield that can provide numerous public health benefits.

In this context,several geneshave been studied, including those of the molecules involved in the estrogen pathway and the follicle-stimulating hormone (FSH) receptor LHR,AMH receptor.

Many polymorphisms of the FSH receptor gene have been discovered, but the most studied are the Ser680Asn and Thr307Ala ones. The Ser680Asn polymorphism of the FSH receptor gene has been found to influence the ovarian response to FSH stimulation in women undergoing IVF, as the FSH receptor in women carrying the Ser/Ser genotype appeared to be more resistant to FSH action. The clinical implications of this finding 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, determine the required FSH dose and avoid the possible complications related to FSH stimulation.

W e have examined the frequency distribution of the Ser680Asn polymorphism of the FSHR, in ovarian dysfunction (OD) infertile women, 'poor responders' (PR) and normo-

ovulatory controls (good responders, GR) of Greek origin.This study demonstrates that for OD patients the FSHR Ser/Ser variant was more prevalent (45.5%), while the Asn/Ser variant is correlated with more follicles and oocytes. Furthermore, data from the three different groups leads to the suggestion that the Ser/Ser variant is related with a higher level of serum FSH while the Asn/Ser variant with a lower. Furthermore, in the GR group, patients belong more often in the Asn/Ser genotype.

A hypothesis that a discrete set of genes includingFSHR, ESR1 and ESR2 genotype patterns may explain thepoor response to FSH, in order to investigate this hypothesis weusing a specific biostatistical programs, if they provided significantevidences of genetic interaction between FSHR,ESR1 and ESR2 markers in relation to COH outcome, supportingthe hypothesis that a set of genes, all related to theFSH hormone mechanism of action, may participate alongwith other factors to the control of the ovarian response to FSH. In that direction, a more recent observational molecularstudy by our department focused on the ESR1 Pvu II, ESR2Rsa I and Ser680Asn polymorphism of the FSH receptor in aGreek population of women undergoing IVF/ICSI, alone andin combination, concerning the ovarian stimulation outcomeand pregnancy rate. This study brings to light evidence thatthe patients carrying the polymorphisms in a homozygousstate in both ESR1 and FSHR genes (simultaneously) areover-presented in the poor responders group in a statisticallysignificant way ($p=0.038$). This is supported also by the factthat this certain genotype combination presents the worstovulation induction profile when compared with the rest ofgenotype combinations, considering the total amount of gonadotrophinsused, the peak E2 and the number of folliclesproduced ($p<0.05$)].

AMH (as a paracrine product of immature follicles) is a more direct measure of ovarian status compared with other endocrine reproductive hormones. AMH is primarily produced by the preantral and small antral follicles, and correlates with the number of primordial follicles at the gonadotrophin-independent stage of follicular development.

The inhibitory action of AMH on the physiology of ovaries is due:a) to the initial recruitmentof follicles independently of FSHb) to the cyclic recruitment: rescue of a restricted number of antral follicles from atresia.In the absence of AMH primordial follicles are recruited at a faster rate, resulting in premature exhaustion of the primordial follicle pool and consequently to a premature menopause.The first end point in our study was to examine the distribution of AMH and AMHRII SNPs in the Greek population and the second end point to investigate the possible association between the presence or not of polymorphisms and the different parameters of ovarian stimulation in women undergoing IVF.Women of IVF group heterozygotes or homozygotes for AMH polymorphism (Ile/Ser και Ser/Ser) showed statistically significant higher E_2 values at ovulation compared to women without the polymorphism (Ile/Ile) (p-value = 0.009). Women of IVF group–carriers of AMHRII SNP (A/G και G/G) showed:statistically significant lower levels of E_2 at ovulation (p-value = 0.009) .Statistically significant lower number of follicles(p-value = 0.026).Statistically significant lower number of oocytes (p-value = 0.034)Our conclusions are :1.AMH SNP and without AMHRII SNP probably have a better prognosis regardıng the outcome of ovarian stimulation.2 : Women carriers of the AMHRII SNP perhaps should be treated as poor responders modification of gonadotrophin dose according to the genetic profile of each patient.

In conclusion the impact of these factors (Genetics) may be small. In order to ensure that a beneficial effect is achieved, an array of molecular tools will be needed and hundreds of thousands of polymorphisms must be examined in appropriate phenotypic groups such as “poor responder” patients. Genotyping of patients scheduled for ovarian stimulation could be an attractive tool to individualize FSH dosage according to the genetic differences in ovarian sensitivity.

O-26 Poor ICSI outcome is associated with an increase of total CD16+ CD56+ NK Cells and activated CD69+ NK Cells in peripheral blood

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Objective: The relationship between peripheral blood Natural Killer (NK) Cells and pregnancy outcome after ICSI treatment has been examined in several studies, and their effects on reproductive failure is still controversial.

The aim of this study was to evaluate the effect of the peripheral NK Cells, including total CD16+ CD56+ and activation marker CD69+ on pregnancy outcome after ICSI treatment.

Design: This prospective observational study of 312 randomly selected women who underwent ICSI treatment from Jan. 2008 to Jan. 2010.

Materials and Methods: Blood samples were obtained on the day of oocytes retrieval prior to the procedure. The CD16+ CD56+ NK Cells, CD69+ Activated NK Cells and CD19+ B---Cells were identified by flow cytometry.

The results were presented as a percentage of total Lymphocytes, and their relationship to ICSI outcome were analyzed.

Results: Receiver operating characteristic (ROC) curve and area under curve (AUC) analysis were performed to select CD16+ CD56+ and CD69+ thresholds for further statistical analysis.

The clinical pregnancy rate (CPR) was significantly lower (P <0.0001) for women with CD16+ CD56+ NK Cells percentage more than 18% (CPR was 25%), compared with percentage below this value (CPR was 52.38%), and the serum CD16+ CD56+ NK cells demonstated a sensitivity of 68.3 (95% confidence interval [CI]:60.5–75.4) and specificity of 91.67 (CI: 85.9 – 95.62) for the prediction of implantation failure in ICSI patients.

Moreover, CPR was also significantly lower (P <0.0001) when the percentage of activated CD69+ NK Cells was more than 1% (CPR was 27.54), compared with the percentage below this value (CPR was 54.11), and the sensitivity was 72.3 (CI: 59.5–77.4) and specificity of 86.81 (CI: 80.16–91.87) for the prediction of implantation failure in ICSI patients.

Conclusions: The present study indicates that increase in the percentage of CD16+ CD56+ NK Cells or activated CD 69+ NK Cells in the peripheral blood is associated with a reduced implantation and clinical pregnancy rate in ICSI treatment.

Keywords : NK Cells, ICSI, Activated CD69+ and Implantation failure.

O-27 The Impact of New Technology on Preimplantation Genetic Testing

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Preimplantation genetic testing (PGT) is increasingly being adopted in clinical medicine. However, its effect on reproductive outcomes remains controversial. The objective of this presentation is to explore the different methodologies currently used in PGT, and to systematically review the existing evidence with regards to their clinical impact.

We conducted a review of the literature, including observational studies, well-conducted retrospective cohort studies, prospective cohort studies, and randomized controlled trials that deal specifically with the clinical outcomes associated with the use of PGT. We describe the new techniques used in PGT today: PCR-Multiplex, qPCR, CGH, aCGH, and SNP microarray.

The use of this new technology, when compared to the traditional FISH-based PGT, improves implantation rates, ongoing pregnancy rates and live-birth rates in preimplantation genetic screening (PGS). As for preimplantation genetic diagnosis (PGD)used in couples with known chromosomal translocations, this new technology also appears to yield improved clinical outcomes compared to FISH, with the added advantage that it allows simultaneous screening for translocations and for de-novo aneuploidy.

Through comprehensive chromosomal analysis, the practice of PGS and PGD with qPCR, aCGH and SNP microarray techniques appears to provide the expected benefit, which FISH failed to demonstrate. Their use in clinical practice appears to be warranted. Large randomized controlled trials are currently in progress addressing this matter further.

Overall, it is evident from early and recent trials that the future of PGT, as well as that of affected couples, will be greatly enhanced by the use of this new technology.

Room: Hall A

ORAL PRESENTATIONS SESSION 9: Andrology

O-28 Ketotifen a mast cell blocker improves sperm motility in asthenospermic infertile men

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Introduction: This study aimed to evaluate the efficacy of ketotifen on sperm motility of asthenospermic infertile men.

Methods: In this interventional experimental study, a total of 40 infertile couples with asthenospermic infertility factor undergoing ART cycles were enrolled. The couples were randomly assigned to one of two groups at the starting of the cycle. In control group (n = 20), the men did not receive Ketotifen, while in experiment group (n = 20), the men received oraly ketotifen (1mg Bid) for 2 months. Semen analysis ,under optimal circumferences, was obtained prior to initiation of treatment. The second semen analysis was done 2-3 weeks after stopped ketotifen treatment and sperm motility was defined. Clinical pregnancy was identified as the presence of a fetal sac by vaginal ultrasound examination.

Results: The mean sperm motility increased significantly (from 16.7% to 21.4%) after ketotifen treatment ($P < 0.001$). This sperm motility improvement was more pronounced in the primary infertility cases ($P < 0.003$). The rate of pregnancy was 12.5% in infertile couples that their men receiving 1 mg/ twice a day ketotifen. In 52% of infertile men's semen, the percentage of sperm motility was increased from 5 to 35% and this sperm motility improvement was also observed in 33% of necrospermia (0% motility) cases.

Conclusion: These results suggest that ketotifen may represent as a novel therapeutic approach to improve sperm motility in the infertile men with cause of asthenospermia or necrospermia.
Key words: Ketotifen, Sperm motility, Male factor, Infertility

O-29 Effect of administration of vitamins C and E on fertilization capacity of rats exposed to noise stress

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The aims of this study were to evaluate the effects of administration of Vitamins C and E on fertilization capacity in rats exposed to noise stress. 40 adult male rats were randomly divided into 5 equal groups. Group 1 as controls who were not exposed to noise and groups 2-5 exposed to noise with 90-120 dB intensity and 300-350 Hz frequency from 7 pm to 7 am everyday for 50 days. Group 2 exposed to noise and did not receive Vitamins. Group 3 received vitamin C, Group 4 received Vitamin E. Group 5 received Vitamins C and E concomitantly. After 50 days, serum Follicle-stimulating hormone (FSH), Luteinizing hormone (LH) and testosterone were calculated. Then each rat was left with three female rats for mating. Pregnant females were sacrificed on the 19 th day of pregnancy and evaluated for the presence and number of viable, dead and absorbed fetuses. The level of FSH, LH and testosterone significantly decreased in rats exposed to noise ($P < 0.05$). By administration of Vitamins in groups 3-5 we observed that the level of hormones significantly increased in compared to group 2 ($P < 0.05$). The fertilization capacity of male rats in groups 3-5 significantly increased in compared to group 2 ($P < 0.05$). There was significant difference between groups 1 and 2 in case of fertilization capacity ($P = 0.001$). The data in this study strongly suggests a negative role for noise stress on level of FSH, LH and testosterone level and also fertilization capacity of male rats. To complement the information it is suggested that this research be done on human samples.
Keywords: *Antioxidants, infertility, mortality, pregnancy*

O-30 The Detail Characteristics of Structural Sperm Morphology in Globozoospermia

Ozdemir I, Karaca N, Yilmaz R, Gul C, Solakoglu S, Kervancioglu E.

Introduction: The main characteristic defects of globozoospermia which is called round-headed sperm syndrome are lack of acrosome and round-headed nucleus. Furthermore, any other morphologic defects such as deformed tails, abnormal perinuclear cytoskeleton and disturbed midpiece may be accompanied in this syndrome. Although the abnormal spermatozoa has progressive motility, it is not able to fertilize the oocyte. Thus, the fertilization rate by ICSI is low persantage in globozoospermic spermatozoa. In this study, the morphological changes affected in fertilization were investigated by transmission electrone microscopy in round headed sperm.
Material and Methods: The samples of five globozoospermic patients were fixed in cacodylate solution which is include 2% glutaraldehyde and 1% osmium tetroxide. After

the dehydrated stage, samples were blocked in Epon 812. The prepared thin sections were contrasted. These samples were examined by Jeol 1010B electron microscopy.
Results: The acrosome membrane and sac have not been observing on head of the spermatozoa in all cases. In three cases, head of the spermatozoa was round and chromatin condensation was normal. In most cases, chromatin condensation and vacualization were observed in spermatozoa nucleus. The membrane structure on neck and midpiece, and localization of mithocondria were normal in first four cases. Variable chromatin condensations anomalous were observed at a high persentage in nucleus of 4^{th} and 5^{th} cases. Also in 5^{th} case, a lot of serial debris cells which had more than one nucleus were observed in semen. In the all cases, central and peripheric microtubuli which composed the acsoneme in tail structure were normal. However, some spermatozoon had no meaning defected microtubuli arrangement.
Conclusions: Globozoospermic cases are heterogeneously group since observing variable abnomalous such as lack of acrosome and choromatin condensation in spermatozoa. The semen morphologic details in globozoospermic patients were showed that there can be different ethiologic factors in this pathology. For this reason, we need more comprehensive studies to solve ethiopathogenesis of globozoospermia.

Room: Hall B
ORAL PRESENTATIONS SESSION 10: Andrology

O-31 Does prepubertal testicular tissue vitrification influence spermatogonial stem cells (SSCs) viability?

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Introduction: Testicular cryopreservation prior to chemotherapy or radiotherapy in children with cancer is one of the ways to preserve fertility. However, cryopreservation may cause damage to the testicular parenchyma cells. The objective of this study was to investigate effects of vitrification on the intracellular LDH leakage, cell cycle/apoptotic responses and apoptosis-related gene expression patterns in the spermatogonial stem cells (SSCs) obtained from the vitrified testis.
Methods: The testes of the mice pups (6-day-old, BALB/c) both vitrified and fresh groups were digested with enzymes (collagenase, DNaseI, trypsin-EDTA) to disperse the cells. The SSCs ,type A, were isolated from the rest of testicular cells by MACS. The amount of damage to the SSCs immediately was evaluated by Cytotoxicity assay, Flow cytometry assay and Real-time PCR.
Results: The intracellular LDH leakage in the SSCs ,harvested from the vitrified testes, was less reported compared with the fresh ones. Moreover, the percentage of apoptotic and necrotic SSCs obtained from the vitrified testes was lower than that of yielded from the fresh samples. Also, the apoptosis-related genes of the SSCs ,collected from the

vitrified testes, changed their expression profile as increasing P53 and BCL-2 expression levels and decreasing Bax and Fas expression levels.

Conclusions:The study indicates that vitrification of prepubertal testicular tissue may not increase some of the expression profile of apoptosis-related genes such as Bax and Fas in the testicular SSCs with also subsequent no more observing the cell apoptotic/necrotic responses and no increasing intracellular LDH leakage.

Key words: Vitrification, SSCs, Intracellular LDH leakage, Cell cycle/apoptotic responses, Gene expression profiles

O-32 EVALUATION OF Y CHROMOSOME MICRODELETION IN TUNISIAN INFERTILE MEN

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Objectives: Y chromosome micro deletions are the leading genetic cause of male infertility and its detection is clinically relevant for appropriate genetic counseling. We aimed to determine the prevalence and the type of Y chromosome microdeletions in infertile Tunisian men with abnormal sperm counts and to assess the clinical features and frequency of chromosomal abnormalities in Tunisian patients with microdeletions.

Methods: We divided 107 infertile patients into groups A (with non obstructive azoospermia, n =77), and B (with severe oligozoospermia, n= 30) enlisted 1 fertile male and women as normal controls. We collected DNA from the peripheral blood, Multiplex-PCR was used to detect sequence tagged sites (STS) of AZF microdeletions. Then we separated and scanned the amplified products by agarose gel electrophoresis to identify microdeletions and their types in comparison with the controls. These 107 men were then retrospectively studied for cytogenetic evaluation and testicular biopsy for the outcomes of ICSI.

Results: In our cohort, 4, 6 % (5/107) of infertile men had Yq microdeletions with 7 % in azoopsermia, and 3.3 % in severe oligozoospermia cases. Deletions of AZFc were at highest frequency (80 %) observed in our cohort .Deletions of AZFb was observed in one azoospermia subject.

Among the 5 patients with microdeletions and available histological results, 50% of the azoospermic group had histological abnormalities. The frequency of both chromosomal abnormalities and histological abnormalities was higher in the azoospermic group compared to the oligozoospermic group. Testicular biopsy was canceled in the patient with a microdeletion in AZFb . Heigthy nine ICSI cycles with either testicular (n = 49) or ejaculated spermatozoa (n = 40) were performed. Nineteen clinical pregnancies (21.3%) were obtained.

Conclusions: The study results revealed a close relationship between microdeletions and spermatogenesis. The results of our study have avoided unnecessary testicular biopsy in a patient with AZFb microdeletion of the Y chromosome. before using ICSI in infertile patients with severe spermatogenic defects, careful evaluations of chromosomal abnormalities and Y chromosome microdeletions screening should be performed and genetic counseling should be provided before IVF.

O-33 The best time for diagnosis of endometrial polyps in TVS

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4-Ph.D, Marvdasht Azad University, Marvdasht,Iran.

