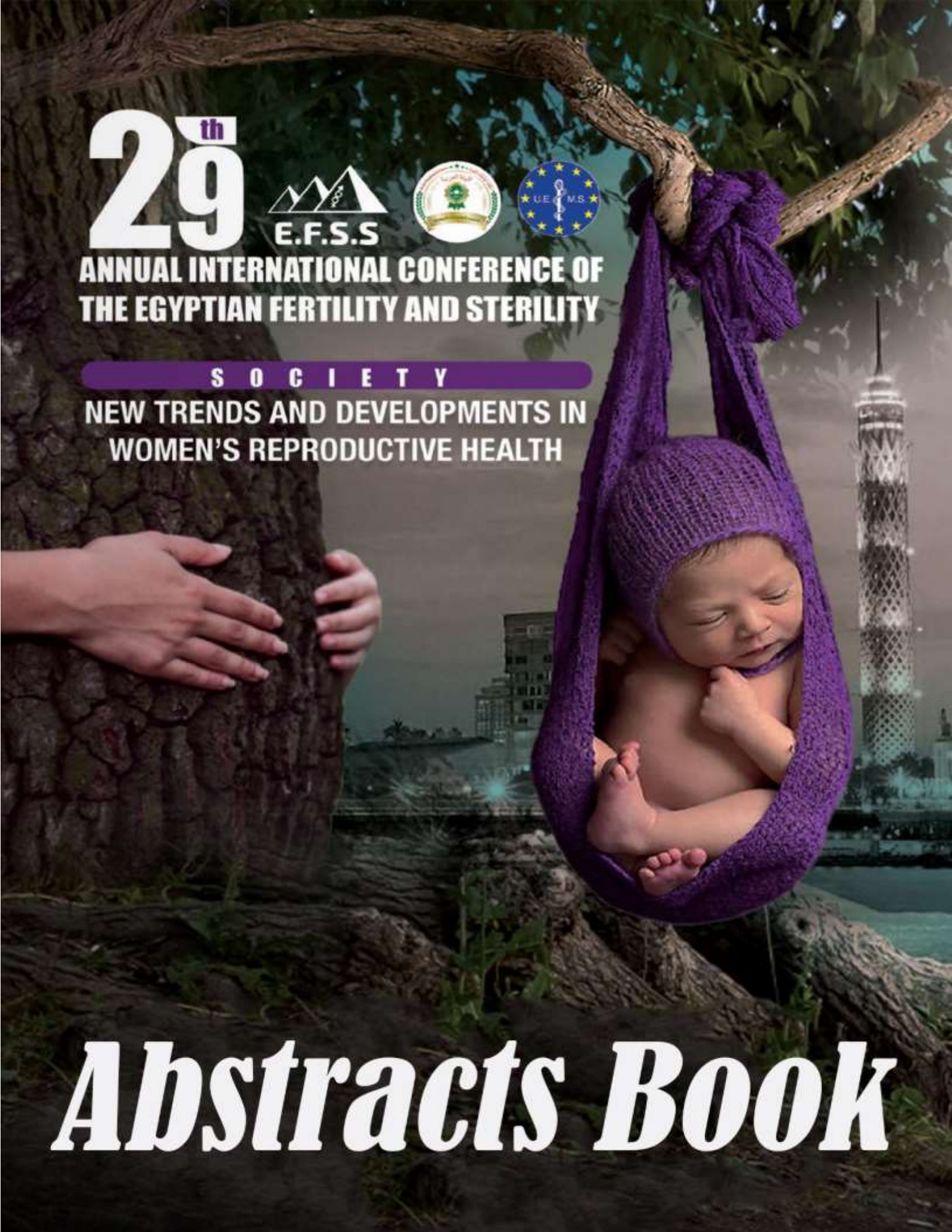
29th
E.F.S.S
ANNUAL INTERNATIONAL CONFERENCE OF
THE EGYPTIAN FERTILITY AND STERILITY
SOCIETY
NEW TRENDS AND DEVELOPMENTS IN
WOMEN'S REPRODUCTIVE HEALTH
Abstracts Book

Plenary 1

- **Awareness and delay in diagnosis of endometriosis in the Arab world**

Hisham Arab, MD FRCSC FACOG

(KSA)

Women suffering from endometriosis have always been misdiagnosed. Their misdiagnosis leads to years of suffering and pain before their illness is truly detected. Educating women about endometriosis is an important part of the management of endometriosis, however, what appears to be more essential is raising awareness of the disease and its impact among primary healthcare professionals and the public. This lack of awareness is usually combined with a tendency to accept pain as a part of menstruation. After years of conducting endometriosis education and applying endometriosis care to patients in our clinics in three different cities across Saudi Arabia - Jeddah, Makkah, and Riyadh - coupled with two pilot studies, we took the initiative of compiling this knowledge into this **Endometriosis Coping and Awareness Bundle (ECAB)** to provide physicians and the public with a proper tool that supplements medical care. Moreover, we have evidence now that increasing awareness of endometriosis has reduced the time to diagnose the disease in many sceneries.

ECAB targets promoting endometriosis awareness in medical, institutional, and social settings. It emphasizes the importance of putting endometriosis patients in the limelight and providing them with the support they need so they can feel victorious rather than victims. The message in this bundle has been extended to the rest of the Arab world as one society that has to overcome its cultural inertia and raise awareness of this misunderstood and neglected condition.

- **Reproductive hormone secretion and follicular maturation in PCOS**

Ioannis Messinis, (Greece)

Polycystic ovary syndrome (PCOS) is characterised by changes in the secretion of basic hormones mainly of the reproductive axis. These changes include a significant increase in the blood levels of LH, androgens, antimullerian hormone (AMH), and insulin with resistance to this hormone and a decrease or no change in the levels of FSH. These changes are interrelated so that insulin and LH are responsible for the increased production of ovarian androgens and the latter for the increased secretion of AMH. On the other hand, the increase in LH seems to be related to the lack of progesterone due to anovulation, although androgens may also be implicated. Disturbances in folliculogenesis in PCOS include the inhibition of follicular maturation resulting in a significant increase in the number of small antral follicles. This is mainly related to hyperinsulinaemia leading to a premature response of the granulosa cells to (increased) LH from the follicular size of 4-5 mm instead of the normal 10 mm. Androgens also appear to be involved in the process of slowing the maturation of the follicles. On the other hand, increased AMH decreases aromatase production and granulosa cells sensitivity to FSH. The result of the above disorders is anovulation, which is also related to the fact that the system is unable to recruit and select the dominant follicle due to the absence of the intercycle rise of FSH. In clinical terms, the use of appropriate FSH step-up protocols, which increase FSH levels above the threshold, leads to single follicle selection and mono-ovulation. The complexity of the above mechanisms warrants further research.