Introduction: An endometrial polyp is a lesion in the lining of the endometrium that takes up space within the uterine cavity. Incidence of endometrial polyps is up to 10%.of women. They may have a large flat base(sessile) or pedanculated. Pedunculated polyps are more common than sessile ones. They range in size from a few millimeters to several centimeters. The aim of this research is to determine the optimal time for detection of endometrial polyp during the menstrual cycle in transvaginal sonography(TVS).
Method: This is a prospective clinical trial study carried out on 930 women with AUB who were referred to Dr.Rasekh clinic during the 6 months . 81(8.7%)81 patients are suspected to have endometrial polyps. The average age of them is 35.06 years. TVS was performed . If a lesion was detected, it was further evaluated by hysteroscopy.
Results: TVS was performed on the day 9 -14 of the menstrual cycle. Polyp size was estimated between 4.3 mm to 2.60 cm. Patients were operated BY hysteroscopy that it Was confirmed the diagnosis of endometrial polyps. Accuracy of TVS during different phases was largely dependent on the time of undergo ultrasonography and the size of the lesion . TVS falsely detected one(1.2%) lesions.
Conclusion: Accuracy of TVS in detection of endometrial polyp is highly dependent on the menstrual cycle phase, on the day 9 -14 of the menstrual cycle being the optimal time for this examination. Because endometrial cavity is three layer and transparent at this time.
Keywords: menstrual cycle, endometrial polyp, transvaginal sonography

O-34 Association study between the number of CGG repeats in FMR1 gene with recurrent abortion in Iranian patients

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Introduction: One of the most frequent anxieties in the pregnant women is recurrent abortion with prevalenceof 1 per 300 pregnancies which is occasionallycaused throughAutoimmunity disorder. Recurrent abortion has been observed in pregnant women with Autoimmune Antibody such as Anti-phospholipids and Anti-TPO. The number of CGG repeats in 5'UTR-FMR1 gene correlatestoautoimmunity. The FMR1 normal phenotype individuals have the normal range of CGG repeat (5-54) in this site. The Normal function of ovarian is correlated to (26-34) CGG repeats in 5'UTR-FMR1. Based on two distinct types of ovarian genotypes are Het-norm/low, Het-norm/high with fewer 26 and more than 34 respectively. Autoimmunity has been reported to be

associated toHet-norm/low subtype. This study was designed to evaluate the relationship between the numbers of CGG repeat with recurrent abortion in Iranian patients.

Materials and methods: In this investigation, 50 women with normal karyotype and normal MTHFR (with at least two kids) genotype were compared to 50 women with 3 or more recurrent abortions forthe number of FMR1-CGG repeats. Long range PCR was performed to amplifythe5'-UTR of FMR1 gene and the results were analyzed using theTOTAL LAB software and the obtained were confirmed using sequencing.

Results: Our finding shows that 10 persons with recurrent abortion have high correlation with Het-norm/low sub genotype.This study provide experimental evidence in support of the our hypothesis that the number of CGG repeat correlate to recurrent abortion. There was a statistically significant difference in the number of CGG repeats of women without abortion compared with women with 3 or more recurrent abortion (P-value <0.05).

Conclusion: This is the first report to show the correlation of FMR1 genotype and recurrent abortion. Further study is needed to explore the probable causes.

Key words: ***FMR1*** gene, recurrent abortion, autoimmunity.

O-35 Thrombophilia & IVF: the unresolved question

Dr. Aiman Al Sumadi MD FRCOG

Consultant OB/GYN , Lead Physician –ART Unit : King Hussein Medical Centre

Introduction: Human reproduction is a relatively inefficient process , of the pregnancies that are lost, 75% represent a failure of implantation and are therefore not clinically recognized as pregnancies . Failure of implantation in IVF is still the main problem facing the infertility specialist with many factors affecting the outcome.

Thrombophilia may have a significant role in IVF–embryo transfer implantation failure with conflicting results whether treatment for thrombophilia may affect the outcome

The objective of this presentation is to determine the incidence of thrombophilic abnormalities in recurrent IVF failure and evaluate the effect and safety of low-molecular- weight heparin (LMWH) in these women.

Methods: The study was done in two phases: phase one where group A with 90 patients with recurrent implantation failure were compared with group B with 90 patients who have had successful pregnancy after their first IVF-embryo transfer cycle., All women were tested for the presence of both inherited or acquired thrombophilic factors.

Phase two where patients with recurrent IVF failure and thrombophilic defect were randomized either to receive enoxaparin 40 mg/day (group C), and group D who received placebo. The primary outcomes were the implantation, pregnancy and live birth rates

Results: Both single or combined thrombophilia were more prevalent in group A compared with group B (70% for single and 35% for combined in group A and 26% and 5% for group B respectively) (P<0.0001 for both variables).

Patients in group C had a significant increase in the implantation and pregnancy rates compared with the group D (20.9% vs. 6.1% and 31% vs. 9.6%, respectively; $p < 0.001$ and $p < 0.05$, respectively).

Conclusions: Thrombophilia might be an important factor in IVF-embryo transfer implantation failure. Women with repeated IVF-embryo transfer failure should be offered a screening for thrombophilia and positive cases can be offered LMWH as thromboprophylactic treatment.

O-36 Letrozole; new trends in ICSI

Elmahdy, M; Abd Rabbo, S; Mashali, N; Maghraby, H.

Background: Endometriotic implant acts as an intracrine source of estrogen through over-expression of P450 aromatase. Endometriotic lesions may be active or non-active. Activity of the lesions has deleterious effects on the reproductive outcome. Combined administration of aromatase inhibitor and GnRH-agonist may efficiently suppress estrogen biosynthesis through a combined action in pituitary, ovary and local in the implants and may affect the reproductive outcome.

Objective: Evaluate the effect of using letrozole in improvement of the results of ICSI/ET in endometriosis women with long agonist protocol.

Patients: Sixty infertile women with minimal and mild endometriosis according to the revised American fertility society classification were scheduled for ICSI /ET .

Methods: All women were subjected to biopsy from suspected lesion using scissor to confirm diagnosis and activity. Activity was assessed by the stroma to glands ratio. Women were randomized into 2 groups. Group 1: using the traditional luteal long agonist protocol using triptorelin 0.1 and Group 2: using letrozole 5mg/ day after 5 days of start of GnRH agonist for 5 days. Day 6 serum estradiol level, final serum estradiol, number of retrieved oocytes, number of MII oocytes, fertilization rate, cleavage rate, number of class (A) embryos and clinical pregnancy rate were assessed .

Results: 5 cases were cancelled, 3 were in the study group and 2 were from the control group. Days of stimulation were prolonged in the active treated group than in the non active treated group (P 0.019). The percentage of class (A) embryos was lower in the active non treated cases (60.09 ± 27.15) on the other hand the quality of embryos improved after treatment by letrezole (79.21 ± 21.79). Pregnancy rate didn't show any significant difference between the two studied groups. It was 29.6 % and 34.6% in the letrozole treated group versus control group (P 0.631)

Conclusions: Activity of lesions affects the quality of embryos. Letrozole suppress the activity of the lesions and improved the quality of embryos.

Friday November 8, 2013

Room: Hall A

Keynote Lecture IV

O-37 Techniques and Technologies for Embryo Transfer: Does it Really Matter.

Johnny Awwad, MD
Professor of Obstetrics and Gynecology, Head, Division of Reproductive Endocrinology and Infertility
American University of Beirut Medical Center, President Middle East Fertility Society

The learning objectives of this presentation are to understand the dynamics involved in the process of ET, evaluate the evidence for/against common practices and techniques and develop a standardized ET process in view of supporting evidence.
Gametes and embryos are handled with extreme care at every step of the Laboratory process. ET is the least sophisticated step of the In Vitro Fertilization process, making it the most vulnerable. The working hypothesis is that designing a Standardized Embryo Transfer Approach is expected to maintain higher pregnancy rates and lower adverse effects.
Experimental findings suggest that positioning of the patient while keeping the uterine fundus at the highest point in the sagittal cross-section above the horizon, placement of the catheter tip at mid cavity about 2.0 cm from the fundus and delivery of the load over a course of 10 s or more, may be associated with the desired outcome.
Evidence supports:a definite proof of benefit for the use of soft embryo transfer catheters and ultrasound guidance; a limited proof of benefit for mid-uterine position of catheter tip, acupuncture, use of hyaluronic acid , shortening of the loading discharging interval time of embryos and mechanical closure of the cervical canal following ET; and no proof of benefit for the use of mock transfer prior to ET, antibiotic administration, full bladder, removal or flushing of the cervical mucus, use of fibrin sealants and bed rest following ET.

Room: Hall A

CONCURRENT SCIENTIFIC SESSION12: Endometrial Implantation

O-38 Management of unexplained Recurrent Pregnancy Loss: Status of the evidence

William Kutteh (USA)

Recurrent pregnancy loss (RPL) has recently been defined by the American Society of Reproductive Medicine (ASRM) as a disease distinct from infertility defined by two or more failed consecutive pregnancies. The spectrum of pregnancy loss includes pregnancies of unknown origin, early embryonic losses before 6 weeks, embryonic losses between 6 and 9 weeks, and fetal losses from 9 to 20 weeks of gestation. The ASRM indicated that a complete evaluation for RPL includes karyotypes on both partners, uterine cavity evaluation, hormonal profile (Progesterone, hemoglobin A1c, TSH), and autoimmune evaluation (antiphospholipid antibodies, lupus anticoagulant, and beta2 glycoprotein 1). This evaluation will leave up to 50% of pregnancy losses categorized as

unexplained. This presentation will review evidence-based results for the evaluation of RPL based on many of the authors own studies. Additional data to support the genetic evaluation of the products of conception from failed pregnancies will be presented. The karyotype of the failed pregnancy provides a prognosis for subsequent pregnancy outcomes. Studies from women with RPL who underwent IVF with preimplantation genetic diagnosis of embryos demonstrate high frequencies of aneuploidy in each chromosome. A new algorithm for the evaluation of RPL, based on the results of genetic tests on the failed pregnancy will be proposed. Outcome data based on maternal age and number of prior losses reveal that 45% to 80% of women will subsequently have a live born child.

O-39 Repeated Implantation Failure.Novel approaches.

Professor A.Makrigiannakis MD,PhD,
Chairman of Ob/Gyn Department, University of Crete

The immunological relationship between mother and conceptus still remains a mystery , although the recent advances in molecular biology have lighten a lot of the parameters that participate in feto-maternal cross talk during implantation. The atypical expression of major histocompatibility complex (MHC),the specific role of some hormones and cytokines, as well as the modified function of cellural constituents of the feto maternal interface,represent substantive parameters of fetomaternal immunotolerance during implantation. However the implantation process is currently considered the most important limiting factor for the establishment of a viable pregnancy and the fertility physician is often called upon to perform the unpleasant task of counselling an infertile couple after repeated implantation failure. (RIF)Aetiology is often not clear and treatment options are indistinct. Some of these include hysteroscopic treatment , myomectomy,preimplantation genetic diagnosis for aneuploidy screening (PGS),assisted hatching, blastocyst transfer, zygote intra
-Fallopian transfer (ZIFT),salpingectomy of hydrosalpinges and
immunological treatment. Since some of these remedies have not been proven to be effective (the evidence behind some of these is robust), assisted reproduction programmes should resist offering treatment options that are not evidence based at least until well designed randomized studies show the value of what are today considered as empirical treatments.

O-40 Progesterone supplementation and threatened abortion: Evidence-based or en vogue?

Fadi Mirza
American University of Beirut Medical Center, Beirut Lebanon

Spontaneous abortion (miscarriage) is the most common complication of early pregnancy. This outcome is often preceded by a clinical condition known as threatened abortion, where the patient presents with vaginal bleeding in the setting of reassuring features such as closed cervix and viable fetus. Although not all cases of threatened abortion culminate in a miscarriage, this period may be the source of significant distress to both the prospective mother and her health care provider. It is well-known that progesterone, a hormone secreted from the ovary by the corpus luteum, plays a major role in the maintenance of early pregnancy. Progesterone and its derivatives are

currently used in various forms, including oral, vaginal, and intramuscular, for a multitude of obstetric indications. Given the plausible role for progesterone in cases of threatened abortion, progesterone supplementation to women presenting with threatened abortion is a common practice among obstetricians. This talk examines the available evidence behind this clinical practice.

Room: Hall B

CONCURRENT SCIENTIFIC SESSION 13 : Embryology

O-41 The application of noninvasive technologies for objective embryo selection: which one is clinically more successful?

Alberto Tejera PhD
ClinicalEmbriologyLaboratory Instituto Universitario IVI, Valencia, Spain

The efforts aimed at improving pregnancy rates have focused on the search for additional noninvasive markers of viability to supplement current criteria for embryo selection.Some of these noninvasive methods that have been regarded as valuable parameters for evaluating embryo quality are the Oxygen consumption (OC) and the Embryo Kinetic (EK), which are correlated with healthy development of the embryos.
The OC has been considered as the main portion of the metabolism in the growing embryo; due the mitochondria are the main oxygen consumers in mammalian oocytes and early embryos.
Regarding oocyte OC the results showed that O2 consumption is related with fertilization ability and is affected by different ovarian stimulation regimes.
Regard to the OC uptake rates during embryo development are positively associated with implantation potential and embryo quality demonstrating that the use of OC measurements during embryo culture could be considered as a potential marker of oocyte and embryo quality,forming part of the laboratory as supplement to the process of selecting viable embryo for improving pregnancy and implantation rates.
The other one is the Time-lapse technology, totally implemented in the laboratory routineand it represents a powerful tool in assisted reproduction techniques evaluating embryos from a dynamic point of view. Standard methods of embryo assessment are based on subjective morphology evaluation at discrete time points, limiting the information produced for embryo selection. Time-lapse recording introduces several morphokinetic parameters for embryo evaluation. The additional information achieved can improve implantation rates and reproductive outcomes.

O-42 Clinical relevance of Morphokinetics to assess embryo viability

Alberto Tejera PhD
ClinicalEmbriologyLaboratory Instituto Universitario IVI, Valencia, Spain

Noninvasive markers of embryo quality are being sought to improve IVF success. Using traditional incubators, inspection is therefore limited to snapshots at a few discrete points in time, reducing the amount of information that could potentially be obtained. Time-lapse monitoring overcomes this limitation without exposing the embryos to environmental changes. Moreover, several recent studies suggest that timelapse monitoring may introduce new dynamic markers of embryo competence. Alsotime-lapse

monitoring allows for a flexible embryo evaluation and potentially provides extra information regarding embryo development (cell divisions and timing between divisions). Our experience showed that the kinetics of early embryo development is closely related with the development potential to blastocyst stage and the final implantation.The data generated by time-lapse microscopy indicate that cleavage times from the 2- to the 8-cell stage are indicative of the embryo's ability to develop to blastocyst, expand and implant. Also, we have observed morphology events of embryo development that affected strongly to the implantation rates; the direct division, asymmetry in 2- cell stage and multinucleation in 4-cell stage, being consideredthis kind of embryo behavior as one exclusion criteria. These findings have allowedfor us develop a model to predict embryo implantation ability based on the timing and characteristics of cleavage events, adding further emphasis to the usefulness of continued embryo observation.We have generated and evaluated a tool for the selection of viable embryos based on the exact timing of embryo development events together with morphological patterns by using an automatic time-lapse system to monitor embryo development.

O-43 Selected single embryo transfer

Fernando Sanchez

The best outcome for assisted reproduction techniques is a single, healthy, term newborn. The single embryo transfer (SET) is the best way to achieve it. SET is becoming a trend, especially in northern Europe.

But the wishes of the patient are different to medical recommendations since most patients prefer a twin pregnancy versus simple. This is despite knowing the risks of twin pregnancy.

Another limiting factor are the results in terms of pregnancy rate (PR), since PR currently are higher transferring two embryos versus one. These rates are almost equal when we count all pregnancies per cycle (fresh plus vitrified) but patients prefer the earlier achievement and do not want to go through the psychological stress of a second cycle of treatment and two weeks of waiting for results, and they don't want to make more hormone treatments.

The economic aspect is also relevant, depends on who is paying. If the state pays for IVF (Belgium) There are a statewide considerable savings when we take into account the costs associated to neonatal complications (more frequents in twins) and long-term costs in the treatment of patients with severe impairments (cerebral palsy). If the payers are the patients they look for the maximum profit (understood in newborns number for the money invested), so usually they do not want to transfer only one.

Although medically is the right thing, actually SET is not frecuent but it's increasing gradually. We have to work hard to transfer this information to the patients.

Room: Hall C

CONCURRENT SCIENTIFIC SESSION 14 : Polycystic Ovary Disease

O-44 Polycystic ovary syndrome – new perspectives on an old entity

Lubna Pal (USA)

Polycystic ovary syndrome is a poorly understood yet liberally diagnosed disorder with a finite spectrum of clinical manifestations. Racial heterogeneity in the clinical picture, varying degrees of contribution of obesity to the clinical phenotype and varying adoption of diagnostic nomenclatures across the global regions add to the diagnostic dilemmas. The diagnosis of PCOS holds implications that extend well beyond the presenting symptoms, and must be perceived as a chronic disorder. Management strategies for PCOS should target not just the presenting complaint, but also the covert health burdens the individual patient is deemed at risk for. Pregnancy related risks in this population are not trivial and implications for trans-generational burden are also evident. Beyond symptom control, management considerations must address the individual woman's reproductive and psychological wellbeing and should incorporate risk reduction strategies to minimize long term health risks. Optimization of life style parameters and weight reduction for the overweight and obese must be considered as first line management strategy.

Learning objectives: At the conclusion of this presentation, participants should be able to:

1. Appreciate the spectrum of clinical presentations of PCOS
2. Appreciate the spectrum of health implications relating to PCOS diagnosis
3. Initiate a diagnostic workup to rule out common disorders that can mimic a PCOS like picture
4. Individualize risk assessment and tailor management strategies Become familiar with emerging concepts

O-45 Should all Women with PCOS-related Infertility be treated with Insulin Sensitizing Drugs?

Johnny Awwad, MD
Professor of Obstetrics and Gynecology, Head, Division of Reproductive Endocrinology and Infertility
American University of Beirut Medical Center, President Middle East Fertility Society

Interest in the role of insulin sensitizing drugs (ISDs) as a means of reducing compensatory hyperinsulinemia in the hope of improving metabolic and reproductive functions in women with PCOS has grown measurably over the past decade. Metformin is believed to lower fasting serum insulin levels in insulin-resistance.

For the management of ovulatory infertility in the non-obese PCOS population (BMI < 30 kg/m2), there is moderate-quality evidence demonstrating that metformin monotherapy improves the odds of ovulation and chance of achieving clinical pregnancy.

There is moderate-quality evidence demonstrating the absence of reproductive benefit when metformin is combined with CC therapy in the non-obese population of women with PCOS-related subfertility. CC-alone therapy remains the mainstay pharmacological therapy for this group.

For obese women (BMI ≥ 30 kg/m2) with PCOS-associated subfertility, there is low-quality evidence showing the failure of metformin monotherapy to improve reproductive endpoints [26]. In view of the considerable side effect profile, metformin monotherapy may not be recommended for fertility management in this group of women. There is moderate-quality evidence to support a beneficial effect of metformin in combination with CC therapy in increasing the likelihood of ovulation and clinical pregnancies. For women with CC-resistant subfertility, there is moderate-quality evidence to support that metformin co-treatment increases ovulation rates. There is also low-quality evidence

demonstrating that metformin/CC combination therapy may be associated with higher live births than laparoscopic ovarian drilling. Women with CC-resistant PCOS may be given the benefit of a trial of medical ovulation induction using combination therapy prior to committing to the more invasive and expensive alternative of LOD.
For women with PCOS undergoing IVF/ICSI treatments, there is moderate evidence to support the failure of metformin co-administration to improve the clinical outcomes of live births, clinical pregnancies, or miscarriages. There is moderate evidence demonstrating a significant reduction in the risk of OHSS with metformin co-treatment, when hCG is used to trigger final oocyte maturation.

O-46 The Origins of PCOS

Ghina Ghazeeri, American University of Beirut Medical Center, Beirut, Lebanon.

PCOS (Polycystic ovary syndrome) is a complex endocrine disorder and is known to cause anovulation and subfertility.PCOS is linked to a metabolic disturbance such as IR (insulin resistance) and hyperinsulineamia which are risk factors for diabetes type 2(DM2).The Androgen Excess Society defines PCOS as disorder clinical or biochemical high androgen , and chronic oligoovulation and/or polycystic ovaries. Etiology shows high evidence for potent genetic contribution .Experiments on animals have shown effective results supporting the evidence of developmental programming. There are similarities in the reproductive and metabolic phenotype between women with PCOS and androgenized animals such as monkeys and sheep. These results shouldn't disregard the developmental determinants as it is hard to map PCOS as a developmental disorder or only as featal intrauterine exposure.Barker's hypothesis on featal origin of disease has shown some origin of disease caused by poor nutritional exposure in the uterus .Genetic disorder in insulin secretion and resistance , and increased risk of abdominal adiposity abnormal LH secretion .All factors interact together to change the phenotype of PCOS and produce the diverse nature of this disease affecting 6-8 % of the women in reproductive age in the US .This increasing prevalence is parallel with type 2 diabetes An insight of the origin can shape the perceptive of the disease and its prevention as a major priority in the PCOS agenda.

Room: Hall A
CONCURRENT SCIENTIFIC SESSION 15 : Outcome of ART

O-47 Ovulation induction and multiple pregnancies

Dimitrios Loutradis
Professor of Obstetrics and Gynecology, *Head of 1st Department of Obstetrics and Gynecology*
University of Athens Medical School, Alexandra Hospital

Multiple pregnancies including twin and higher order pregnancies *a priori* are considered high risk pregnancies, associated with increased maternal and perinatal morbidity and mortality.However, women who experience infertility are often desperate to conceive and view a multiple pregnancy as a positive outcome.
The rising rate of multiple pregnancies recorded nowadays is mainly attributed to the widespread use of infertility treatment modalities. Interestingly, still most of the twins

result from natural conception. Ovulation induction (OI) inanovulatory women and superovulation (SO) in ovulatory women with unexplained or age-related infertility,combined with timed intercourse or intrauterine inseminaton, account for the majority of high order (triplet , quadruplet etc) multiple gestations. On the contrary, artificial reproductive technologies (ART) contribute to high order multiples to a lesser extent due to the implementation of restrictive embryo transfer policies.Thus, the incidence of high order multiples is progressively decreasing, whereas the twinning rate continues to rise.

Strategies for the control of multiple pregnancies in OI and SO cycles are based on pretreatment risk assessment and close follow-up of the stimulation process using ultrasonography and monitoring estradiol levels. Initial stimulation with oral agents (clomiphene citrate or aromatase inhibitors), low dose gonadotropin stimulation, withholding hCG triggering and abstaining from sexual intercourseor providing contraception,use of a lower hCG triggering dose or alternatively triggering ovulation with LH or GnRH-agonists, pre-ovulatorytransvaginalultrasound-guided aspiration of supernumerary follicles and finally conversion of OI or SO to ART cycles, where limiting the number of embryos transferred can reduce the risk of multiple gestations are major components of the effort to reduce multiple pregnancy rate associated with fertility treatment approaches.

O-48 Perinatal outcome of singleton pregnancies following in vitro fertilization

Fadi Mirza,
American University of Beirut Medical Center, Beirut, Lebanon.

Since the late 1970s, in vitro fertilization (IVF) has changed the face of the field of reproductive endocrinology and infertility, impacting the lives of millions by giving them the opportunity to conceive. Yet, it is now known that the impact of this technology goes beyond conception, as it has significant maternal and fetal implications for the remainder of pregnancy. Conception by IVF is associated with a number of adverse perinatal outcomes, even with this technology results in singleton gestations. These complications include spontaneous abortion, ectopic pregnancy, congenital anomalies, and genetic abnormalities. Singleton gestations following IVF appear to also be at increased risk of placenta previa, abruptio placenta, gestational diabetes, preeclampsia, and cesarean delivery, although to varying degrees. In addition, a number of long-term sequelae have been linked to IVF, including cancer and developmental problems. This talk reviews the perinatal outcome of singleton pregnancies following IVF, shedding the light on these associated complications.

O-49 The use of vaginal progesterone for prevention of preterm birth in IVF/ICSI pregnancies

Mona AboulGhar

Preterm birth is a major public health burden. The incidence of preterm birth in IVF/ICSI pregnancies is higher than naturally conceived pregnancies.

Mid-trimester transvaginal ultrasound measurement of cervical length is proved to be a good predictor for preterm birth in singletons and in twins.

The use of dailyVaginal Natural progesterone or IM Weekly synthetic progesterone has proven effective in prolongation of pregnancy in singleton pregnancies with a short cervix *as* well as those with previous history of preterm birth.

This has not been shown in twins neither through administration of daily
Natural vaginal neither progesteronenor IM weekly 17-α hydroxyprogesteronecaproate, even in twin pregnancies with short cervices
In IVF/ICSI pregnancies the situation is different, transvaginal cervical measurement was not found to be a predictor for preterm birth.
The use of dailyvaginal natural progesterone was studied in a randomized placebo controlled study exclusively on ICSI singleton and twin pregnancies. Natural vaginal progesterone significantly reduced the incidence of preterm birth in singletons, however did not in twin pregnancies.

Room: Hall B
CONCURRENT SCIENTIFIC SESSION 16: Ovarian stimulation for ART

O-50 Cost effectiveness analysis between GnRH antagonist & Agonist : an evidence Based approach

Hesham El-Inany (Egypt)

Abstract not received

O-51 Assisted reproductive technology in Egypt, 2008-2009: Results generated from the Egyptian IVF registry

Omnia Kamal, Ragaa Mansour, Mohamed Aboulghar, Gamal Serour
The Egyptian IVF-ET Center

Introduction: The objective of this report is to summarize the results of ART procedures cycles initiated in Egypt during the years 2008-2009.
Material and Methods: It is a voluntarily data collection. Forms designed by International Committee Monitoring Assisted Reproductive Technologies (ICMART) were distributed to all IVF centers in Egypt.
Results: Data were anonymously received from 12 centers in 2008, and 8 centers in 2009, with a total of 22648 cycles were reported. In fresh cycles ICSI constituted 100% in 2008, and 98.8% in 2009. Frozen-thawed embryo replacement cycles represented 17.2 % in 2008 and 17.5% in 2009 of all ART cycles.
In Fresh cycles, the clinical pregnancy rates per aspiration and per transfer were 36.8%, 40.0 %, for 2008, and 33.98%, 37.32% for 2009 respectively. The distribution of singleton, twin, triplet and high-order deliveries for IVF, ICSI and FET combined was 71.2%, 27.8%, 1% for 2008 and 74.7%, 24.5%, 0.8% for 2009 respectively. As a result of ART activities in 2008 a total of 2766 neonates were born and 1817 babies for 2009. The outcome of 1365 cycles (33%) in 2008 and 751 cycles (25.5%) in 2009 were lost to follow-up.
Complications of ART were mainly ovarian hyper stimulation syndrome, complicating 141 cases (1.36 %) of cycles in 2008 and 14 cases (0.18%) in 2009. The occurrence of bleeding was 4 cases of the aspiration cycles for two years.
Conclusions: These are the Nineth ,Tenth consecutive reports of the activities of the Egyptian IVF registry for cycles initiated during the years 2008-2009. The number of participating centers declined. The clinical pregnancy rates were comparable with the previous reports. The multiple pregnancy rate is still higher than would be desired. The

number of embryos per transfer should be limited to two or one except in certain indications, (≥ 3 embryos) per transfer. OHSS is much lower than previous reports. More efforts are needed to complete data on deliveries and perinatal mortalities.

Room: Hall C
CONCURRENT SCIENTIFIC SESSION 17: Lifestyle in Reproductive Health

O-52 Ovarian aging and somatic health

Marcelle Cedars (USA)

Menopause, while the end of reproduction, also represents a major hormonal, psychological and physiological event in the lives of all women. A number of studies have suggested an association between the age of menopause and longevity. Additionally, cellular and molecular mechanisms of general aging have been suggested to play a vital role in ovarian aging. In parallel with the recognition of these similar physiological parameters, markers of "ovarian age", also known as ovarian reserve, have been developed. These markers may allow prediction of age of menopause and the identification of women at increased risk for earlier menopause, and perhaps advanced somatic aging. The ability to identify these women would be critically important if decreased ovarian reserve were associated with increased long-term health risks. Thus, it is critical to understand if ovarian aging, and particularly, early ovarian aging, would place women at risk for long-term health issues with increased morbidity and mortality. Numerous studies reviewed support an association between menopause, and premenopausal changes consistent with diminish ovarian reserve, and cardiovascular risk, bone loss and changes in mood and cognition. Only longitudinal studies will be able to confirm if any identified associations reflect causality or common underlying risk, but the available data suggest women with diminished ovarian reserve represent a unique group that may be at increased risk for long-term health effects beyond fertility loss.

O-53 Relevance of vitamin D for reproduction

Lubna Pal (USA)

Vitamin D has long been recognized for its relevance to bone health and calcium homeostasis. Recent years however have generated an increasing realization of importance of vitamin D signaling for many organ systems other than the skeleton. We are amidst a pandemic of vitamin D insufficiency, with certain global regions and populations bearing a heavier burden of deficiency than others. While adverse implications of chronic and severe vitamin D deficiency for skeletal wellbeing are well known, an accruing body of literature suggests that optimization of vitamin D status may be of benefit against non-skeletal disorders and even reproductive health.

Learning objectives: At the conclusion of this presentation, participants should be able to:

1. Understand the biological significance of vitamin D in health and disease

2. Appreciate importance of vitamin D for reproductive biology
3. Identify screening and supplementation strategies for managing vitamin D deficiency as well as appreciate risks of over supplementation.

O-54 Lifestyle Issues: Conception and pregnancy

William Kutteh (USA)

Individual lifestyle decisions can play a significant role in reproductive success when evaluating pregnancy rates and miscarriage. Increasing maternal age is associated with increased aneuploidy in maternal oocytes and significantly impacts pregnancy and miscarriage. Obesity, designated by a body mass index (BMI) of 30 or higher, has become an epidemic in the United States and other developed countries. A number of factors found in obese women alter the balance in reproductive hormones and affect oocyte, sperm and embryo potential. Pregnancy rates, implantation rates, and take home baby rates are all adversely affected by increased BMI. Approximately one-third of reproductive-aged men and women use tobacco in the US. Women who smoke are 60% more likely to be infertile, require nearly twice the number of IVF attempts to conceive, have the onset of menopause 3 to 4 years earlier, have significantly increased basal FSH levels, and suffer increased miscarriage when conceiving naturally or with assisted reproduction. Alcohol consumption is associated with an increased risk of spontaneous miscarriage. The minimum threshold dose for significantly increasing the risk of first-trimester miscarriage is two or more alcoholic drinks per week. Women who consume more alcohol have decreased fertility and take longer to conceive in many studies. Caffeine use of less than 600 mg/day (two cups of coffee) appears to be safe and does not significantly affect pregnancy or miscarriage.

Room: Hall A
Keynote Lecture V

O-55 Aristotle, godfather of evidence-based medicine

Hassan N. Sallam, MD, FRCOG, PhD (London)
Professor in Obstetrics and Gynaecology, University of Alexandria, and
Clinical and Scientific Director, Alexandria Fertility Center, Alexandria, Egypt

Aristotle, one the greatest minds that ever existed, is indeed the godfather of evidence-based medicine. His teachings of logic and philosophy have been a driving force continuously guiding medicine away from superstition and towards the scientific method. Today, the revival of evidence-based medicine by the school of Archie Cochrane is a reaffirmation of his early teachings dating from the fourth century BC. This presentation will clarify how the ideas of this great man have influenced science in general and medicine in particular since his times and until the beginning of the twenty first century, spanning on the way the great achievements of Alexandrian and Arabic medicine as well as the achievements during the middle ages, the age of discoveries, the age of enlightement and finally modern medicine.

O-56 The clinical significance of DNA fragmentation combined with semen analysis in assisted reproduction

Sousou, S.; Al Shaikh,H.; Ghawanmeh,B.; Otaibi,K.; Ragheb, A and Dabit,S.

Introduction: Sperm DNA fragmentation is being increasingly recognized as an important cause of infertility. Sperm DNA fragmentation may result from aberrant chromatin packaging during spermatogenesis , defective apoptosis before ejaculation , excessive reactive oxygen species and extrinsic factors such as hyperthermia and environmental toxins .

Material & methods: By using halotic DNA kit,t 300 sperm were counted for chromatin dispersion (SCD). The test is based on the principle that sperm with fragmated DNA fail to produe the halo characteristic of dispersed DNA loops that is observed in sperm with non-fragmanted DNA, following acid denaturation and removal of nuclear proteins. Sperm suspension prepared from semen were embedded in an agarose microgel on a pretreated slides. An initial acid treatment denature the DNA .Following this, the lysis solution removes most of the nuclear proteins. When absence of massive DNA breakage is present, nucleoid with large haloes of spreading DNA loops, emerging from central core are produced. However the nucleoid from sperm with fragmented DNA either, do not show a dispersion halo or the halo is minimal .

Sperm were estimated for count, motility and morphology using strict criteria values.

DNA Index values were classified into three groups:

>15% has excellent fertilty, <15%<30% has good fertility, >30% has fair poor fertility

Results: Ninety tests were performed for SCD, Forty three cases with normal sperm parameters showed 84% normal DFI values, in the contrary, 47cases with abnormal sperm parameters showed 70%abnormalDFI values.

Conclusion: The SCD is a simple, accurate and inexpensive method for the analysis of DNA fragmentation in semen .In this study, sperm from abnormal semen values showed increased DNA fragmentation compared with sperm from normal semen under SCD test.Successful human reproduction depends on the inherent integrity of the sperm DNA. Indeed, there appears to be a threshold of sperm DNA damage beyond which embryo development and subsequent pregnancy outcome are impaired. Additional studies are needed to fully define the clinical value of sperm DNA damage testing and the optimal test to be used in this setting. Finally, therapies for impaired DNA integrity need to be developed and subsequent improvements in sperm DNA integrity from such therapies need to be correlated with improved reproductive outcomes.

O-57 Magnetic Activated Sperm Sorting: An Effective Method for In Vitro Reduction of Sperm with DNA fragmentation in Semen Samples of Infertile Men Undergoing Assisted Reproductive Techniques (ART).

Tamer Degheidy, Howida Abdelfattah, Ahmed Seif, Feras Albaz, Sherif Gazi, Samir Abbas.

Semen parameters of infertile men usually show higher levels of abnormalities including DNA fragmentation and apoptotic markers. Negative correlation between increased level

of DNA fragmentation and assisted reproductive techniques (ART) outcome was studied by several authors.