- **Modern approaches for medical therapy of symptomatic myomas**.

Jacques Donnez, (Belgium)

Plenary II

- **Management of infertility in PCOS.**

  Basil Tarlatzis, (Greece) Virtual

- **Ovary allo-transplantation.**

  Sherman Silber (USA)

Research question: Is it possible to use experience gained from 24 years of frozen ovarian transplantation, and from recent experience with in-vitro gametogenesis to accomplish simple and robust in-vitro maturation (IVM) of oocytes from human ovarian tissue?

Design: A total of 119 female patients between age 2 and 35 years old underwent ovary cryopreservation (as well as in-vitro maturation of oocytes and IVM in the last 13 individuals) over a 24-year period. Up to 22 years later, 17 returned to have their ovary tissue thawed and transplanted back.

Results: Every woman had a return of ovarian function 5 months after transplant, similar to previous observations. As observed before, anti-Müllerian hormone (AMH) concentration rose as FSH fell 4 months later. The grafts continued to work up to 8 years. Of the 17, 13 (76%) became pregnant with intercourse at least once, resulting in 19 healthy live births, including six live births from three women who had had leukaemia. Of the harvested germinal vesicle oocytes, 35% developed with simple culture media into mature metaphase II oocytes.

Conclusions: 1.) Ovary tissue cryopreservation is a robust method for preserving fertility even for women with leukaemia, without a need to delay cancer treatment. 2.) Many mature oocytes can often be obtained from ovary tissue with simple media and no need for ovarian stimulation. 3.) Ovarian stimulation is only necessary for removing the oocyte from the ovary, which can also be accomplished by simple dissection at the time of ovary freezing. 4.) Pressure and just eight 'core genes' control primordial follicle recruitment, development, and ovarian longevity.

- **Ovarian tissue: freezing or Vitrification: time to be objective**.

  Marie-Madeleine Dolmans, (Belgium)

Because of the simplicity of vitrification, many authors have investigated it as an alternative to slow freezing for cryopreserving ovarian tissue. In the last decade, numerous studies have evaluated vitrification of ovarian tissue from both humans and animals. Different vitrification solutions and protocols, mostly adapted from embryo and oocyte vitrification, have been applied. The results have been discrepant from species to species and even within the same species. Despite the encouraging results obtained with vitrification of ovarian tissue from humans and different animal species, it is necessary to understand how vitrification solutions and protocols can affect ovarian tissue, that contains many different types of cells. In addition, it is important to bear in mind that the utilization of different approaches to assess tissue functionality and oocyte quality is essential in order to validate the results obtained with freezing procedures. Our results showed that baboon ovarian tissue can be successfully cryopreserved with a vitrification protocol, but nevertheless, none of the baboons became pregnant. Although vitrification appears to preserve the quality of the ovarian stromal tissue, it might have a deleterious effect on the oocyte quality. In humans, more than 250 live births have been obtained after transplantation of slow frozen ovarian tissue, in contrast with 2 live births after vitrification.

- **Eggs and Sperm from a Buccal Smear.**

  Eli Y. Adashi, (USA) (Virtual)

In Vitro Gametogenesis (IVG) constitutes the process wherein a pluripotent stem cell is guided toward a gametogenic fate. Yet to be fully accomplished in humans, IVG holds significant promise for the redress of reproductive disorders

Debeate

- **Uterine septum is to be removed in infertile women.**

Yes, **Mohamed Bedaiwy**, **Canada (20 min)**

The publication of the TRUST trail results added to the controversy of managing uterine septum in the infertility population. This aim of this portion of the debate is to provide evidence to support septum resection and to counter the evidence refuting septum resection using a shared decision making approach.

- **Uterine septum is to be removed in infertile women.**

No, Yakoub Khalaf, UK (20 min)

Session: Governance, training, and medical education/research:

- **Burnout in IVF Labs: Identifying Triggers and Implementing Solutions for Andrologists and Embryologists - Worldwide Survey.**

Mamoon Banat,
Senior Embryologist working at Olive Fertility Centre in Vancouver, Canada.

This study examines the burnout and stress levels experienced by Andrologists and Embryologists in IVF labs, which has been intensified due to the growing demand for IVF treatment. The aim is to identify stressors, coping mechanisms, and the relationship between burnout and job satisfaction. These professionals play a crucial role in IVF procedures, requiring specialized skills and dealing with emotional intensity, financial burdens, and the potential for errors.

An anonymous survey was distributed worldwide through online platforms, resulting in 182 responses. The survey consisted of 32 questions that comprehensively assessed physical, emotional, and mental stressors using various response formats.

The key findings reveal diverse levels and sources of stress among Andrologists and Embryologists. Statistical analysis did not find significant correlations between stress levels and demographic factors, but variations in stressor rankings were evident. Notably, stressors such as dealing with clinic staff and patients, work-related procedures, and working shifts were prominent.
The study underscores the importance of addressing these stressors and fostering open discussions within the IVF team, including doctors, nurses,

managers, and lab personnel. Neglecting these stressors can lead to severe health fatigue and mental exhaustion.

In conclusion, this research sheds light on the stressors faced by Andrologists and Embryologists in IVF labs, providing insights into managing burnout. It emphasizes the significance of recognizing and addressing these stressors to promote the well-being of the IVF team and enhance the quality of care provided

- **Emotional distress after IVF failure.**

  Khaldoun Sherif, MBBCh (Hons), MD, MFFP, FRCOG, FACOG
  Consultant Obstetrician & Gynaecologist
  Subspecialist in Reproductive Medicine & Surgery; Clinical Director
  Fertility Center, Jordan Hospital, Amman, JORDAN.

Infertility by itself is distressing, as is IVF treatment. However, a higher degree of emotional distress is experienced by patients after IVF failure. In most IVF units, given the patients' ages and range of pathologies, there are more failed cycles than successful ones. Therefore, managing the patients' emotional distress after failed IVF is an integral part of care as well as being essential to the continued viability of the unit; patients who fail IVF will only come back to the same unit if they feel well looked after, both physically and emotionally.

Also, one of the causes of high burn-out in IVF unit staff is the emotional distress experienced by them when repeatedly dealing with failed and emotionally distressed patients. This burnout, if not properly recognized and managed, can adversely affect the staff's performance at work as well as their mental well-being.

Recognizing and managing emotional distress after failed IVF in both patients and staff will be addressed in the lecture.

- **New Trends and Professional Responsibilities in Obstetric–Gynecologic Medical Education and Training**.

  Ahmed Makhlouf, (Egypt)

- **To get the benefit of doubt: the fifth paradigm in medical practice!**

Mervat Sheikh El Arab

Professor and head of the Department of Obstetrics and Gynaecology, Alexandria Faculty of Medicine. (Egypt)

The question of this presentation is:
"Is medical practice improving with accumulating information, conflicting evidence, and changing paradigms?
If the answer is NO, then we have to think about what are we doing wrong, and where is the potential for correction.
A call for patience, individualization, and some skepticism.

- **A new technique for management of post-hysterectomy vault prolapse: case series**

Ayman Shehta Dawood[1], Mohamed Attia Raslan[2], Heba Rady Elbasuiny[2]

[1]Assistant professor of Obstetrics and Gynecology, Tanta University, Tanta, Egypt
[2]Lecturer of Obstetrics and Gynecology, Tanta University, Tanta, Egypt

Objective: To treat PHVP in patients presenting with sexual, urinary or gastrointestinal symptoms.
Study design: Case series.
Patients and methods: Patients presenting with PHVP of any type were included. Age, type of hysterectomy, interval till first presentation, and main complaint. Preoperative investigations and laparoscopic correction using Mersiliene tape were done for the enrolled patients. Operative time, blood loss, and any operative complications were reported. Follow up for 6 months to detect any complications or recurrence.
Results: Five cases were operated in the period from September 2021 to September 2022. The age range was (42-55 years) and BMI was (23.6-26.4 kg/m^2). Three cases had vaginal hysterectomy, one case was operated by TLH and the other case was TAH. The ovaries were present in all cases. The cervix was present in one case. The interval range was (1-6 years). The main symptom was a mass protruding from the vagina. Sexual function was impaired in all cases. Urinary symptoms were found in 2 cases only. No GIT symptoms were found. The operative time range was (90-140 minutes). The blood loss range was

(100-300 ml). One case of bladder injury was found. Follow-up revealed no recurrence or any complications.
Conclusion: Correction of PHVP using Mersiliene tape was found to be safe, effective, and feasible to be done by laparoscopic approach.
Keywords: Prolapse, Hysterectomy, Mersiliene tape, PHVP, Laparoscopy

Session: Ovarian Stimulation Protocols:

- **What is the best protocol for surpassing LH surges?**
  Basil Tarlatzis, (Greece)

- **Highly purified gonadotropins**.

  Salah Rasheed, Sohag University, Egypt.

New Trends in Follicular Recruitment
Hisham Arab, MD FRCSC FACOG
Director, Woman and Fetal Health Program at Dr Arab Medical Center, Jeddah, KSA

The essential role of the female gonad is the differentiation and release of the mature oocyte for fertilization and successful reproduction. Gonadotropins determine the follicle selection and ovulation rate. Follicle growth, however, is independent of gonadotropins until antrum formation, at which time recruitment occurs. Once recruited, follicles will continue to grow or degenerate. The term recruitment has been used regularly by reproductive scientists to describe two important but distinct decision points during follicle development in animals and humans. The dormant primordial follicles are recruited into the growing follicle pool in a continuous manner, whereas increases in circulating FSH during each reproductive cycle recruit a cohort of antral follicles.

For more than 60 years, many hyperstimulation protocols for follicular recruitment have been developed and modified according to patients' responses from around the world. Its major application ranges from simple timed

intercourse to in vitro fertilization. New trends have been tried mainly for poor responders such as the addition of intracellular modulators and others. More recently the recognition of fertility preservation as a reproductive salvage for oncology patients, several protocols of ovarian hyperstimulation have been tried to modify the traditional follicular recruitment to suit the timing of chemotherapy and other urgent medical interventions for such patients.

Most of these new trends in follicular recruitment will be presented in a summarized and practical review to catch up with the current trends in fertility enhancement.

- **Poor Ovarian Responders. Novel algorithm for management.**

Amr Adeel Saleh,
Fetal medicine unit, Kasr Al-Ainy medical school, Egypt
MD, Egyptian Fellowship Of Obs & Gyn, MRCOG
International Diploma of Operative Gyn Endoscopy-France
Fellowship of Fetal Medicine, Kasr Al-Ainy (CAIFMF)

Introduction

Poor ovarian response (POR) is a challenging situation in assisted reproduction. The most common criterion to diagnose POR is a retrieval of low number of oocytes despite adequate ovarian stimulation in an assisted conception cycle. The ESHRE working group on POR definition (the Bologna criteria) reached a consensus on the minimal criteria needed to define POR by the presence of two of the following three features: (i) Advanced maternal age (≥40 years) or any other risk factor for POR; (ii) a previous characterized POR cycle (≤3 oocytes with a conventional stimulation protocol); (iii) an abnormal ovarian reserve test (antral follicle count <5–7 follicles or anti-Mullerian hormone (AMH) <0.5–1.1 ng/ml). The incidence of POR ranges from 9% to 25%. Various controlled ovarian hyperstimulation protocols and strategies have been used in this group of women to improve reproductive outcomes, but the success rate still remains low.

Objectives

Put a clear plan for stratification and prediction of poor responders, and deliver an algorithm for improving clinical outcomes in poor ovarian responders.

Data collection

Data were collected from RCOG, ACOG, SOGC, ESHRE, ASRM, Cochrane Library, UpToDate.

Results and Conclusion Interpreting both Poseidon and Bologna criteria for poor ovarian responders and all interventions done, to put a clear algorithm for classification and management of different groups of poor ovarian responders. Although, the ovarian reserve could still outweigh the patient's age when predicting the ART outcome of a low-responder infertile woman. However, when ovarian reserve is not statistically different between patients, younger women with a low prognosis have a higher probability of pregnancy than their AMH-matched older counterparts. Younger women, even those with a low prognosis, can still have a chance to increase their probability of ART success by undergoing multiple cycles of in vitro fertilization (IVF).