In the current study, we aim to evaluate the possible value of Magnetic activated cell sorting (MACs) in reducing DNA fragmentation in semen of infertile men.

Methodology: Semen samples obtained from 19 infertile men were subjected to density gradient centrifugation (DGC). DNA fragmentation index in processed re-suspended sperm was evaluated using TUNEL assay both before and after Magnetic activated cell sorting MACs using Annexin V microbeads that bind to the externalized phosphatidylserine (PS) on the surface of apoptotic sperms. DNA fragmentation was then evaluated in post MACs samples.

Results: DNA fragmentation was significantly decreased ($P<0.05$) in the MACs treated samples (9.31±6.28%) compared to the preMACs control samples (12.08±7.17%). There is no deleterious effect on sperm motility between the PreMACs samples (85.4±4.9%) and the MACs treated samples (85.2±3.86%).

Conclusion : MACs technique is a simple, reliable, non invasive, and non time consuming technique that may have a possible positive impact in ART and can, efficiently, remove apoptotic spermatozoa and reduce DNA fragmentation in treated samples prior to ART which can imply positive impact on ART outcome.

O-58 Relationship between reactive oxygen species (ROS), malondialdehyde (MDA), total antioxidants (TAS), leukocytes and round cells in seminal plasma and their effect on sperm parameters.

ME Hammadeh[1]; R. Al Qudah S, Solomayer E.F.

[1]*Department of Obstetrics & Gynecology, University of Saarland, Homburg/Saar Germany*

The objectives of this study were to determine WBC, round cells, ROS, MDA and total antioxidant level in seminal plasma and their correlation with sperm parameters, DNA integrity and DNA fragmentation and to find out the role of WBC, round cells in male infertility.

Material and Methods: Semen samples collected from 123 infertile men were examined according the WHO guidelines (1999). MDA in seminal plasma was measured using the Bioxytech MDA kit. Concentration of ROS was measured using Oxystat kit. Chromatin condensation evaluated by (Chromomycin CMA3). DNA fragmentation was assessed using TUNEL assay.

Results: The concentrations of WBC and round cells were 0.79±1.78 mill/ml and 9.6±5.1mill/ml. The levels of ROS and MDA and TAS in seminal plasma were 76.4 ± 82.0 µMol/l and MDA 0.956±0.595 µmol/10^7 respectively).

Sperm concentration, vitality, motility, morphology, membrane integrity (HOS-test), DNA condensation and DNA fragmentation was as follow: (43.1±37.5mill/ML; 40.3±25.9%; 51.1±13.4%; 61.3±17.1%; 70.0±19.4%; and 5.0±4.4 respectively).

An inverse correlation was found between ROS concentration and sperm vitality (r=-0.111; p=0.453; membrane integrity (r=-0.042; p=0.778) and Morphology (r=-0.141; p=0.340).

Regression analyses between MDA and various sperm parameters showed a statistically significant correlation (r=0.2319; p=0.0001) between MDA and WBC as well as between MDA and “round cells” (r=0.939; p=0.0084). DNA fragmentation correlates negatively with motility (r=-0.078; p=0.0.600) and vitality (r=-0.108; p=0.467). The correlations between MDA and leukocytes as well as “round cells” indicate an association between these cells and the induction of lipid peroxidation in sperm cell suspensions.

Conclusion: The inverse correlation between ROS and sperm vitality, membrane integrity and morphology and TAS in addition to the significant correlation between MDA and WBC and Round cells could be one of the mechanisms explaining the decrease of the fertilizing potential of spermatozoa in infertile patients.

O-59 Homocystein (HCY), Folic acid and Vitamin (B12) levels in Follicular fluid (FF) and serum of patient who became pregnant and those who did not after controlled ovarian hyperstimulation (COH) for ICSI.

Al-Qudah, S and Hammadeh ME
Department of Obstetrics & Gyxnecology; University of Saarland, Homburg/Saar, Germany

Objective: the objectives of this study were to investigate the levels of HCY, Folic acid and Vit. B12 in serum and FF of patients undergoing (COH), and to determine whether these substances could be affect ICSI outcome.
Design: Prospective study
Materials and Methods: The levels of HCY, Folic acid and Vit. B.12 and the mean number of fertilized, cleaved and transferred embryos of patients who became pregnant (G.1= 23) and those who did not (G2= 63) were analysed and compared. Correlation coefficients were measured between these parameters and clinical outcome
Results: HCY, Folic acid and Vit. B12 levels in serum were (7.75±1.77 µmol/l; 17.17±10.33 ng/ml and 387.76±144.31 pg/ml) and in FF were (6.62±1.95µmol/l; 23.86±12.27ng/ml and 783.81±1087.50 pg/ml respectively). HCY level in serum was significantly higher (p=0.001) than that in FF. Whereas, Folic acid and Vit. B12 levels in FF were significantly higher (p=0.001) in comparison to serum levels.
HCY, Folic acid and Vit B12 levels in serum of G.1 were (7.92±1.26µmol/l; 17.97±6.56ng/ml;351.18±143.67pg/nl) and in G.2 were (7.73±1.96µmol/l; 16.69±11.55ng/ml; 399.6±144.8pg/ml respectively). FF levels in G.1 were (7.06±1.77µmol/l; 25.08±9.78ng/ml; 416.3±167.28pg/ml) and in G.2 (6.52±2.01µmol/l; 23.25±13.20ng/ml; 930.16±1252.26pg/ml). Neither serum nor FF levels of HCY, folic acid and Vit.B12 showed a significant difference between G.1 and G.2.
The mean number of retrieved, fertilized and transferred embryos in G.1 was 9.22±4.48; 5.43±2.81; 2.61±0.58 and in G.2 was 7.67±5.47; 3.32±2.77; 2.06±0.82.
HCY level in serum and FF showed a negative correlation with the number of transferred oocytes, and pregnancy rate. However, a positive correlations was found between Folic acid level in FF and the number of transferred embryos and pregnancy rate (r= 0.25; p= 0.031; r= 0.121; p=0.318). Vit. B12 correlated significant positively with pregnancy (r=0.228; p= 0.037).
Conclusion: The concentration of HCY affect ICSI results negatively whereas, Folic acid and Vit.B12 level in FF influence positively the ICSI outcome.

Room: Hall B
ORAL PRESENTATION SESSION 19: Male Infertility

O-60 Obesity and male fertility

Imad aboujaoude[1] , Joanne Saad[2],Alexandra Hajjeh[2], Mira hazzoury[2] Youssef Andraos[1]
[1]*Center for reproductive medicine and genetics, Aboujaoude hospital Jaledib Lebanon 2 Reproduction biology lab, Lebanese University faculty of sciences II, Fanar Lebanon*

Introduction: Studies showed that obesity is associated with several health problems, including infertility. Data strongly suggest that excess bodyweight affects sperm production, but it is currently unclear whether weight loss can reverse this effect. Our study objective was to examine the relationship between BMI, male fertility and semen parameters (sperm quantity and quality). We also report the cases of four male patients who underwent rapid and major weight loss from bariatric surgery and the consequences on sperm parameters.
Material and methods: -first study; A total of 97 men, they were divided into two groups: fertile (n=52) and infertile men (n=45). They were subjected to BMI calculation (weight in kilograms per height in meter)
-Second study Spermogram were extracted on all male partners of couples attending for infertility investigations with normal female consultations. Then, we compare sperm depending on BMI for a total of 62 men

- Group 1: BMI<25 (kg/m2) (n=15)
- Group 2: 25<BMI<30 (kg/m2) (n=21)
- Group 3: BMI>30 (kg/m2) (n=26)

-third study studying 4 patient operated by bariatric surgery.
Results; - first study The average BMI was 27.06 kg/m^2 for the fertile group and 29.69 kg/m^2 for the infertile group. The average BMI in the infertile group was greater than the fertile group, p=0.02, the difference was significant.
-Second study Both overweight and obese men had a lower sperm concentration compared with controls, even though this decrease was not significant. The percentages of sperm motility and normal morphology did not show any significant variation in either overweight or obese men.
-Third study A significant decrease in the average BMI was observed after the surgery. There was also a decrease in sperm concentration and sperm motility after the surgery but this decrease was not significant. Time to conceive had a statistically significant increase after the surgery.
Conclusion The first study show that the average BMI was significantly higher in the infertile group Population-based studies conducted have indicated an increased likelihood of abnormal semen parameters among overweight and obese men, and a potential increased chance of subfertility among couples in which the male partner is obese, which was confirmed in our study.. Our study indicates that bariatric surgery and the drastic weight loss that accompanies might induce secondary infertility. More extensive, long-term studies need to be performed to determine the definite effects of bariatric surgery on male fertility; in the meantime, this procedure should not be recommended as a treatment for obesity-linked infertility.

O-61 Mobile phone and male fertility

Khouloud Khreiss MS, Rayan Chebaro MS, Dr Ahmad Yaacoub Daher.
Lebanese University faculty of sciences II, Fanar Lebanon

Introduction: the electromagnetic waves issued from a mobile phone have adverse effects on the human health. In order to understand their effects on male fertility, we undertook this study.
Materials and Method: 30 male rats of the species Spraque-Dawley were divided into two groups. The first contains 15 control rats, and the second 15 rats were exposed to an

antenna that emits electromagnetic waves of frequency 900MHz for 24 hours / 7 days and 6 weeks.

Results: the control rats exhibit a normal number of sperm in the ejaculate, and their seminiferous tubules and blood testosterone levels are normal. However, the rats that were exposed to the waves showed an absence of sperm in the ejaculate (olizoospermie or azoospermia), the seminiferous epithelium is atrophied with a small diameter, in addition to low testosterone levels in their blood serum.

Conclusion: electromagnetic waves probably cause a malfunction on the level of the gonadic axis hypothalamic-pituitary.

O-62 Expression Analysis of TEX14 Gene in Testis Tissues of Non-obstructive Azoospermic Iranian Infertile Men

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Introduction: Germ cell cytokinesis results in a permanent intercellular bridge connecting the daughter cells through a large cytoplasmic channel. During spermatogenesis, proposed roles for the intercellular bridge include germ cell communication, synchronization, and chromosome dosage compensation in haploid cells. Testis-expressed 14 (TEX14) is a novel protein that localizes to germ cell intercellular bridges. In the absence of TEX14, intercellular bridges are not observed by using electron microscopy and other markers. TEX14 is required for intercellular bridges in vertebrate germ cells, and recent studies provide evidence that the intercellular bridge is essential for spermatogenesis and fertility. TEX14 is a large protein with three N-terminal ankyrin repeats, a central kinase-like domain, and a C-terminal domain with limited homology to known proteins.

Materials and methods: Testis tissue samples were obtained from 10 patients with severe oligozoospermia and 20 patients with non-obstructive azoospermia (10 with SCOS syndrome and 10 with maturation arrest) who were referred to the Royan institute. Total RNA was extracted with Trizol and cDNA was synthesized. Quantitative real-time RT–PCR was performed using Power SYBR Green kit.

Results: Normalizing the relative amount of TEX14 transcript by the amount of GAPDH transcript in the same sample, indicated that expression of TEX14 in the testis samples of patients with SCOS syndrome (P value = 0.004) and patients with maturation arrest (P value = 0.038) is significantly reduced as compared with oligozoospermic patients.

Conclusion: The same expression pattern of TEX14 among mouse and human indicated that TEX14 is a highly conserved gene that might has an important role in mammalian testis functions like spermatogenesis. Although its function is unknown in human but given its role in progression of mouse spermatogenesis, it can be concluded that TEX14 gene can also has the same role in human. According to the results, we can conclude that TEX14 expression levels are essential for normal spermatogenesis and deficiency in this gene can cause spermatogenic failure and infertility in men.

Keywords: Male infertility, Non-obstructive Azoospermia, Severe Oligozoospermia, TEX14

O-63 Novel Indication For ART
Using Smuggled sperms of Palestinian prisoners

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Introduction: There are about 4,800 Palestinians are Languishing behind The discriminative Bars of Israeli jails, most of them are serving lengthy sentences ,with around 1,000 of them saddled with 20 years or more.
And since Palestinian prisoners in Israeli jails are not allowed conjugal visits, but some Israeli prisoners are…Day by day, those prisoners are losing the hope of being Fathers and mothers, especially those faithful waiting wives with their limited reproductive life as every woman in the world.
Material and Methods: The idea of utilizing IVF technique in such case is being discussed since 2001, But it took long time to achieve the needed religious ,political ,and social legitimacies before Its implementation could take place.
Now we have gathered more than 65 frozen samples at our center, besides , about 28 prisoners' wives have undergone IVF treatment in 48 trials (more than one trial for each ,once the first trial Failed)
Results: The 48 mentioned IVF Trials ,resulted in 21 clinical pregnancies…Among them , 3 have aborted ,13 have ongoing pregnancies ,and 5 have delivered their alive male babies recently.
Conclusion: For many Palestinian families split by incarceration, raising babies from prison-smuggled sperm brought hope to them and at the same time it highlighted their issue globally .

Room: Hall C
ORAL PRESENTATIONS SESSION 20: Reproduction

O-64 Reproductive performance after conservative surgical treatment of postpartum hemorrhage

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Introduction: Atonic postpartum hemorrhage (APPH) is the most common form of postpartum hemorrhage which in turn is the dominant cause of maternal morbidity and mortality worldwide. The conventional primary management of APPH includes uterine fundal massage, manual exploration of the uterus, and the use of various types of oxytocics. In refractory cases, however, several surgical interventions were introduced in order to control the bleeding. While hysterectomy is the definitive surgical operation for controlling the blood loss, it is a radical procedure leading to permanent loss of fertility. Alternatively many conservative surgical or the so-called uterine sparing- procedures were described. These procedures include bilateral internal iliac artery ligation (BIL), uterine artery ligation (UAL), step-wise uterine devascularization (SWUD) and B-Lynch. However, the data about the implications of these procedures on the future reproductive performance of the patients (i.e. fertility and pregnancy outcome) are relatively lacking.

Moreover, the influence of these interventions, particularly the SWUD on the ovarian reserve was not, to the knowledge of the authors, studied before. Herein, the aims of the present study were to evaluate the influences of the different uterine-sparing procedures on the future fertility, ovarian reserve, and outcome of subsequent pregnancy.
Patients and methods: A total of 168 infertile and pregnant patients with past history of uterine-sparing procedure were allocated into 4 groups; group I (BIL [n = 59]), group II (SWUD [n = 65]), group III (BUAL [n = 2]), and group IV (B-Lynch [n = 42]). One-way ANOVA test was used for comparison of prevalence of infertility, status of ovarian reserve, and incidence and type of relevant maternal and/or fetal obstetric complications between the study groups.
Results: Group II and IV had the highest prevalence of infertility. The OR was significantly lower in group II. Unexplained infertility was the predominant cause of infertility in group I, anovulation, and premature ovarian failure (POF) in group II, and endometriosis and intra-uterine adhesions in group IV. The obstetric complications particularly placenta previa and preterm labor were high in group IV.
Conclusions: BIL had the least deleterious effect on the reproductive performance. SWUD increased the risk of POF. B-lynch increased the risks of endometriosis, intra-uterine adhesions, placenta previa and preterm labor.
Key words: Uterine-sparing procedures; Infertility; Pregnancy outcome.