- **Artificial oocyte activation; clinical application revisited.**
  Bassam A. El Helw, FRCOG
  Cairo Fertility Clinic (Egypt)

Repeated ICSI failures can be encountered in infertile couples with low oocyte yield in combination with abnormal semen parameters. One of the factors associated with ICSI failure is oocyte activation deficiency (AOD). The latter is considered a result of sperm-derived molecules, such as phospholipase C-zeta (PLCζ), that is not capable of producing adequate Ca+2 oscillations for oocyte activation. Apart from these natural activators, other stimulants, such as Ca+2 iono-phore A23187 (calcimycin), ionomycin and strontium chloride have been applied to overcome AOD and ICSI failure.

In this presentation, we aim to discuss and critically appraise the literature on physiological, pathophysiological, and ethical aspects of AOA in clinical practice.

- **Progestin primed double stimulation protocol: a glimpse of hope in the management of poor responders.**

  Aly Ahmed Aly Emam,

  Alexandria University, Egypt

Poor ovarian responders represent a daily clinical challenge to fertility practitioners. Dual stimulation protocols aim at maximizing the number of retrieved oocytes in the shortest time. In this study, the progestin-primed double stimulation protocol was compared to 2 cycles of the flexible antagonist protocol in poor responders. Additionally, we have investigated both phases of the double stimulation and the effect of the progestin used, Dydrogesterone, on the ovarian response. 90 poor responders, defined according to Bologna criteria, were randomized into 2 groups. Group I, was stimulated using the progestin-primed double stimulation protocol, and Group II, was stimulated by 2 cycles of the flexible antagonist protocol. Total days of controlled ovarian stimulation and the total gonadotropins requirements were comparable among both groups. However, the number of retrieved oocytes was significantly higher in the dual stimulation group. There was no statistically significant difference, in the implantation rate, clinical, or ongoing pregnancy rates. In the dual stimulation group, we found that the stimulation days and the gonadotropins requirements were statistically higher in the luteal phase compared to the follicular phase. However, we also noticed that luteal stimulation resulted in a significant increase in the number of mature oocytes, fertilization rate, and embryos available for cryopreservation. So, we concluded that progestin-primed double stimulation is a valuable option in poor ovarian responders.

Trial registration number: ClinicalTrials.gov ID: NCT04537078

Session ART Protocol, Procedures & Outcomes:

- **Does elective embryo freezing increase the success of IVF/ICSI?**

  Yakoub Khalaf, (UK)

- **Ethical challenges in balancing myths, science, and policy in the delivery of ART – the case of twins and triplets**

  Silke Dyer, (South Africa)

Data from the African Registry for ART document that 1 in 4 deliveries following ART are multiple deliveries. Africa has hence the highest rate of ART multiples among all world regions. This talk will first explore some of the myths that continue to contribute to the high rate of multiples and balance these with real-world scientific evidence. It will further address the role of reproductive autonomy in the context of ART multiples and how to balance beneficence and non-maleficence. Ultimately it will be demonstrated that justice cannot be achieved without healthy policy.

- **EFRE survey for luteal support in IVF among national and international fertility specialists.**

  Hassan A. El Maghraby, (Egypt)
  Prof. OB/GYN, Alexandria University, Egypt

- **Do we need to assess hormones besides ultrasound monitoring during ART cycles? … The Indian View.**

  Duru Shah, (India) virtual

Controlled ovarian stimulation (COS) is an integral part of an ART cycle. In order to optimize success rates and warrant safety throughout the cycle, monitoring is essential. Conventional monitoring has included transvaginal sonography for many years. Combining hormonal monitoring with USG has been suggested to enhance final IVF outcomes. The aim of having a live birth after an IVF cycle must be balanced with the risk of Ovarian Hyperstimulation (OHSS). While few studies do not recommend hormonal monitoring during COS due to the inconvenience and added expenses associated with it, few studies also stress its importance.

Hormonal Monitoring during COS can assist in individualizing treatment plans, help in dose adjustment, and help in identifying the ideal time for embryo transfer. Estradiol (E2), Progesterone (P4), and LH are the most common hormones measured during a COS cycle.

Cycle commencement can be done after confirming pituitary down-regulation with a long protocol by measuring E2, P4, and LH levels. During Ovarian Stimulation, Serial E2 levels can help predict probable oocyte number and predict impending OHSS. Progesterone levels can help identify the best time for transferring the embryos, thus avoiding any asynchronization between the embryos and the endometrium. Hence E2, P4, and LH evaluation in both fresh and frozen cycles is useful in predicting the ovarian endometrial response. Establishing ideal progesterone levels before ET can help rescue cycles with low progesterone levels prior to transfer.

Recent studies have established the use of salivary sample testing in an IVF cycle. Many urinary assays have been shown to be compatible with hormone measurement whilst comparing with Serum hormone levels. Since these are non-invasive options, they are more patient-friendly and convenient to use. Further studies are needed to evaluate their feasibility and efficacy.

Currently, USG has been the mainstay of monitoring ART cycles. Although hormonal monitoring is widely practiced, standard recommendations and guidelines need to be established to make it a standard practice of care in ART cycles.

- **Diagnostic Role of IVF/ICSI in Couples with Unexplained Infertility.**

Mohamed Ahmed Faris, (Egypt)

Lecturer of Obstetrics and Gynecology, Ain Shams University
Infertility and ART Consultant
Clinical Director of Dar Al-Teb Infertility Center, Alexandria Branch

The current criteria for a diagnosis of 'unexplained infertility' involve a heterogeneous group of couples with clinically evident female- and male-partner abnormalities. In a retrospective analysis of a case series of 482 initiated ICSI cycles in 318 infertile couples, 'occult' oocyte, sperm, and uterine abnormalities were explored. Such abnormalities had not been diagnosed by conventional and even by 'additional' testing proposed to such couples, and were only explored when couples with 'unexplained infertility' passed through an ICSI cycle.

- **Fresh versus frozen embryo transfer - what is the best?**

  Amr Sharaf Eldin,
  Benha University, (Egypt)

Session: The futuristic outlook of ART

- **Transforming Fertility Clinics: Unlea-shing the Potential of the Metaverse.**

  Julie Morgan, (UK)

  Assisted Reproduction & Gynaecology Centre, United Kingdom

The dawn of the metaverse - a comprehensive, immersive digital universe - is poised to transform healthcare delivery. The shift towards the metaverse was precipitated by the COVID-19 pandemic's impact on healthcare, necessitating the adoption of advanced technologies for continued growth and resilience. The global market for a healthcare metaverse is projected to reach USD $72 billion by 2030, underlining the exciting journey ahead for fertility clinics and patients, and promising an era of innovation and revolution in fertility treatments.

This digital frontier revolutionizes the patient process and has huge potential for improving accessibility, convenience, and outcomes in fertility care. It facilitates virtual consultations through holographic representations or avatars, access to instantaneous support via AI chats and anonymous online communities, and provides efficient, real-time access to patient data for healthcare professionals. Patients can actively participate in treatment protocols through at-home health monitoring devices, self-administered tests, sophisticated algorithms, and automated self-imaging ultrasonography technology. Interactive digital resources foster fully informed consent and enhancing patient-clinician trust, and gamification elements promote treatment adherence and engagement.

Healthcare metaverses also create new opportunities for providers: clinicians and embryologists can use haptic tools for hands-on training in risk-free simulated environments, as well as collaborate with other institutions using virtual laboratories, reducing reliance on traditional randomised controlled trials (RCTs) and enabling big data analysis for robust insights.

As the healthcare landscape continues to grow, clinics that successfully leverage the metaverse are positioning themselves as industry leaders, meeting and exceeding the evolving demands of digitally fluent generations.

- **Artificial intelligence and ART.**

Aboubakr El Nashar,
Prof. of OB/GYN, Benha University (Egypt).
Elnashar53@hotmail.com,

I. Introduction: AI as an official term, first appeared at the Dartmouth conference in 1955. Applications in life are many. AI is an umbrella term attributed to the primary objective within the field of computer science to develop machines with intelligence. Algorithms are the core element of AI and are specific steps in the computer to solve problems. AI facilitate the jobs of fertility specialists, increases the success rate of IVF & decrease the cost of IVF procedure. ART software covers the whole work process of IVF medicines

II. Application of AI in ART
   1. AMH-based ovarian stimulation
   2. Ultrasound examination automation
   3. Evaluation & selection of oocyte
   4. Sperm selection
   5. Embryo selection
   6. Detection of aneuploid embryos
   7. The prediction of IVF outcome

III. AI & research: AI can replace complicated statistical techniques as different types of regression analysis for the prediction of diagnosis & treatment

IV. Limitation of AI: very expensive & strong hardware, the data of the models are small in number, single in source &retrospective lack of large-scale RCT to test the external validity

V. Future: new technology should be developed & tested by good prospective randomized studies.

- **Recent advances in IVF technology.**

Adel Elboghdady,
Assistant professor of obstetrics and gynecology, Al Azhar University (Egypt)

My presentation (Add ons in IVF technology Do it or not)
A- screening hysteroscopy
B- Endometrial receptivity tests
C- Artificial oocyte activation
D- Assisted hatching
E- Time-lapse imaging
F- PRP
G- Endometrial scratching

- **Contraceptive in the pipeline: near future.**

Omar M Shaaban, Department of `obstetrics and Gynecology, Prof. of OB/GYN, Assiut University Egypt.

It is of great importance to be aware of the recent advances in the field of family planning. We should understand the main difference in hormonal birth control in both genders. In females, its hormonal methods generally work by convincing the body that it's pregnant, which is something that our biology is well-equipped to undergo. On the contrary, in men, it works by reducing sperm count, which isn't supposed to happen normally make advancement in the field of hormonal male contraceptives is still behind. In this presentation, I chose 6 New contraceptives to present (3 female and 3 male). As regards female contraceptives, for the first time a natural estrogen in the new **Nextstellis** (drospirenone and estetrol) combined oral contraceptive. A new vaginal ring **Annovera** (segesterone acetate and EE) and the new low-dose contraceptive patch **Twirla** (levonorgestrel and EE). On the other hand, advancements in male contraceptives include topical hormonal Gel (NES/T) **Vasalgel**/Reversible Inhibition of Sperm Under Guidance (RISUG), and finally an irreversible Intra Vas Device (IVD).

- **IVF success train: Has it parked?**

M.W. ELDEEB, S. ELRASHEDY, W. HAMED.

Alexandria, Egypt.

With steadily improving pregnancy and live birth rates, IVF over approximately the first two decades evolved into a highly successful treatment for female and male infertility, reaching peak live birth rates by 2001-2002.

Improving culture media to have the best blastocysts, new generations of incubators, Genetic testing for the selection of euploid embryos, etc.…, are very effective in improving pregnancy outcomes.

Plateauing rates, thereafter, actually started declining in most regions of the world. IVF, therefore, has increasingly disappointed outcome expectations, and neither the profession nor the public has paid attention to this development which, therefore, also has gone unexplained. And now we urgently need evidence-based explanations.

Session: Oncofertility:

- Ovarian tissue transplantation: lessons from more than 350 live births.

Marie-Madeleine Dolmans, (Belgium)

The feasibility of freezing and thawing ovarian tissue is nowadays widely documented. However, ovarian tissue transplantation (OTT) is happening at a much slower pace, and clinical experience is somewhat limited. In this review, five European centers present their collective experience of transplanting ovarian tissue in 285 women. The focus is on surgical techniques and OTT outcomes, reproductive outcomes, the impact of chemotherapy before ovarian tissue cryopreservation (OTC), the risk of relapse, and endocrine resumption and longevity of transplanted tissue. The risk of relapse due to reimplantation of ovarian tissue appears to be very low according to current data. Recovery of endocrine function is seen in almost all women undergoing transplantation of ovarian tissue, and about 1 in 4 gives birth to a healthy child. The efficacy of in vitro fertilization in these patients is not very high, however, and needs to be substantially improved. Radiation to the pelvis, especially with relatively high doses, appears to considerably decrease the likelihood of a successful pregnancy and may be contraindicated. Our results demonstrate that chemotherapy before OTC does not impair the chances of success, depending, of course, on the total

dose and type of chemotherapy administered. At this early stage of development of OTT for restoration of fertility, the results are encouraging and demonstrate clear potential.