O-65 Relationship between in vivo concentrations of Activin-A, Follistatin and AntiMüllerian ovarian hormones with pregnancy rate following Intrauterine insemination

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Introduction: Recently the reproductive hormones, activin A, follistatin (FS) and Anti-Mullerian hormone (AMH),have been found to play an important role in folliculogenesis, oocyte maturation and corpus luteum function by changing the pattern of granulosa cell expression which in turn affects the success of fertilization potential.
Objective: To examine the relation of in vivo concentrations of, activin A, FS and AMH hormones on the ovaries status in the phases of menstrual cycle and to elucidate the relationship of these hormones with pregnancy rate following intrauterine insemination (IUI).
Material and Methods: A total of 77 infertile couples were recruited from infertility Clinic population at the IVF Institute through the period from September 2011 to May 2012. Those infertile couples were divided into 3 groups according to the infertility causes (male factors , anovulatory and unexplained infertility). Measurements of AMH , activin A, and FS hormones levels were done at (CD2-5) and then activin A, and FS hormones levels were measured at preovulatory(CD12-14) before hCG injection . IUI was performed 36-40 hours after hCG injection Measurements of activin A, and FS hormones were done at day 28 of the cycle(CD28) and then measurements of the three hormones were performed after successful IUI.
Result: There was a positive significant correlation between endometrial thickness (ET) and pregnancy rate and the best ET to predict pregnancy is ≤ 7.5mm. There was no significant relation (P>0.05) between AMH level and pregnancy rate. A significant correlation was found between follistatin levels in preovulatory (CD 12-14) with a cutoff value 0.20ng/ml to predict the pregnancy. There was a significant relation between

activin-A level and pregnancy rate with a predictive cutoff value 397.5 ng/ml on (CD 28) only. The total pregnancy rate in this work was 23.33% following IUI.
Conclusion: Activin-A can be regarded as a biomarker candidate for diagnosing very early pregnancy at luteal phase following IUI. Endometrial thickness with follistatin preovulatory (average CD13) has the most predictive value for pregnancy following IUI.
Keywords: Activin-A hormone, Follistatin hormone and AntiMüllerian hormone, IUI

O-66 In vitro embryonic development following the insemination with epididymal sperms of vasectomized male mice activated in vitro by Glycyrrhiza glabra extract: model for obstructive azoospermia

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Introduction: Many studies conducted on the Glycyrrhiza glabra (G.glabra) as a motility stimulants showed a positive effect on the activation of sperm in vitro specifically improve the forward movement. However, it was not known the impact of these stimulants on the nature of sperms parameters in vasal obstruction of mammals.
Objective: This experiment was designed to examine the possibility of fertilization ova by epididymal sperm of vasectomized mice activated by G. glabra and the embryonic development of early cleavage stages, as a model for obstructive azoospermia .
Materials and Methods: Glycyrrhiza glabra aqueous extract (0.3 mg/ml culture medium) was used for in vitro direct sperm activation technique . the female mice were divided into two groups , the first group; the insemination was performed with epididymal sperm of vasectomized male mice activated by adding G. glabra to the culture medium (treated group) while the second group insemination was done with epididymal sperm of vasectomized male mice activated by G. glabra - free medium (control).
Results: This study showed a highly significant ($P < 0.01$) improvement in certain sperm function parameters i.e the sperm forward movement , morphologically normal sperms (MAS) with a highly significant ($P<0.01$) decrease in abnormality. There was a significant ($P<0.05$) increase in fertilization rate (FR) of superovulated (SUO) mice oocyte (75.84%) by using 30 % G. glabra medium compared to G. glabra- Free medium (Hams –F12 medium) alone in SUO group (54.43%).By adding 30% G. glabra to the medium , the number of 3-cell and 4-cell embryonic stage of SUO mice was significantly ($p < 0.05$) higher than that of grouping G. glabra- Free medium mice embryo (62.10 % and 65.78% vs. 58.88 and 66.29% , respectively).
Conclusion: According to the results of the present study, the investigation showed that the G. glabra may contains many factors , and energy sources that supporting the fusogenic process ,growth and normal development of early cleavage stages of mice embryos in vitro . More researches on the cytogenetic effects of this herbal plant on the epididymal sperms are recommended to utilize the results of this study for obstructive azoospermic in men .
Keywords: vasectomized mice, Glycyrrhiza glabra ,Fertilization rate, embryonic development

O-67 The lived experience of Iranian donor oocyte recipient women

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Introduction: Despite the increased demand of donor oocyte treatment, little is known about the experience of recipient women especially in Iran, due to the cultural, social, and religious situation. The aim of this study is to explore and describe the experiences of the women who are recipients of donated oocyte.
Material and methods: Eleven oocyte recipient women participated in this study and their experiences were investigated. It was a qualitative study using phenomenological approach. The cases were chosen by purposive sampling among the women who have referred to Royan Institute, Iran. In this study, the data are generated from transcription of taped interviews. Data analysis was in accordance with the procedure introduced by colaizzi (1978).
Result: Five main themes emerged from the women's descriptions of experiences: (1) perceiving infertility as a "loss", (2) Accepting donated oocyte as a way of experiencing motherhood, (3) Concerns about the uncertain future, (4) Difficult decision making either in anonymous or known oocyte donation, (5) Women's dual perception of oocyte donors. The perception of infertility is formulated on "loss" which is emerged as defect, disease, and scratch on womanhood and inability of gene transmission. Five issues were found to be encouraging factors for accepting the procedure: the possibility to maintain the confidentiality in oocyte donation, the chance of genetic transition from husband, the opportunity of having the experience of motherhood (pregnancy, childbirth and breastfeeding), and this treatment is permitted according to shia religious beliefs and the influence of time factor and advanced maternal age in accepting oocyte donation. Participants stated some concerns about the possibility of unwanted consequences such as any further relation between their husbands and the donors and the child awareness of her/his origin. Also, they mentioned legal concerns for motherhood rights that roots in the worth of lineage in Iranian and Islamic beliefs. In addition, unknown effects of entering a genetically stranger to the family are also included as a concern. However most of women participated in our study prefer anonymous donation, they described it as hazardous and uncertain decision. Following their attempts to be mothers, they have two kinds of perceptions towards the women who donate their oocyte; Positive and grateful feeling to them as perfect women, and negative opinion towards them as exploiters of recipient's need.
Conclusion: Experiences of oocyte donation is not an evident phenomenon. Recognition of unknown dimensions of receiving donor oocyte by infertile women, and acknowledging recipient women's perception of motherhood highlights the importance of counseling, guiding, and supporting the infertile women during and after their treatments.
Keywords: lived experience, oocyte donation, phenomenology

O-68 Educational effectiveness in Infertility Treatment (A Descriptive Study)

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Introduction: Patient education can be defined as the process of improving knowledge and skills in order to influence the attitudes and behavior required to maintain or improve health. Effective patient education entails providing patients with health information that will improve their overall health status.
Methods: This descriptive study was performed to assess the effect of educational interventions on infertility treatment process in Royan Institute. 46 infertile patients selected through accessible sampling to complete questionnaires before and after educational program. Patients completed written measures of variables (i.e., Baseline knowledge, positive aspects and the effectiveness of an educational program, clinical outcome and satisfaction and willingness to participate in such program; demographic variables: age, education, medical/allied health training) before and after educational meeting held by gynecologists and/or fertility specialist. Collected information analyzed using Chi- Square tests and T- tests by SPSS software, version 16.00.
Results: patients reported highly enhance in their knowledge that helps create an atmosphere of trust, enhances the doctor-patient relationship, reduce their stress as well as empowers them to participate in their own treatment process; so they were more likely to be satisfied with their physicians and other health care team members experience in terms of diagnostic and different therapeutic approaches of ART and its success rate. Patients often tend to receive sufficient information in their first visit by educational classes (face-to-face teaching) and some cited other media such as videos and television programs. There are extensive research examining the benefits of patient education on the process of medical interventions especially in chronic disease which recognized that patient involvement in the medical decision-making process through patient education is central to improving overall health outcomes and patient satisfaction. An increased knowledge base, contribute to improving outcomes for infertile patient. It is widely supported that reduced stress levels may contribute to improved satisfaction levels, consequently facilitating a positive outcome for patient receiving first time fertility treatment.
Conclusion: Appropriate reassurance and support from healthcare professionals can provide a more positive experience for couples. Considering that educational programs not only aim to improve knowledge, but also the behaviors that influence the disease
Keywords: Infertility; Patient education; Health care; Treatment; effects

Room: Hall A
ORAL PRESENTATIONS SESSION 22: Reproduction

O-69 ROLE OF VAGINAL MISOPROSTOL IN ACHIEVING CERVICAL RIPENING BEFORE OPERATIVE HYSTEROSCOPY.

Elbareg, AM.; Elmehashi, MO.; Elsarati, OA.; Essadi, FM.

Background & Objectives: OHYS has gained popularity in management of intrauterine abnormalities. Cervical dilatation (CD) represents a real challenge during the procedure. Misoprostol, a synthetic prostaglandin E1 analogue has a cervical ripening effect, being more effective when it is administered vaginally than orally. Aim of this work is to evaluate effectiveness of vaginal Misoprostol in facilitating CD prior to OHYS.
DESIGN: Prospective controlled clinical trial
Materials and Methods: 120 patients considered medically fit and scheduled for OHYS with an Olympus hysteroscope 9-mm during follicular phase were recruited over a period of 6 months from July to December 2012. Patients divided randomly and equally into 2 groups of 60 each: group (A) to receive 800 µg misoprostol (Cytotec), given vaginally 3 h prior t operation, in group (B) nothing received. Primary outcome measure was CD assessed by largest size of Hegar dilator entering cervix without resistance, secondary outcome was subjective assessments of ease of CD to 9 mm. Adverse effects if any were recorded. Data analysed and P-value considered to be significant if < 0.05, analyses were performed using SPSS software.
Results: No significant difference between the groups for age and parity. CD in group (A)(9.4±2.4 mm) was significantly (P<0.05) greater than that in group (B)(7.8±1.9 mm). Difficult CD was significantly less in group (A) than group (B) (P<0.012). Time taken for CD up to 9 was 58 seconds in group (B), only 41 seconds in group (A). Vaginal bleeding was significantly higher in group (B)(P<0.03), but did not affect the operations. Pre-operative pain was slightly more in treatment group, but not statistically significant. No cervical damage, false passage, uterine perforation or infection in both groups.
Conclusions: Vaginal misoprostol applied 3 hours before OHYS reduce the need for CD and facilitate hysteroscopic surgery. It is of easy application, cheaper price, more economic and with greater acceptability.

O-70 The relationship between blood group and urinary tract infection in pregnancy

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Introduction: Blood group antigens (ABO) and (Rh) are present in all cells including cells of the urinary tract and as a predisposing factor for infection in different parts of the body. The aim of this research is to determine the high-risk blood group that is prone for development of genitourinary tract infection. **Methods:** In this descriptive research 150 pregnant women were admitted to Dr. Rasekh clinic from 2010 to 2012. urine analysis and culture were tested in women with different blood groups in early pregnancy that was negative. Urine analysis and culture were analyzed In the second trimester of pregnancy were tested. Results were analyzed by SPSS15 software. Results: Frequency of pregnant women with blood group A+ was 23.2% that 42.4% of this group were positive in urine analysis and culture in the second trimester of pregnancy. The frequency of blood groups were B+, AB+ , O+ , A-, B-, AB-, O- respectively 16.9%,8.5%,7.43%,0.7%,2.1%,0.7% and 4.2%. People with these groups had positive urine analysis and culture in the second trimester of pregnancy respectively, 25%, 25%, 27.4%, 0.01%, 33.3%, 0/01%, 16.7%. **Conclusions:** The women with blood group A+ and B- are

more prone to genitourinary tract infections. Due to serious consequences of infections like; low birth weight, renal infection, anemia, high blood pressure, miscarriage, neonatal infection during vaginal delivery, postpartum uterine infection and because of restrictions on the use of antibiotics in pregnancy , high-risk groups should be identified and monitored .

Key words: urinary tract , infection, pregnant, blood group

P-01 Fertility outcomes following abdominal myomectomy in infertile women

Çiçek Mahmut Nedim, Güzel Ali İrfan, Özer İrfan, Erkılınç Selçuk, Kara Aydan Sezer

Background: Fibroids is detected in 5-10 % of infertile cases and reported that intramural and submucosal fibroids are thought to reduce the effectiveness of assisted reproduction cycles (1, 2). Postoperative pregnancy rate is reported to be between 9 and 76% depending on different types of fibroids (3).
Purpose: To evaluate and compare pregnancy outcomes in infertile women performed abdominal myomectomy at our clinic.
Methods: This retrospective study included 76 infertile women underwent abdominal myomectomy. The data were collected from hospital records and patients files, descriptively. The cases were divided into two groups according to achieving postoperative pregnancy (Group 1, n=22), and cases with no postoperative pregnancy (Group 2, n=54). Risk factors recorded were; age, gravidity, parity, size of the fibroids, body mass index (BMI), tumor markers and serum blood values (Table 1). Statistical analyses were carried out by using the statistical packages for SPSS 17.0 for Windows (SPSS Inc., Chicago, IL, USA).
Results: A total of 76 infertile women underwent abdominal myomectomy during the study period. Of all cases 22 became pregnant. There was statically significant difference between the groups in terms of age, BMI, diameter of the fibroids ($p<0.05$) (Table 2). The receiver operator curve (ROC) analyses showed that diameter of the fibroid may be a prognostic factor in order to assess the probability of pregnancy following abdominal myomectomy in infertile women.
Conclusion: We think that infertile women with a diameter of> 5 cm fibroids may have more chance of conceive after abdominal myomectomy.
Key Words: abdominal myomectomy, fertility outcomes, infertile women
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P-02 Simultaneous serous cyst adenoma and ovarian pregnancy in an infertile woman

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Introduction: Ovarian pregnancy is a rare form of extra uterine pregnancy. Serous cyst adenoma is a benign variant of epithelial cell ovarian tumor. The coexistence of a cyst adenoma with an ovarian pregnancy in the same ovary is extremely rare. Some studies have suggested that infertility or ovulation-inducing drugs can be involved in increased risk of ovarian tumors and ovarian pregnancies.

Case: A 28 year-old infertile woman presented with a ruptured ovarian pregnancy following ovulation induction with metformin. She had a concurrent, benign serous cyst adenoma in the same ovary. Resection of ovarian pregnancy and the mass were performed. The ovary was preserved.
Conclusion: Removal of gestational tissue and preservation of involved ovary is the best option for management of ovarian pregnancy in young patient. Although, there is an association between infertility and ovulation-inducing medications with ovarian gestation, their connection with serous cyst adenoma is undetermined.
Key Word: Infertility, Ovulation Induction, Non-tubal ectopic pregnancy, Ovarian pregnancy, Serous cyst adenoma, Metformin .

P-03 Reproductive complication after hystroscopic surgery for asherman's syndrome

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Introduction: Asherman's syndrome is often secondary to pregnancy related endometrial trauma by curettage or cesarean section. Although it is a cause of infertility, pregnancy is possible after hysteroscopic surgery. However, the obstetric outcome is not always satisfactory. **Objective**: We report a case ofplacenta increta following treatment of Asherman's syndrome to raise awareness of possible severe reproductive complications of such treatment. **Case report**: A 26 year old woman presented with secondary infertility and severe Asherman's syndrome occurred following a dilatation and curettage, performed for retained products after cesarean section. Hysteroscopic surgery was performed twice before restoring a normal uterine cavity. She conceived after intracytoplasmic sperm injection. At 12 weeks gestation the patient presented with mild vaginal bleeding which settled spontaneously. At 19 weeks she was hospitalized with vaginal bleeding and abdominal pain as a case of inevitable miscarriage. The fetus expelled but placenta was retained with no signs of separation. Impression of placenta increta was made and we decided for conservative management. After the initial control of bleeding she received two weekly separated doses of methotrexate. Four months later she resumed her menstrual period and follow up ultrasound imaging suggested complete desorption of the placenta increta 6 months after the miscarriage. Follow up diagnostic hysteroscopy confirmed normal uterine cavity. **Conclusion**: Hysteroscopic adhesiolysis can be performed for severe Aherman's syndrome with safety and efficacy. However, it is important to realize the significant high risk pregnancies after such treatment with complications including spontaneous abortion and abnormal placentation.
Key words: Placenta increta, Asherman's syndrome, Hysteroscopic surgery.

P-04 SUCCESSFUL LAPAROSCOPIC ASSISTED MANAGEMENT OF OVARIAN TORSION DURING 33rd WEEK OF PREGNANCY

H Chin, M. S. Hendricks, SF Loh

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 patient's post-operative morbidity.

Key words: Laparoscopic assisted management, ovarian torsion, in pregnancy

P-05 A Successful Childbirth in Patient with Globozoospermia After ICSI with Oocyte Activation by Calcium Ionopohore

Karaca N, Yilmaz R, Oral S, Kanten G, Cengiz F.

Introduction: Globozoospermia which is called round-head spermatozoa without acrosome is rare and severe causes of structural abnormality in male infertility. The main problem of cases with globozoospermia is a very low fertilization and pregnancy rate. We here report a successful pregnancy and childbirth in patient with type 1 globozoospermia after intracytoplasmic sperm injection (ICSI) with oocyte activation by calcium ionopohore.

Case: The couple admitted to our unit with a history of infertility for 17 years duration. The 37-year-old woman had regular ovulatory cycles, normal hormonal profile. The man was 39-year-old and findings in his physical and urogenital system examination was normal. His endocrine profile was within normal range. The results of karyotype analysis performed in peripheral blood samples were normal (46, XY) and also had no Y-microdeletion. The spermiogram showed a sperm count of 14 million/ml, with 35% actively motile and 100% morphologically abnormal sperm which was globozoospermia. Classic long down regulation protocol in the ovarian stimulation was used. We collected 13 MII oocystes. We applied Ca^{++} ionophore following the ICSI procedure. We obtained 5 PN embryos and the two grade 1 embryos on 5^{th} day were transferred. We found a positive BhCG after 2 weeks following the oocyte collection. In the 6^{th} week, we diagnosed the patient with a clinical pregnancy after the fetal cardiac activity. Pregnancy had uncomplicated and resulted in delivery a healthy male infant at 38 weeks.

Conclusion: ICSI with assisted oocyte activation by Ca^{++} ionophore may overcome the male infertility with globozoospermia and result in healthy livebirth.

P-06 Basal hormonal profile may predict poor responders in intracytoplasmic sperm injection cycles.

Al-Taee , H.; Al- Khfaji , Z. and Al- Madfai , Z.

INTRODUCTION: Ovarian response varies considerably among individuals and depends on various factors. Poor response in In Vitro Fertilization(IVF) yields lesser oocytes and is associated with poorer pregnancy perspective. Cycle cancellation due to poor response is frustrating for both clinicians and the patient. This paper studies some ovarian reserve hormonal profiles which may be a contributing factor for poor ovarian response in IntraCytoplasmic Injection (ICSI) cycles. **SUBJECTS AND METHODS**: This is a prospective controlled trial conducted at the Fertility unit in Al- Sadar medical city, Najaf Al-ashraf province. Eighteen poor responders to controlled ovarian hyperstimulation with gonadotropin have been withdrawn from 67 initially selected participants intended to undergo intracytoplasmic sperm injection as a treatment option for their infertility. Basal cycle day 2 hormonal levels for follicular stimulating hormone(FSH) ,Anti mullerian hormone (AMH) and estradiol(E2) as well as antral follicular count(AFC) were measured and compared for both groups . **RESULTS**: The poor responder group found to be of higher age and basal serum FSH and lower basal serum AMH levels ,the AFC found to

significantly lower in the poor responders group. **CONCLUSIONS**: some markers of ovarian reserve(namely FSH AFC and AMH) may be used as a predictor of poor responders in assistedreproduction programme.