- **Fertility preservation in female cancer patients: a practical approach.**

  Mohamed Mamdouh Thabet
  Lecturer of OBGYN -Cairo University, (Egypt).

It's a brief discussion of the fertility preservation options in female cancer patients, discussing the reasons behind the growing need for this, the candidate selection, and the technical tips and tricks of the procedure

- **Ovarian transposition prior to radiotherapy.**

  Sherif Mohamed Mahmoud Elsayed, (Egypt)
  Lecturer of OBGYN -Cairo University

It's a brief discussion of ovarian transposition prior to radiotherapy. My presentation includes a discussion about Patient selection, Surgical technique, Factors influencing success, Measures, and precautions to improve outcomes, and Analysis of clinical outcomes regarding fertility and ovarian endocrinal function.

- **Fertility-sparing surgery in early-stage ovarian carcinoma.**

  El Said Abdel Hady, PhD, FRCOG
  Professor in Obstetrics and Gynecology,
  Former Dean of Mansoura School of Medicine,
  President of Horus University,
  President of EGOS. (Egypt)

Ovarian carcinoma is more commonly diagnosed in young women who are desirous of preserving their fertility. Most carcinomas in young women are germ cells, of low grade, early stage and therefore carry a better oncological prognosis. Also, Fertility sparing techniques and ART results have improved significantly in recent years. This necessitates that, every effort must be made to preserve fertility in young women whenever possible.
This talk will cover the techniques and prerequisites for fertility-sparing management in this age group.

- **Fertility sparing in cervical cancer in Egypt.**

Amr El-Shalakany, MSc MD FRCOG
Ain Shams University, (Egypt).

Cervical cancer is the 4th. Most common female cancer. Incidence in the Western world has been dropping since the adoption of national screening programs in the late eighties of the past century. Not only the incidence has been declining, but also there has been a shift in stage at the time of detection towards earlier stages. Also, there has been a tendency to detect in women within the reproductive years.
The imminent French surgeon Sargent has great credit for introducing the fertility-preserving radical trachelectomy, almost 30 years ago. Following his track the procedure has been more refined and performed vaginally, abdominally, and laparoscopic ally. Accumulating evidence suggests that the abdominal radical trachelectomy is the preferred approach. A more conservative approach has evolved for earlier stages (IA, IAii) suggesting that even clod knife conization or simple trachelectomy may be an effective fertility-preserving treatment option. Premature birth is higher following these treatments.
In Egypt, the lack of effective screening programs makes the situation different. Data from the Ain Shams University Early Cancer Detection Unit over the past 35 years indicate that none of our patients are detected as stage IA and only 14 % are stage IB and usually stage IB2/IB3 where fertility preservation options are difficult to implement. A good effective screening strategy is a prerequisite if fertility preservation options are to be considered in women diagnosed with cervical cancer.

Society of Endometriosis and Uterine Disorders (SEUD) Adenomyosis: A Modern Vision

- **Current concepts in adenomyosis.**

Silvia Vannuccini, MD PhD
Assistant Professor in Obstetrics and Gynecology
Dept. Experimental and Clinical Biomedical Sciences "Mario Serio"
University of Florence, (Italy) (Virtual)

- **Modern approach for adenomyosis diagnosis.**

Mariona Rius (Spain)

Adenomyosis diagnosis is challenging due to diverse diagnosis criteria and management of this disease. In this talk, we will review the new adenomyosis diagnosis criteria in ultrasound scans as well as in MRI

- **Adenomyosis and infertility.**

  Charles Chapron, (France)

- **Adenomyosis and QoL. How to improve it.**

  Francisco Carmona (Barcelona, Spain)

Adenomyosis is a chronic disease that can significantly impact a woman's quality of life due to its often-debilitating symptoms. This condition, characterized by the abnormal growth of endometrial tissue within the uterine walls, can lead to heavy menstrual bleeding, severe pelvic pain, and fertility issues. Improving the quality of life for individuals with adenomyosis involves a multifaceted approach: through a combination of medical treatments, lifestyle adjustments, emotional support, and proactive self-care, individuals can find ways to manage their symptoms and improve their overall well-being.

Session: Stem cells and Gamete development

- **In vitro maturation (IVM).**

  Sherman Silber,
  Director, Infertility Center of St. Louis (USA)

This talk will review simple approaches to in vitro maturation (IVM) of oocytes from ovarian tissue, and a new understanding of ovarian longevity, based on ovary transplantation and in vitro oogenesis using skin cells transformed into IPS (induced pluripotent) cells. Many oocytes can be obtained from human ovarian tissue and mature to metaphase 2 in vitro with no need for ovarian stimulation. Ovarian stimulation may only be necessary for removing the oocyte from the ovary, but this can also be accomplished by simple dissection at the time of ovary tissue cryopreservation. By using surgical dissection of the removed ovary, rather than a needle stick, we obtain many oocytes from very small follicles not visible with ultrasound.

A clearer understanding of ovarian function has come from in vitro oogenesis experiments that explain why IVM has now become so simple and robust. Tissue pressure (and just a few “core genes” in the mouse) direct primordial follicle recruitment and development to mature oocytes, and therefore also control ovarian longevity. There are three distinct phases to oocyte

development both in vitro and in vivo: “IVD” which is not gonadotropin sensitive (the longest phase), “IVG” which is the phase of sensitivity to gonadotropin to prepare for meiotic competence and IVM. On any given day 35% of GV’s in ovarian tissue have already undergone “IVD” and “IVG” in vivo, and therefore are ready for IVM.