Key wards: Anti mullerian hormone (AMH), Folliclle stimulating hormone (FSH),Estradiol (e2) ,antral follicular count, Intracytoplasmic sperm injection(ICSI), Poor respoders

P-07 Decreased expression of *JMJD1A* histone demethylase gene lead to reduction of *TNPs* and *PRMs* expression in testis tissues of subfertile men

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Introduction: Spermatogenesis is a complex and unique process in male reproductive system which transforms diploid spermatogonia into differentiated haploid spermatozoa, with a completely condensed chromatin. Sperm chromatin condensation occurs by replacement of histones with transition proteins (TNP) and protamines (PRM), respectively. These processes mediated by different histone modifying enzymes such as JMJD1A, a histone modifier that specifically demethylates lysine 9 of histone H3 (H3K9). This protein involves in sperm chromatin condensation by demethylation of *TNP* and *PRM* genes in their promoter regions. This study aimed to consider correlation of *JMJD1A* mRNA level, with expression of *TNP1*, *TNP2*, *PRM1* and *PRM2* genes in testis tissues of subfertile men.

Material & methods: Ethical approval and informed patient consent was gained for the use of tissue samples. Testicular biopsies were collected from 20 infertile men referred to Royan Institute and underwent testicular sperm extraction (TESE). Through pathological and spermogram analyses, these samples distributed into 4 groups: hypospermatogenesis (positive control), sever oligoasthenoteratozoospermia, complete maturation arrest at spermatid level and sertoli cell only syndrome (negative control).

Total RNA was extraced from the tissue samples. After synthesis of first-strand cDNA, quantitative real-time PCR was performed using designed primer pairs.

Results: This data significantly revealed lower expression levels of *JMJD1A*, *TNP1*, *TNP2*, *PRM1* and *PRM2* genes in all 3 sample groups with spermatogenesis defect in comparison to positive control.

Conclusions: This data demonstrated that defective expression of *JMJD1A* histone demethylase gene can reduce expression of *TNP* and *PRM* genes during spermatogenesis, and cause to defective chromatin condensation of sperm and male infertility.

Keywords: Male infertility, Epigenetics, JMJD1A, TNP, PRM

P-08 H2A.Z and Proliferation in Endometriosis

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Introduction: Endometriosis is a common gynecological disorder that is defined by the presence of endometrial glands and stroma outside the uterine cavity. It has many features in common with neoplasia such as clonal proliferation and a tendency to metastasis and tissue invasion. Although it is not a malignant disorder, endometriosis exhibits cellular proliferation and invasion. H2A.Z is a histone variant that plays role in cellular proliferation. It activates c-Myc expression by binding the promoter of *c-Myc* oncogene and recruiting the transcriptional machinery for gene activation. H2A.Z represses p21 expression by being differentially localized within p21 promoter by the action of p53 or c-Myc transcriptional factors, and stimulates the cell proliferation in cancer cells. It is an important regulator of gene expression, and its deregulation may lead to the increased proliferation of mammalian cells. The aim of this study was to evaluate the expression of *H2A.Z* gene in eutopic and ectopic endometrium of women with endometriosis, in comparison with normal endometrial tissue.
Materials and methods: Local ethical approval was gained for this study and informed consent was given by patients. All patients were between 20-45 years old, consulted for infertility and/or pelvic pain, and were found to have no endometrial hyperplasia or neoplasia. We investigated both ectopic and eutopic endometrium in women with endometriosis. Ectopic biopsies were obtained by laparoscopic procedure and eutopic biopsies were obtain by piplle. In women without endometriosis, control biopsies gained with piplle. Total RNA was extracted separately from each group using TRI reagent and treat with DNase I. First-strand cDNA synthesis was performed using random hexamer primers and the superscript II reverse transcriptase system. Quantitative PCR was performed using the prepared cDNA and primers for *H2A.Z*. The relative expression of *H2A.Z* gene was compared in biopsy samples after normalization with *β-actin*.
Result: The results showed that the mRNA level of *H2A.Z* was significantly higher in ectopic endometrium of endometriosis patients compared to eutopic ones, as well as in the control biopsies in proliferative phase of menstrual cycle.
Conclusion: This finding implies for the first time that the histone variant H2A.Z can be considered as dynamic epigenetic factor in endometriosis and infertility.
Keywords: H2A.Z, Endometriosis, Proliferation

P-09 Evaluation of *CDY1* gene expression in testis tissues of infertile men reffered to Royan institute

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Background: Spermatogenesis is characterised by two distinct stages, spermatocytogenesis and spermiogenesis. During spermiogenesis, haploid spermatids endures complex changes to differentiate into spermatozoa, these processes include chromatin modifications mediated by different histone modifying enzymes resulting in compaction and protection of chromatin. Chromodomain y (CDY) proteins encoded by the *CDY* family of genes, are characterized by two functional motifs, a chromodomain and a histone acetyltransferese catalytic domain. A testis specific CDY protein, named CDY1, binds to methylated histone regions through its chromodomain, and then causes hyperacetylation of the genes involved in sperm chromatin condensation. This study

aimed to investigate the relative expression of chromodomain y1 (*CDY1*) gene in the testis tissues of infertile men**.**

Material &Method: Local ethical approval was gained for this study and informed consent was given by patients. Testicular biopsies were collected from 20 infertile men referred to Royan Institute and underwent testicular sperm extraction (TESE). Through pathological and spermogram analyses, these samples distributed into 4 groups: Hypospermatogenesis (positive control), Sever oligoasthenoteratozoospermia, Compelet maturation arrest at spermatid level and Sertoli cell only syndrome (negative control).

Using reverse transcription and quantitative real-time PCR reaction (qRT-PCR) methods, the expression profile of *CDY1* gene was evaluated in the tissue samples.

Result(s): Our data significantly showed lower expression of *CDY1* gene in all 3 sample groups with spermatogenesis defect.

Conclusion(s): This result indicates that *CDY1* gene can be considered as a genetic biomarker in male infertility.

Key Word: *Spermatogenesis; Hyperacetylation; CDY1*

P-10 Epigenetic evaluation of *FMR1* gene regulatory region in blood samples of infertile women with Diminished Ovarian Reserve (DOR) reffered to Royan institute

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Introduction: Diminished ovarian reserve (DOR) is a primary infertility disorder characterized by a reduction in the number and/or quality of oocytes, usually accompanied by high follicle-stimulating hormone (FSH) levels and regular menses. Premature ovarian failure (POF) is another infertility disorder related to DOR and both are diagnosed by high levels of FSH. Furthermore, DOR has been described as a feature of POF. Recently, the association between *FMR1* premutations(50-200 CGG repeats) and the premature ovarian failure (POF) disease has suggested that *FMR1* gene acts as a risk factor for POF and recently for DOR pathogenesis. Expansion of CGG repeat numbers results in silencing of *FMR1* gene expression. This expansion triggers methylation of *FMR1* CpG island, hypoacetylation of associated histones, and chromatin condensation, all characteristics of a transcriptionally inactive gene. In this study, dimethylation and trimethylation levels of histone H3 at lysine 9 (H3K9me2 and H3K9me3) on the regulatory region of *FMR1* gene were evaluated and analyzed in blood cells of patients with DOR.

Material &Method: Local ethical approval was gained for this study and informed consent was given by patients. Blood samples were collected from 30 infertile women referred to Royan Institute. These samples distributed into two groups (DOR patients and non-DOR patients), based on the number of follicles, serum FSH level and number of CGG repeats. The patient groups included samples that had higher levels of FSH (>11), number of CGG repeats between 50-200 and follicles number lower than three. Each group contained 15 samples. Using chromatin immunoprecipitation (ChIP) coupled with real-time PCR, di- and trimethylation of H3K9 in the promoter and exon1 regions of *FMR1* gene were quantitatively compared.

Result: The data clearly demonstrated that incorporation of H3K9me2 were significantly higher in the regulatory region of *FMR1* in DOR patient in comparison with non-DOR

patients, whereas the incorporation of H3K9me3 in non-DOR patients in comparison with DOR patients were higher.

Conclusion: Our experiments indicate that H3K9 methylation can be considered as a dynamic epigenetic switch in regulation of *FMR1* gene in DOR, causing female infertility. This indicates that the promoter and exon 1 regions are the critical sites for epigenetic regulation of the *FMR1* gene in ovary function development.

Key Word: DOR; FMR1 gene; H3K9 methylation

P-11 Decreased levels of SMCY in sertoli cell-only syndrome

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Introduction: Infertility is prevalent and problematic among couples worldwide and the male factor is implicating to more than half the cases. A part of male infertility cases is because of failure in complex process of spermatogenesis and chromatin condensation of sperm. Several factors with various functional roles have been identified in chromatin compaction through maturation of sperm. In recent years it has been observed that some cases of male infertility are linked to loss of a type of histone lysine demethylase named SMCY. The Y chromosome *SMCY* gene belongs to the JmjC domain–containing family of histone demethylases and encodes a histone demethylase of H3K4me2/3. It's been revealed that SMCY associates with meiosis-specific events and plays an important role in male fertility.

Methods and matherials: Local ethical approval was gained for this study and informed consent was given by patients. Based on spermogram and histopathologic features of infertile men referred to Royan Institute, two groups of azoospermic patients were selected in this study including sertoli cell-only group and hypospermatogenesis group. Total levels of SMCY protein in chromatin of testis biopsies of the mentioned groups were quantitatively evaluated by an Enzyme-linked immunosorbent assay (ELISA) on intact nucleosomes.

Results: Results showed significant decrease of total levels of SMCY protein in sertoli cell-only azoospermic group in comparison to hypospermatogenic group.

Coclusion: This finding implies significant association of SMCY protein with spermatogenesis and sugesstes that this histone demethylases can be considered as a risk factor for patients with sertoli cell-only syndrome.

Key wolds: male infertility, spermatogenesis, histone demethylase, SMCY.

P-12 Genetic variation analysis of H2BFWT gene in azoospermic infertile men referred to Royan institute by PCR-RFLP method

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Introduction: During spermatogenesis, significant chromatin reorganization occurs due to the histones replacement with testis-specific histone variants, transition proteins and protamins, respectively. Probably this architecture is required for the normal formation of spermatid nuclei. The H2B family, member W, testis specific (*H2BFWT*) gene encodes a testis specific histone that is a fundamental component of the sperm telomere-binding protein complex, required for specific functions during chromatin remodeling in meiosis and the regulation of spermatogenesis. Therefore, it is hypothesized that genetic alterations of this gene may be associated with male infertility.
Material and Methods: Genetic alterations of single-nucleotide polymorphisms loci −9C>T (rs7885967) in *H2BFWT* gene, were investigated in the peripheral blood samples of 92 infertile men with azoospermia (including patient with sertoli cell only syndrome (SCOS)(42), complete maturation arrest (CMA)(34) and hypo spermatogenesis (16) according to testicular biopsy) and 60 fertile men with normal semen parameters referred to Royan Institute by Polymerase Chain Reaction and restriction fragment length polymorphism technique (PCR-RFLP).
Results: Statistical studies indicated that the genotype distribution frequencies were similar between infertile and fertile group. However, the frequency of this SNP in patients suffering from CMA was significantly higher compared with patients suffering from SCOS (p = 0.015).
Conclusions: As this gene expressed in late stages of spermatogenesis (spermiogenesis), it can play an important role in sperm maturation process. Consequently, it can be concluded that -9T allele might be contributed to complete maturation arrest of sperm in azoospermic patients.
Keywords: *H2BFWT*, Male Infertility, Polymorphism, PCR-RFLP

P-13 Predictive Power of Activin A Levels in the Prognosis of First Trimester In VitroFertilization Pregnancies

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Introduction: The present study aims to determine the predictive power of activin A levels in the prognosis of first trimester pregnancies conceived by in vitro fertilization (IVF).
Material and Methods:
The study cohort included 23 biochemical, and 23 normal ongoing pregnancies conceived via IVF. Serum β-human chorionic gonadotropin (β-hCG), progesterone, and activin A levels were assessed 14 days after embryo transfer.
Results: Serum activin A levels were significantly lower in biochemical pregnancies compared to normal ongoing pregnancies (0.57 vs. 0.81 ng/mL, p<0.001). The ability of activin A to predict normal ongoing pregnancies at a cutoff level of 0.695 ng/mL gave a sensitivity of 91.3%, a specificity of 100%, a positive predictive value of 100%, and a negative predictive value of 92%. Significant correlation was found between β-hCG and progesterone, β-hCG and activin A, and progesterone and activin A. Activin A, β-hCG, and progesterone were all found to be efficacious in prediction of early IVF pregnancies.

Conclusions: The present study indicates that single measurement of activin A can be suggested as a marker for the progress and outcome of early pregnancies conceived via IVF. However, further large-scale studies are required to determine the efficacy and reliability of activin A in prediction of early pregnancies achieved by assisted reproductive techniques (ART).

Key words: Activin-A, in-vitro fertilization

P-14 Effectiveness of Human Neutrophile Protein 1-3 (HNP 1-3) levels in follicular fluid in determining the success of the IVF treatment

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Introduction: To investigate the effect of follicular fluid levels of Neutrophile Protein 1-3 (HNP 1-3), which is an alpha-dephensin, on IVF success.

Material & methods: The correlation between HNP 1-3 levels and IVF success is determined by application of ELISA technique on the follicular fluids of patients who assign to the IVF clinic and that are subjected to controlled ovarian stimulation in accordance with the central protocol, without severe systemic disease and from whom oocytes are collected.

Results: No statistically significant difference was found between the pregnant and nonpregnant group in terms of age, body mass index, infertility type, cause and duration, basal E2 and FSH levels, antral follicles counts, number of total oocytes obtained, M II and 2 PN oocytes, total embryos, transferred embryos and blastocysts in grade 1-2-3. Non-pregnant and pregnant groups had a significant difference of basal LH levels. Basal LH was higher in the group of pregnant women ($p = 0.039$). Non-pregnant and pregnant groups were statistically indifferent in terms of HNP1-3 levels ($p > 0.05$). There was a statistically negative significant difference between HNP 1-3 levels and number of M II oocyte, 2 PN oocyte and embryos ($p<0,05$).

Conclusions: HNP 1-3 levels did not show a statistically significant difference between pregnant and not pregnant women, therefore, it is concluded that follicular levels of HNP 1-3 were not effective in predicting IVF success. Negative significant difference between HNP 1-3 levels and numbers of M II oocyte, 2 PN oocyte and embryos could be effective in predicting fertilization and cleavage rates.

P-15 Comparing the proliferation and purification of human spermatogonial stem cells in different culture systems

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Introduction: Spermatogenesis is a highly organized process that is tightly regulated. Spermatogonial stem cells (SSCs) are responsible for Spermatogenesis. As the mechanisms that involved in human spermatogenesis are complex and unknown, this study was designed to providing an appropriate in vitro system to proliferate and enrichment of hSSC .

Materials and Methods: In this research we evaluate different cultural systems according to their efficiency in proliferation and purification of Human spermatogonial stem cells. Colonization of isolated spermatogonial cells were studied in various groups during 3 weeks culture. Gene specific methylation and quantitative genes expression of pluripotency (Nanog, C-Myc, Oct-4) and specific germ cell (Integrin α6, Integrin β1, PLZF) genes in each stages were evaluated by MSP and quantitative PCR. To revealing functionality, spermatogonial cells from the selected group were transplanted to azoospermia mouse model.

Results: The results showed that the number and diameter of colonies in testicular cell suspension was significantly higher than others ($p \leq 0.05$). The expression of germ specific genes in testicular cell suspension was significantly increased ($p \leq 0.05$). Nanog and C-Myc expression level were significantly decreased in this group ($p \leq 0.05$). There was no significant difference about the expression of Oct-4 among testicular cell suspension and other groups ($p > 0.05$).

Conclusion: Gene specific methylation pattern of examined genes didn't show any changes during culture period. Our data from transplantation indicated the homing of the donor derived cells and the presence of human functional sperm. In conclusion our results confirmed that culture of testicular cell suspension and selection of spermatogonial cells could be effective ways for purification and enrichment of the functional human spermatogonial cells.

Key words: Spermatogonial stem cells, Enrichment, Colony formation, Co-cultivation, Transplantation

P-16 Decreased expression levels of *CREM* gene in testis tissues of infertile men referring to Royan Inistitute

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Background: Spermatogenesis is the process by which spermatozoa are produced from male primordial germ cells through mitosis and meiosis. Spermatogenesis is highly dependent upon optimal conditions for the process to occur correctly, and is essential for sexual reproduction. The nuclear compaction of the sperm wich occures during spermatogenesis involves sequential replacement of histones by transition proteins and then by protamins, leading to chromatin condensation. Promoters of many post-meiotic genes, such as protamines that are known to play a vital role for male fertility, contain a cAMP-responsive element (CRE) serving as binding site for the transcription factor cAMP-responsive element modulator (CREM). CREM regulates the expression of a number of post-meiotic genes involved in the process of spermiogenesis. The CREM gene encodes both repressors and activators of cAMP-dependent transcription in a tissue and developmentally regulated manner. In the post-meiotic haploid germ cells only activator

forms of CREM are expressed. The aim of this study is evaluation of the expression profile of *CREM* gene in testis tissues of infertile men.

Material & methods: Ethical approval and informed patient consent was gained for the use of tissue samples. Testicular biopsies were collected from 20 infertile men referred to Royan Institute and underwent testicular sperm extraction (TESE). After pathological and spermogram analysis, these samples distributed into 4 groups: Obstructive azoospermia (group I as positive control), Sever oligoasthenoteratozoospermia (group II), Completly maturation arrest at spermatide level (group III) and Sertoli cell only syndrome (group IV as negative control). Each group contained 5 samples.

Total RNA was extracted from testes. Using reverse transcription and quantitative real-time PCR (qRT-PCR) methods, the mRNA expression levels of *CREM* gene were evaluated and analysed.

Results: qRT-PCR analysis significantly revealed lower expression of *CREM* in groups II , III and IV, compared to positive control.

Conclusions: Our finding clearly showed a correlation between men infertility and lower expression of *CREM*. This data suggests CREM factor as a biomarker of male infertility.

Keywords: Spermatogenesis, *CREM,* male infertility.

P-17 Effectiveness of vaginal misoprostol in management of delayed miscarriage

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Objective: to determine the effect of vaginal Misoprostol in delayed miscarriage cases between 8 & 24 weeks, and time taken from insertion until expulsion of conception products..

Study Design: Prospective controlled clinical trial

Setting: Obstetrics & Gynaecology Dept at Misurata Central Hospital, Misurata, Libya.

Methods: This prospective controlled clinical trial was carried out over one completed year from january-december 2012 , 90 delayed miscarriage cases were hospitalized, divided into 2 groups: A (8-12 weeks) & B (13-24 weeks). Exclusion criteria: previous uterine surgery, intraamniotic or genital infection, any unfavorable medical condition. 600micrograms were inserted vaginally to all patients. Expulsion time of conception products calculated for both groups. Each patient received after expulsion 2 tablets per rectum (3 doses, 4 hours apart), ultrasound performed to be sure nothing left inside the uterus.

Results: 42 (77.7%) from 54 in group A responded well, mean time taken for complete expulsion was 6 hours, all discharged home on the same day. The other 12 (22.2%) each received an additional dose of 2 tablets, 9 (16.66%) aborted completely and discharged the following day, the other 3 (5.55%) developed bleeding per vagina and needed evacuation and curettage (E & C), discharged 24 hours later. 23 (63.88%) from 36 in group B showed good response with mean time of 5 hours for complete expulsion and went home on the same day,7(19.44%) needed 2 tablets more, the 6 (16.66%) left refused additional tablets and ended with (E & C), all 13 discharged on the following day. No serious effects were recorded.

Conclusion: vaginal misoprostol for termination of delayed miscarriage is safe and reliable alternative to other methods with significant timesaving that may have an important impact on resource consumption.

Keywords: delayed miscarriage, misoprostol, evacuation and curettage.

P-18 A Succesfull Healthy Childbirth in Patient with Recurrent Cornual Pregnancy after Bilateral Salpingectomy

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Introduction: : Heterotopic pregnancy is the simultaneous occurrence of two or more implantation sites. Although it has traditionally been observed extremely rare before the widespread using of gonadotropin therapy, the true incidence is not exactly known. Cornual pregnancy which is abnormal located in the proximal portion of the fallopian tube lying within the muscular wall of the uterus is rare subtype of ectopic pregnancy. We here report, cornual heterotopic pregnancy after bilateral salpingectomy resulting in term delivery of a healthy infant.

Case: The 25 years-old women admitted to our unit with a history of infertility for 3 years duration. She had two operation which were bilateral salpingectomy because of hydrosalpinx and resection of uterine septum a years ago. Also she had a laparoscopic resection because of left cornual ectopic pregnancy in her first IVF cycle. After 1 years later, classic antagonist protocol in the ovarian stimulation was used in second attempt . We collected 12 MII oocyctes. We obtained 9 PN embryos and the two grade 1 embryos on 5^{th} day were transferred. We found a positive BhCG after 2 weeks following the oocyte collection. She presented with severe low quadrant abdominal pain to the emergency service at the 37^{th} day after embryo transfer. We demonstrated a viable intrauterine pregnancy with a hypoechoic region in the right cournual part of the uterus and there was massive intraperitoneal fluid in the abdominal cavity. Subsequent emergency laparoscopy, the bleeding which originating from the cornual remnant of the right tube was observed. The cornual pregnancy was aspirated and the hemostasis was obtained by bipolar coterization. The visible uterin corn was repaired with polyglactin sutures. After operation, she was discharged on her second postoperative day. Her intrauterin pregnancy was followed up until 38 weeks safely and resulted by primary cesarean section.

Conclusion: Our case shows that the cournual pregnancy may be occured after bilateral salphingectomy and it is managed surgically with the sucessfull preservation of intrauterine pregnancy.

P-19 A survey of relationship between neonate and mother prognosis and plasma level of blood uric acid in preeclampsia pregnant women.

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Introduction: The purpose of this study was investigated that whether the measure of the uric acid in pregnant women has cause-effect relationship with severity of preeclampsia, biochemical and urine parameters. This study was targeted singleton pregnant women as the first group that is preeclampsia women with uric acid levels ≥ 6 mg/dl, the second group is preeclampsia cases with uric acid levels < 6 mg/dl and the third group is healthy pregnant women who were admitted for pregnancy termination.

Methods: In order to survey of serum Hb, platelet, liver enzymes and renal function test findings (BUN, Cr and urine albumin), blood and urine samples of preeclampsia and control groups were taken before delivery and analyzed.

Results: There was significant differences in the gestational age and mean serum AST, ALT, BUN and urine albumin between the preeclampsia groups with uric acid levels less / greater than 6 mg/dl and healthy women. Also the gestational age variable in preeclampsia women who have higher than 6 mg/dl uric acid were lower than preeclamptic patients who have lower than 6 mg/dl uric acid. Systolic and diastolic blood pressure were higher in the both preeclampsia cases with more than 6 mg/dl and less than 6 mg/dl uric acid compared with control group.
There was significant differences in the Apgar scores in the first and fifth minutes of life between the preeclampsia groups with uric acid levels less / greater than 6 mg/dl and healthy women. Also Apgar score in the fifth minutes of life has a significant effect on the risk of preeclampsia with more than 6 mg/dl uric acid compared with preeclampsia with less than 6 mg/dl uric acid. Neonatal weight in the preeclampsia groups with uric acid levels less / greater than 6 mg/dl were lower than its levels in the control group.
Coclusions: In conclusion our results declared that a cause-effect relationship between the secretion of serum uric acid and severity of preeclampsia, biochemical and urine parameters may in fact exist.
Keywords: Uric acid, Biochemical parameters, Urine parameters, Apgar scores, Systolic and diastolic blood pressure, Preeclampsia

P-20 Sonographic evaluation of mullerian anomalies in women with polycystic ovaries

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Introduction: Mullerian anomalies are relatively common and contributing to the problems of infertility and poor pregnancy outcomes. But their molecular pathophysiology has been insufficiently studied. In other hand, polycystic ovary syndrome (PCOS) is found in nearly 80% of women with hyperandrogenism and also in 8-25% of normal ones. It seems that anti-mullerian hormone (AMH) which inhibits the formation of the mullerian ducts in male increases in women with PCOS. Therefore, the aim of the study is whether PCOS is associated with mullerian anomalies.
Methods: In this case-control study, 83 women with PCOS and 83 cases without PCOS were evaluated with trans-vaginal ultrasound (TVS) for the diagnosis of mullerian anomalies.
Results: The results of each group were compared with other group.In the PCOS patients, TVS revealed mullerian anomalies in the uterine cavity in 29 out of 83 women. Among 29 patients who had lesions in their uterine cavity, 27 cases had septate uterus and two had arcuate uterus. In the healthy women, TVS revealed 6 septate uterus and 4 arcuate uterus abnormality cases of the uterine cavity. There were significant correlation between polycystic ovary syndrome of the patients and the mullerian anomalies lesions (i.e. septate and arcuate uterus) which were seen in them.
Conclusions: Mullerian anomalies are more common in women with PCOS and the most common anomaly was uterine septum. In fact, the present results revealed that it seems a cause-effect relationship between the mullerian anomalies and PCO syndrome may in fact exist.
Keywords: Polycystic ovaries syndrome, Mullerian anomalies, Trans-vaginal ultrasound, Septate uterus, Arcuate uterus.

P-21 Unusual complication of first-trimester surgical abortion: Intrauterine fallopian tube herniation

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Intraduction: Surgical methods were the most widely used technique for the termination of firsttrimester pregnancies. Uterine perforation occurred in 0.71 per 1,000 cases in first trimester surgical abortions but should be more frequent in patients withuterine anomalies.Uterine perforations from surgical methods usually go undetected. Herniation of the omentum, appendix vermiformis, small bowel, and fallopian tube into theuterine cavity is an extremely rare occurrence.

Cases: We report an unusual complication of first-trimester surgical abortions in two patients. During hysteroscopy and laparoscopy, herniation of the right tube into the uterine cavity in two patients were observed. The herniation was repaired with second-look laparoscopy.

Conclusion: These cases supports the utilization of ultrasound guidance during surgical abortion in selected cases to decrease procedure-related morbidity.

P-22 Simultaneous serous cyst adenoma and ovarian pregnancy in an infertile woman

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Introduction: Ovarian pregnancy is a rare form of extra uterine pregnancy. Serous cyst adenoma is a benign variant of epithelial cell ovarian tumor. The coexistence of a cyst adenoma with an ovarian pregnancy in the same ovary is extremely rare. Some studies have suggested that infertility or ovulation-inducing drugs can be involved in increased risk of ovarian tumors and ovarian pregnancies.

Case: A 28 year-old infertile woman presented with a ruptured ovarian pregnancy following ovulation induction with metformin. She had a concurrent, benign serous cyst adenoma in the same ovary. Resection of ovarian pregnancy and tumoral mass were performed. The ovary was preserved.

Conclusion: Removal of gestational tissue and preservation of involved ovary is the best option for management of ovarian pregnancy in young patient. Although, there is an association between infertility and ovulation-inducing medications with ovarian gestation, their connection with serous cyst adenoma is undetermined.

Key Word: Infertility, Ovulation Induction, Non-tubal ectopic pregnancy, Ovarian pregnancy, Serous cyst adenoma, Metformin .

P-23 More than 60% of semen form unknown infertile men have bacterial infection

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Introduction: One of the most important factors that affect male fertility is urogenital infection via impairment in sperm function, change in sperm parameters, induction of inflammation in epididymis and prostate gland. Especially in unknown cases, various microorganism types may be known as etiology of infertility. In this descriptive study we evaluated the incidence of seminal fluid infection in infertile men with unknown infertility causes.
Methods: Sixty five men who met the inclusion criteria were included in this study. Semen analysis was performed according to WHO guidelines. Blood agar and EMB culture medium was applied for detection of bacterial infection in semen. Supplementary microbial tests were used for further analysis to detect bacterial species.
Results: Of total, 40 specimens had bacterial infection. Seven different bacterial species were detected which the staphylococcus aureus had the most and pseudomonas and enterococcus had the least incidence (16.9 and 1.5%, respectively).
Conclusion: According to high incidence of seminal infection in infertile men, routine application of bacterial tests for infertile men with unknown etiology and effort to treat urogenital infection is suggested.
Keywords: Semen, bacterial infection, infertile men.

P-24 Iran have the first rate of section in aria :why and who: An overview of labor and factors affecting it In Iranian women :a phenomenological study

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Subjective: Different factors such as economical, social, and cultural may have a considerable role in choosing the type of delivery. Considering the importance of women's idea and decision in choosing the type of delivery, this study was done by purposing on explaining women's experiences in delivery and choosing its type in a qualitative study.
Methods: This is a descriptivequalitative study (phenomenology approach) that was done by purposeful sampling on non-nulliparous pregnant women who were in the third trimester of pregnancy referred to Jahrom maternity clinics . The purposeful sampling was used for studying urban and rural pregnant women in six focus groups including seven pregnant women in each that data gathering continued to the point of data saturation and data were analyzed using content analysis.
Results: From 98 dismissed codes, two main teams and nine sub teams emerged that included their perception delivery and their cultural socioeconomic level.
Conclusion: There were many factors affecting the selection of the type of delivery that some of them is the result of the lack of accurate information, poor education and lack of comprehensive rational and decisions regarding women's healthcare. Therefore it's necessary to adapt appropriate strategies to improve children and mother's health.
Keyword: Qualitative study, Delivery, Women.

P-25 Relationship between duration of infertility and stress, anxiety and depresstion

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Introduction : The inability to conceive children is experienced as a stressful situation by individuals and couples all around the world. Infertility is a low-control, chronic stressor with severe long-lasting negative social and psychological consequences. It seems that conception of this problem and effect of that on everyone is dependent on duration of infertility.

Materials and methods : The aim of this study is to assess psychological distress quantitatively in infertile patient and duration of infertility. A prospective study was conducted in 380 infertile patients. Stress level was assessed by using Depression anxiety stress scale (DASS) questionnaire (21-item). In addition, socio-demographic information and all other data pertaining to the study was captured through a structured questionnaire designed for the purpose of this study. Two ways ANOVA and X2 analysis were used to analyze the data.

Result: Results of x2 analysis of variance showed a significant relationship between the amount of stress, anxiety and depression and duration of infertility ($p<0.001$, $p<0.05$ and $p<0.0002$ respectively). Also 51.4% of patient that have less than 5 years infertility, are in the normal range of stress.

Discussion: Since the findings of this research indicated relationship between high stress of infertile patients and their duration of infertility, so identifying stress sources to improve their life quality, providing appropriate education for coping and adapting with chronic disease related stress, seems to be necessary.

The long period of diagnostic and treatment procedures may also have a negative impact on the sex life of the infertile couple.

Also we should pay more attention to infertile patients that have more than 5 year's infertility. It is very important to establish a psychological center in the IVF clinics to help them and decrease their stress, anxiety and depression.

Key words: Infertility duration, psychological distress, DASS questionnaire

P-26 Asn680Ser Polymorphism of the FSH Receptor Gene is not associated with recurrent pregnancy loss

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Keywords: *FSHR*, Asn680Ser, Recurrent pregnancy loss, Miscarriage, Abortion

P-27 Surgical management of intra-abdominal intrauterine devices; 20 year

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Objective: To share surgical management experiences of intra-abdominal IUDs in tertiary center

Material and Methods: A total of 27 patients were retrospectively analyzed. This retrospective study was conducted between September 1992 and April 2013 at Department of Obstetrics and Gynecology Tepecik Research and Training Hospital, İzmir, Turkey. Demographic findings, diagnostic methods, operative notes of patients were obtained from the patient file.

Findings: Mean age was 31,59±7,8 years, and mean duration of IUD use was 20,62±43,21 months. Of IUDs, 9 (33.3%) were in omentum, 4 (15%) were in Douglas pouch, 1 in left sacrouterine ligament, 1 in uterovesical space and 1 in fundus posterior, 6 (22%) in left adnexial region, 1 in abdominal wall, 1 was subdiaphragmatic, 1 in ligamentum latum and 1 in jejunum. Two patients were planned hysteroscopic approach however IUD was removed laparoscopically as almost whole of IUD was out of the uterus. Almost all of the patients had TCu-380 A IUDs. Seventeen patients (63%) were managed by laparoscopy, whereas laparotomy was required in ten (37%). There was no abscess formation in patients. Adhesions were found in 23 of 27 (85%) patients with varying degrees. In 4 cases the incision was extended due to adhesions.

Conclusion: A missing string is the first finding of an intra-abdominal IUD. Pelvic ultrasonography, X-ray and hysteroscopy methods should be performed in order to detect the localization of IUD in case of a missing string. Surgical approach should be the first treatment option for intra-abdominal IUDs. Laparoscopic treatment may be appropriate in most of the cases. Laparotomy may be applied due to the experience of the surgeon or due to adhesions.

Key words: Surgical management, intra-abdominal intrauterine device, hysteroscopy

P-28 Fertility preservation after laparoscopic ovarian diathermy

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Introduction: PCOS is the most common endocrinopathic and reproductive disorders in women. The pathogenesis is still controversial. pcos is associated with relevant reproductive morbidity including, menstrual irregularity, anovulation, infertility, increased pregnancy loss, and complication of pregnancy loss . Laparoscopic surgery is one of PCOS treatment. One of the Complications of laparoscopic ovarian diathermy is damaged the ovarian tissue and follicles that lead to ovarian failure.The aim of this research, fertility preservation of PCOS patients after laparoscopic ovarian diathermy.

Method: this prospective clinical research evaluates the influential of ovarian diathermic laparoscopic factor in pcos patients that unresponsive to medical therapy.

During 8 years, 354 patients with pcos were operated due to unresponsive to medical therapy and IUI , therefore, laparoscopic bilateral monopolar ovarian cauterization in 9 to 15 points at 70 watt cutting power and a 40 watt coagulating power setting and as the probe is pushed into the capsule, electricity is activated for 4-5 seconds were performed. It is necessary to avoid damage of the ovarian hilum. The probe is applied to the surface of the ovary at a right angle, to avoid slippage and to minimize surface damage, with the depth of penetration 4-5mm. At the end of ovarian drilling was cooled down by irrigation using saline normal solution (500-1000cc).