- **Stem Cells from Cord Blood and other sources for therapy- What the obstetricians/ gynaecologists should know.**

  Wolfgang Holzgreve, MBA, FACOG, FRCOG, Medical Director and CEO, University Hospital Bonn, (Germany)

Umbilical cord blood is rich in hematopoietic stem cells. At birth, it can be collected, HLA-typed, and stored. Cord blood has been successfully used for over 10 years as a source of transplantation of hematopoietic stem cells, in addition to bone marrow and mobilized peripheral blood stem cells. Allogeneic transplantations are performed between HLA-identical siblings and from HLA-matched unrelated donors. Most recipients of cord blood are children with leukemia or genetic disorders, but also increasingly adolescents and adults. Based on the promising results, cord blood banks with cryopreserved, HLA-typed cord blood samples from anonymous donors are set up worldwide, ready to be used as allogeneic stem cell grafts. Additionally, so-called "private" cord blood banks were set up, providing the possibility to store cord blood at birth from healthy children with no affected family members for a possible autologous stem cell transplantation in the future if the child later develops a disease such as leukemia. To date, there is no established indication for an autologous cord blood transplantation. Nevertheless, the plasticity and multipotency of adult stem cells, which has been confirmed, could lead to possible autologous use of cord blood stem cells for different indications in regenerative medicines (cell- and organ replacement/regeneration). There are different technologies currently being investigated.

Prenatal in-utero stem cell transplantation is a promising therapeutic option for genetic disorders, which is now at the edge of moving from preclinical research into clinical application. The first clinical experience shows that some form of severe immunodeficiency can be treated successfully in utero. No therapeutic success has been achieved in genetic disorders which do not severely affect the immune system, due to immunologic rejection and hematopoietic competition between donor and host cells. Therefore, new

strategies are being developed, including graft modification, prenatal conditioning of the fetus, postnatal re-transplantation after prenatal induction of immune tolerance, and fetal gene therapy using autologous fetal stem cells. The use of non-hematopoietic (e.g. mesenchymal) or pluripotent stem cells will probably lead to an expansion of the spectrum of indications. Simultaneously, ethical implications, in particular regarding fetal gene therapy and the use of pluripotent stem cells must be addressed.

- **Oocyte cryopreservation. Current trends in Egypt.**

Abdel Maguid Ramzy,
Prof of OB GYN, Cairo University (Egypt)

Oocyte cryopreservation (egg freezing) is a procedure to preserve the fertility of women in their thirties by freezing, for future use when married. It is promoted as a mode of fertility insurance to overcome the age-related decline in fertility as well as post-surgical decline following endometriosis surgery.

Oocyte Cryopreservation among unmarried girls

There has been a rising trend in women, starting their families at a later age, when fertility is already declining due to reduced follicular quantity and quality. Oocytes can be cryopreserved, before the biological clock starts ticking, allowing women to use their own oocytes for future pregnancy. Recently in 2018, the ASRM practice committee accepted social egg freezing as ethically permissible and termed it as “planned oocyte cryopreservation” (“Planned OC”).
This issue has been met with caution in Fatwa (Shari’a) for unmarried women. While It is permissible in Egypt, it is prohibited in Malaysia, as stated, that mature oocytes can readily be produced and fertilized by the husband sperms only during the period of marriage. In Singapore however, it was banned until 2023 for Muslim unmarried women to preserve their oocytes. But currently considered just an act that better walked away from “makrouh”.

Oocyte Cryopreservation among Married Couples
Oocyte cryopreservation acts as a salvage procedure when the husband is not available, or there is an inability to obtain sperms on the day of oocyte retrieval together with the refusal of surgical extraction of sperms. Or failure to retrieve sperms during testicular sperm extraction (TESE) in patients with non-

obstructive azoospermia. The wife may then wish to preserve her oocytes for future marriages

Medical Oocyte Cryopreservation

The incidence of malignancy in women of reproductive age group is about 10%. The demand for this oncofertility preservation method has increased due to the improvement in survival rate following cancer treatment.

Radiation therapy can also damage the ovaries, decreasing the follicular count. **Cancer therapy** might be detrimental to female fertility due to surgical oophorectomy or the use of cytotoxic drugs which may decrease the ovarian

- **The Egyptian IVF center's experience with egg freezing.**

  Mona Aboulghar, (Egypt)
  Prof. of OB/GYN, Cairo University, Egypt.

The presentation will give an overview of the experience of the Egyptian IVF center over a period of 20 years in egg freezing.

The various reasons for egg freezing; male factor, social reasons, and cancer cases will be discussed. The presentation will discuss details of all the cases that underwent thawing of their eggs; survival rate, fertilization rates, and pregnancy rates after embryo transfer of embryos resulting from frozen eggs. Protocols for ovulation induction and the technique of ovum pickup will also be discussed.

- **A simplified approach to ovarian stimulation for elective freezing.**

  Ioannis E. Messinis, MD, PhD (Aberdeen), FRCOG
  Department of Obstetrics and Gynaecology, Faculty of Medicine, School of Health Sciences, University of Thessaly, 41110 Larissa, Greece.

The prevention of the LH surge in cycles stimulated for IVF by the use of GnRH agonists or antagonists minimises the risk of premature luteinisation. The latter condition by advancing endometrial maturation decreases implantation rate after fresh embryo transfer. Regarding ovarian stimulation, there seem to be differences between fresh and frozen cycles. In fresh cycles, the live birth rate shows a positive correlation with the eggs collected up to number of 15, after which a plateau and then a decline in the rate is observed. Conversely, in cycles of elective freezing, the live birth rate increases continuously and proportionally with the eggs retrieved up to the number of 25. Additionally, in fresh cycles, the risk of the ovarian hyperstimulation syndrome (OHSS) increases in proportion to the number of retrieved oocytes, while the risk is minimised by freezing all

embryos. For the same reason, luteinisation does not play a role in frozen cycles. This would imply that the use of GnRH agonists or antagonists to prevent the LH surge in cycles of elective freezing is not necessary. Although exogenous progesterone has almost replaced GnRH analogues in such cycles, the question is whether the use of this steroid is not necessary either. A clinical trial to compare IVF outcome between cycles with and without GnRH antagonists is underway. This is expected to provide clues as to whether it is possible to adopt less invasive and cost-effective ovarian stimulation approaches for IVF.

- **Advancements in Reproductive Health: Harnessing Adipose-Derived Stem Cells for Enhanced Fertility.**

Nani Tatishvili,
Resident of Reproductology (Georgia)

This conference serves as a forum for the exploration and dissemination of groundbreaking research in reproductive health, with a focus on the innovative utilization of stem cells derived from adipose tissue. Employing an ultra-sharp titanium knife for extraction, researchers are delving into novel applications of these cells to address critical aspects of fertility enhancement.

One pivotal area of investigation involves the transplantation of adipose-derived stem cells into the uterus to optimize embryo attachment. This intervention holds promise for elevating implantation rates and, consequently, increasing the likelihood of successful pregnancies. Researchers are intricately studying the regenerative potential of these stem cells to unlock new possibilities in overcoming challenges during the crucial early stages of embryonic development.