Result: No accessible 88 patients, but in following up 266 pcos ladies, 172 conception(64.6 %), 58.7% term pregnancy, 5.9% miscarriage . FSH level and AMH were tested in the rest of 94 patients that was reported normal, after following up for 6 years after the first laparoscopy . so, there aren't any evidence of ovarian failure in all patients.

Conclusion: The application of optimal technique is suggested for laparoscopic ovarian surgery and the numbers of punctures in per ovary must be depended to ovarian volume. Despite, duration, depth of diathermy and intensity of power setting are important. View of situation can be prevented ovarian failure, so fertility preservation will be ensured.

Key words: Fertility, preservation, laparoscopy, ovarian diathermy

P-29 Immediate medical therapy after laparoscopic ovarian diathermy

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Introduction: PCOS is the most common endocrinopathic and reproductive disorders in women. The pathogenesis of PCOS is still controversial. There has long been an association of abnormal gonadotropin secretion with this syndrome. Hyperandrogenemia is principally ovarian in origin although the adrenal gland may contribute. During reproductive age, PCOS is associated with relevant reproductive morbidity including menstrual irregularity, anovulation, infertility, increased pregnancy loss, and complications of pregnancy. The goal of this research, influential immediate medical therapy after LOD.

Method: This prospective clinical research evaluates the multiple influential factors on LOD outcomes, in 177 infertile Pcos ladies, admitted in Pamanieh Hospital of Jahrom, during 4 years. After evaluation of semen analysis, and ruled out other causes of hyperandrogenemia, Metformin and Clomiphene were prescribed for 3 months, if no response, HSG was performed for detection of tubal patency, then gonadotropins were added to previous drugs. IUI was tried in 21.7% of patients. TVS for follicular monitoring was performed. The data were analyzed with SPSS software. LOD was end goal to reduce the amount of androgen-producing tissue, and was continuing medical therapy immediately.

Result: No accessible 44 patients, therefore from 133 pcos ladies, 76 conception(55.6%), 49.7% term pregnancy, 5.9% abortion, due to LOD operation, and immediate medical therapy

Conclusion: medical prescription, immediately after LOD was suggested, because prevention of recurrent increased androgenemia and gonadoropins, therefore, fertility chance will be improved but, this research will be necessitated for more study.

Key words: PCOS, LOD, Infertility,

P-30 Which drug combination is safe in infertility treatment?

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Introductions: Polycystic ovary syndrome (PCOS) is one of the most common endocrinopathies affecting women in the reproductive age group, and is one of the most common causes of hyperstimulation syndrome in infertile patients. The purpose of this study was decreased OHSS due to induction of ovulation with clomiphene citrate and then letrozole in comparison of letrozole and cabergolin and an optimal pregnancy rate.
Material and methods: this is prospective clinical research from Dr.Rasekh infertility clinic. 128 infertile polycystic ovarian syndrome women were selected with 48 months infertility. The average age of them is 27.3 years (STD=5). The patients were divided into two groups: Group A; 72 patients (40%) with drug regimen; initially tab clomiphene citrare (from day 3 of menstrual cycle).Then the second drug Letrozole was started from day 8 to 11 menstrual cycle. OHSS was 0%. Group B; 28 patients (31.1 %) with drug regimen; initially tab Letrozole (from day 3 of menstrual cycle).Then the second drug cabergolin started from day 8 to 11 menstrual cycle. OHSS was 0%. Pregnancy rate in group A, 16(22%) and in group B; 12(21%). The patients were monitored for ovulation by translational ultrasonographic folliculometry, with measurement of number and size of the follicles, as well as endometrial thickness. Human chorionic gonadotrophin (HCG) was injected intramuscularly when at least one mature follicle $18 mm diameter was detected .Data was analyzed with SPSS statistical software.
Results: The rate of OHSS is similar in both groups ($p<0.05$). This means that both methods of treatment can be completely prevented the creation of OHSS. Pregnancy rate in both groups was almost the same ($p<0.05$).
Conclusion: We recommend for the prevention of OHSS that is a serious complication in treatment of infertile women which one of two above method are used. Whilst in both methods has been favorite fertility rate. The goal of treatment is minimal side effects with optimal result. Careful follicular monitoring is important by an experienced Gynecologist. Appropriate dose HCG injection for each patient is an important factor in reducing complications. HCG was injected based on the number and size of follicles in doses of 250 to 1000 mg once or twice.
Key words: OHSS, PCOS, clomiphen, letrozole, cabergolin

P-31 The value of hysteroscopic evaluation in patients with failed in vitro fertilization transfer cycles

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Aim: Invitro Fertilization (IVF) failure in patients with hysteroscopic endometrial cavity evaluation and IVF center to share their experiences in this regard.
Materials and Methods: Tepecik Training and Research Hospital IVF Center in 2011-2013, the applicant made and failed IVF at least once in 258 patients enrolled in the study. Hysteroscopy findings of the patients were recorded.

Results: Hysteroscopic evaluation 47.7% of patients (123/258) cases of intrauterine pathology (polyps, adhesions, fibroids, congenital anomalies, etc.) were detected. 53.3% of patients were normal.
Conclusion: Hysteroscopic evaluation may reduce the IVF-ET failure rate due to intrauterine abnormalities in patients, thus it becomes an absolute prerequisite for all patients scheduled for an IVF program.
Key words: Hysteroscopic evaluation, endometrial cavity, Invitro Fertilization

P-32 The relationship between Clomiphene citrate with fetal sex

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Introduction: Ovulatory disorders are common causes of subfertility and infertility in women.It has been 50 years since the first clinical trial demonstrated that administration of clomiphene citrate induces ovulation in more than 75% of amenorrheic women. Clomiphene citrate is considered a first-line treatment because of its low cost, relative ease of use, and minimal side effect.Clomifene (INN) or clomiphene (USAN) (trademarked as Androxal, Clomid and Omifin) is a selective estrogen receptor modulator (SERM) that increases production of gonadotropins by inhibiting negative feedback on the hypothalamus. The aim of this research is detection of relationship between Clomiphene citrate with fetal sex.
Method: This qualitative clinical trials research is done on some infertile women who referred to Dr.Rasekh clinic in Jahrom city since 2009 to 2012 among the infertile patients referring to clinic and getting clomiphene citrate,50 women became pregnant while the cycles of using this drug and the dosage were different. The patients were regularly observed by Dr.Rasekh in clinic with modern method and instruments for health evaluation of mother and fetus Which sex of the fetus was detected.
Results: Among all the 50 successful pregnancies due to using clomiphene citrate by infertile women,10 pregnancies were as triplets and 8 were twin, and on the whole 78 alive babies were born. Among the 78 babies 58.82 % were female and 41.17% were male. After reviewing the drug dosage was used by patients, we understood that the majority of children are female. They had used high doses of clomiphene citrate(150-200mg /day) and repeated cycles in this trial.
conclusion: this research shows that the anovulatory women who used clomiphene citrate in higher therapeutic dosage will have female babies while using clomiphene citrate in low dosage will not affect the fetus sex.
Key words: clomiphene citrate, high dose, fetal sex

P-33 The epigenetic role of hTSH2B in the testis tissues of non-obstructive azoospermic patients by NU-ELISA

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Introduction: During mammalian spermatogenesis, chromatin undergoes specific reorganization. For this reason, the somatic histones are replaced by the testis-specific histones and then transitional proteins and finally protamines. In contrast to other mammals, mature human sperm retains a set of core histones representing 10–15% of basic proteins. One of the histones retaines in mature human sperm is testis/sperm-specific histone 2B (TSH2B) which is present in total stages of spermatogenesis. TSH2B may associate with telomere activities suggesting the possible role of this histone variant during spermatogenesis and fertilization. The aim of this study is to investigate the epigenetic role of TSH2B in the testis tissues of non-obstructive azoospermic infertile men and its relation with spermatogenesis disturbances.
Materials and Methods: Total levels of the histone variant TSH2B were quantitatively evaluated using nucleosome-ELISA (NU-ELISA), in testis tissues of infertile men with non-obstructive azoospermia (n=9), in three subgroups including: Sertoli Cell Only Syndrome (SCOS), complete maturation arrest at spermatid or spermatocyte level, and hypo-spermatogenesis as positive control. The number of samples in each subgroup was 3, and the experiment was double checked in each sample. Samples were collected from men referred to Royan Institute, who underwent testicular sperm extraction (TESE).
Results: NU-ELISA revealed that total levels of TSH2B in patients with SCOS and complete maturation arrest were significantly lower than infertile men with hypo-spermatogenesis.
Conclusion: Previous studies suggest that nucleosomes containing testis-specific histone variants, with or without chemical modifications, may function as epigenetic markers in the sperm chromatin. Our finding perfectly implies a dynamic epigenetic role for TSH2B in testis tissues of infertile men with non-obstructive azoospermia and its important role during spermatogenesis and fertilization.
Key words: TSH2B, Histone, Male infertility, Spermatogenesis.

P-34 Reproductive performance after hysteroscopic myomectomy for myoma associated reproductive failure

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Objective: To assess the reproductive outcome in patients undergoing hysteroscopic myomectomy for reproductive failure.
Design: Prospective observational study.
Setting: Endoscopy unit, OB/GYN department, Minia Maternity University Hospital, Minia, Egypt.
Patients: Sixty-three patients with submucosal fibroids associated with reproductive failure (primary infertility, secondary infertility, recurrent pregnancy losses and/or preterm deliveries).
Intervention: Hysteroscopic resection using bipolar versapoint resectoscope under general anesthesia.
Outcome measure(s): Reproductive outcome during the follow-up period.
Results: The mean ± SD duration of follow-up was 15.36 ± 9.83 months. Twenty eight (44.4%) patients had primary infertility, 12 (19%) patients with secondary infertility, 3 (4.8%) patients had recurrent first trimester miscarriage, 5 (8%) patients had recurrent second trimester miscarriage, and 15 (23%) patients had preterm delivery. The mean ±

SD duration of the procedure was 32 ± 9.2 min, and the mean ± SD length of hospital stay was 10.5 ± 2.6 hrs. Operative complications were minimal including 3 cases with cervical laceration during cervical dilatation. Postoperative complications were minimal and didn't require extra hospitalization. Hysteroscopic myomectomy significantly improved menstrual pattern in 75.8% of patients complaining of menorrhagia (p=0.001). There was statistically significant improvement in the reproductive outcome after the procedure (p=0.0001). Two patients (3.2%) ended in first trimester miscarriage, 2/63 (3.2%) had second trimester miscarriage, 11/63 patients (17.4%) ended in preterm labor, while 46/63 (73%) had reached to term delivery. There was statistically significant difference in the pregnancy rate, live birth rate and gestational age before and after the procedure (p= 0.0001, 0.0001, 0.001 respectively).

Conclusion: Hysteroscopic myomectomy using the bipolar versapoint resectoscope is a safe and effective therapeutic modality for patients with submucous fibroid and associated reproductive failure up to 36 months follow-up.

KEY WORDS: Submucous fibroid, hysteroscopic myomectomy, reproductive outcome

P-35 By Antimüllerian hormone assesment of ovarian reserve and effect of Selenium to ovarian damage reduction with İschemia-Reperfusion injury in rats

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Aim: İnvestigation of ovarian reserve effected by ovarian torsione-detorsione. Determinining the relationship between ovarian reserve and AMH. And evaluating histological parameters to ovarian ischemia-reperfusion and effect of Selenium

Material and Methods: This study made in Ege University Medicine Faculty after receiving approval from ethical committee This study contains young adult, approximately in 200-250gr weight, 50-female Wistar Albino rats. There are five groups in research. Group1:Sham(just laparatomy), Group2(3hours Torsione/3hours Detorsione), Group3(3hours Torsione/3hours Detorsione+Selenium), Grup4(24hours Torsione/24hours detorsione), Grup5(24hours Torsione/24hours detorsione +Selenium). Selenium was administered intraperitoneally to rats (to Group 3 and 5) twenty minutes before detorsion operation. Ovarian ischemia-reperfusion injury evaluated by using histologic grade, number of follicles and AMH used to determine ovarian reserve.

Results: Ischemia-reperfusion groups compared with sham group. Prolonged time of ischemia-reperfusion associated with increasing ovarian damage (p<0,01). The data are evaluated, the prevention of ovarian damage, the efficacy of selenium, statistically significant at the p <0.01 was. AMH changes between the groups was evaluated. According to degree of ovarian damage, and to duration of ischemia-reperfusion, p> 0.05 was found.

Conclusion: Immunohistochemical analysis showed that prolonged time of ischemia-reperfusion associated with increasing ovarian damage. And also Selenium treatment was effective in preventing ovarian damage. In addition the using AntiMüllerian hormone, were not significant in detecting of increased ovarian damage (p>0,05).

P-36 The Effect of Cyclıc Progestrone Treatment on Respiratory Function Tests of Women with Polycystic Ovary Syndrome

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Polycystic ovary syndrome is one of the most important reasons of menstrual irregularity and androgen excess of women. Its prevelance is 6-12%. The prevalances of obstructive sleep apnea, sudden infant death syndrome are different in male and female sexes making us think that sex hormones are important in the control of respiration. In literature, many studies suggest that women with PCOS are more prone to respiratory problems. Cyclic progesterone is one of the treatment modalities for women with PCOS. There are studies showing the effect end mechanism of progesterone on respiration. We aimed to evaluate the women with PCOS from the point of respiratory health and the relation of progesterone and respiratory functions. One hundred patients who applied to Department of Obstetrics and Gynecology of Necmettin Erbakan University between the dates of January 2012 and May 2012 were included in the study. We had the respiratory function tests of the patient group including the patients with PCOS between the ages of 15-45, with no systemic health problems, not smoking, not having the diagnosis of COAH or asthma and the control group having the same characteristics with the patient group but not having PCOS at the first application to the outpatient clinics. The patient group had cyclic progesterone treatment for two months between the 16th and 25th days of their cycle. After that treatment period the patients were reevaluated with their respiratory function tests. There were no differences in the respiratory function test results of patient and control groups before treatment. After progesterone treatment, the results of patient group were better than both the controle group and their own results before the treatment. We concluded that, the lung capacity and functions of women with PCOS are not different from that of healthy women but these values increase with progesterone treatment.
Key Words: Polycystic ovary syndrome, progesterone, respiratory function tests.

P-37 Place of the ultrasound factors in predicting the results in IVF.

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Introduction: To evaluate the contribution of ultrasound factors: number of antral follicles in the beginning of the cycle, the volume and the surface of the ovaries in the prediction of results in vitro fertilization (IVF).
Material and Methods: A prospective randomized study was performed in patients from reproductive medicine unit at Farhat Hached university hospital, Sousse, including 100 patients aged less than 40 years and with serum FSH lowers basic 10 IU / L, candidates for IVF. The number of antral follicles, ovarian volume and ovarian surface were measured by a two-dimensional transvaginal ultrasound in the third day of the cycle.

Results: The antral follicle count (AFC), ovarian volume and ovarian area were positively correlated with the number of oocytes retrieved (P <0.05). It appeared from the analysis of the sensitivity and specificity of these sonographic parameters that a CFA <8 has a sensitivity of 78% and a specificity of 40%, an ovarian volume <12 cm3 has a sensitivity of 70% and a specificity of 60% and ovarian area <12 mm2 has a sensitivity of 82% and a specificity of 36% in the prediction of poor response in IVF. By combining the various tests we found that the most powerful test in the prediction of poor response was that combining the ovarian surface and the CFA with a sensitivity of 65.2% and a specificity of 60.5%.

Conclusion: We conclude that the CFA combined with ovarian surface measure evaluated at the beginning of the cycle has an important value in the prediction of poor response in IVF.

P-38 Does estradiol supplementation during the luteal phase improve in vitro fertilization outcomes?

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Introduction: Estradiol supplementation during the luteal phase in women undergoing IVF/ICSI-ET has been proposed by some authors. The objective of this study is to evaluate if adding E(2) to standard luteal P supplementation is beneficial both in GnRH agonist and antagonist IVF cycles.

Material and Methods: Two hundred and twenty six women undergoing IVF treatment, at Farhat Hached university hospital center for reproductive medicine, from 1st December 2011 to 1st April 2012, were prospectively randomized into two groups. Group 1 (n = 113) received P (cyclogest® 400mg ,2 times/day) and 4mg oral E2(oromone ®2mg, 2 times/day), group 2 (n = 113) received P only (cyclogest® 400mg ,2 times/day) as luteal phase support. Both progesterone and oestradiol were started the day of oocyte pick-up and then continued till the pregnancy test. The primary outcome was the clinical pregnancy rate/transfer (PR). The secondary variables of interest were the implantation rate (IR), miscarriage rate and multiple PR.

Results: The clinical PR was 29.7%, and 33.3% respectively in groups 1and 2 and the difference between groups was not statistically significant (p=0.5). Moreover, the implantation rate, the miscarriage and multiple pregnancy rates were also not significantly different between the groups. There was no significant difference in pregnancy and implantation rates in both groups neither in agonist nor in antagonist protocols.

Conclusion(s): The results from this study combined to published recent data suggest that the addition of E(2) to P for luteal phase support does not improve IVF outcomes in GnRH agonist and antagonist cycles.

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