Within the context of ovarian health, adipose-derived stem cells are being harnessed to augment ovarian function and reserve. This holds profound implications for individuals undergoing Controlled Ovarian Stimulation (COS) procedures, where the primary objective is to enhance the production of viable eggs. By strategically deploying these stem cells, researchers aim to fortify ovarian reserves, potentially revolutionizing the outcomes of assisted reproductive technologies and offering renewed hope to those seeking to conceive.

Moreover, this conference delves into male reproductive health, specifically addressing azoospermia—a condition characterized by the absence of sperm in semen. Researchers are actively exploring the transplantation of adipose-derived stem cells into the testicles as an innovative therapeutic approach. The ultimate

goal is to stimulate the generation of healthy spermatozoa, presenting a potential breakthrough in the treatment of male infertility.

The interdisciplinary nature of this research underscores the versatility of adipose-derived stem cells in addressing multifaceted challenges within reproductive health. As these methodologies advance, they hold the potential to reshape the landscape of fertility treatments, offering new avenues for individuals and couples facing obstacles in conceiving. This conference provides a platform to disseminate and discuss these transformative findings, fostering collaboration and pushing the boundaries of what is achievable in the field of reproductive medicine.

Session: Genetics and Assisted Reproduction

- **Carrier Genetic Screening.**

J. L. SIMPSON[1,2], S. RECHITSKY[1,2]

1. Florida International University – Miami, FL (United States)

2. Reproductive Genetics Innovations- Northbrook, IL (United States)

Introduction:

Genetic screening has been applicable for a limited number of genetic disorders since the 1970s. Protein gene products were initially analyzed, based on distinguishing homozygous normal from heterozygous carrier. The Human Genomic Project in the 2000s generated methods for whole genome sequencing that allowed hundreds of genes to be undergo DNA-based screening. In 2021 the American College of Medical Genetics considered 415 disorders of moderate to severe phenotype. Based on carrier screening rates of 1/200 or greater 113 autosomal recessive and X-linked recessive disorders were recommended for screening in 6 ancestries. DNA -based screening continues to identify childhood disorders, but gene panels in particular enabled ascertainment of autosomal dominant adult-onset cancer, arrhythmias, and neurodegenerative disorders. PGT-M referral at RGI have now been ascertained more often after carrier screening than after a prior affected child.

Reproductive Genetic Innovations has provided diagnosis for 1147 PGT-M cycles for cancer susceptibility genes. BCA1 and BRCA2 are the most common. Both are germline mutations; thus, every cell has this mutation at birth. Adult-onset cancers arise when there is a second (somatic) mutation ("hit"). This can occur

in multiple organs. In BRCA1 and BRCA2 breast and ovary occur in females, pancreas in both males and females, prostate in males.

Results:

Outcome of IVF and PGT-M at RGI for BRCA1 and BRCA2 was tabulated. 304 BRCA1 cycles in 371 patients resulted in 165 pregnancies and 157 births. 247 BRCA2 cycles in 122 patients resulted in 117 pregnancies and 110 births. Total number of PGT-M cycles for cancer genes increased from 105 in 2017 to 197 in 2022. The frequency of BRCA1 and BRCA2 likewise increased.

Communication between genetic counselors and oncologists has now become pivotal in IVF. The typical case involves a 55-year-old mother with breast cancer found to have an autosomal dominant mutation. Each of her three children has 50% risk of inheriting her mutation. Those children who have inherited the gene are concerned with transmitting this mutation to the next generation, i.e., grandchildren. There are two options for genetic testing: 1) Prenatal genetic diagnosis (e.g., amniocentesis) following natural conception, albeit carrying risk of clinical pregnancy termination; 2) IVF and embryo selection for transfer only of embryos lacking cancer susceptibility mutation. The option of IVF and PGT-M is proving preferable even in couples who are fertile.

- **Genetic testing for early pregnancy loss: New Methods and updated indications.**

  Mohamed Bedaiwy, (Canada)

The goal of this talk is to

1. Provide a clinical review about the genetics of early pregnancy loss.
2. Review the current genetic testing methods for early pregnancy loss.
3. Share updated indications for genetic testing of early pregnancy loss.

- **Is Preimplantation Sex Selection Too Much Used?**

  Abdel Maguid Sarhan, MD, FRCOG
  Zagazig University, Egypt

Since ancient times, prospective parents have tried to influence the sex of their future children. Modern science provides people with new, more effective methods for sex selection. Sex selection can be performed at three stages; preconception sex selection, preimplantation sex selection or prenatal (sex-selective abortion). It can be performed for medical reasons defined in terms of preventing the conception or birth of a child suffering from a sex-linked disorder,

like Duchenne muscular dystrophy or hemophilia or non-medical reasons when people may just prefer a child of one sex over the other, either for personal reasons or for sociocultural reasons. Sex selection for medical reasons is widely regarded as acceptable. However, sex selection for non-medical reasons has been the subject of recurrent ethical and public policy debate in many countries. This type of sex selection had been recently widely used in ART units supported by extensive commercial propaganda. The aim of this presentation is to discuss the different medical, social and legal controversial points with and against sex selection in a trial to reach a conclusion regarding the proper use of this technique in ART practice.

- **Risk Assessment to Reproductive Choices: The Role of Expanded Carrier Screening for Couples.**

Amira Elmakky,
Consultant Clinical Geneticist, London SE1 9RT, UK

In the ever-expanding landscape of genetic medicine, advancements in genetic screening technologies have revolutionized the way couples make informed decisions about family planning. This presentation, titled "From Risk Assessment to Reproductive Choices: The Role of Expanded Carrier Screening for Couples," delves into the pivotal role of expanded carrier screening (ECS) in modern healthcare practices.

The presentation navigates the intricate landscape of genetic risk assessment, emphasizing the significance of ECS in identifying potential genetic disorders within prospective parents. It explores the principles of ECS, highlighting its ability to detect a wide array of genetic mutations, thereby empowering couples with crucial information about their risk of passing inheritable conditions to their offspring.

Furthermore, the presentation discusses the ethical implications, challenges, and advancements in ECS technology, shedding light on the evolving landscape of genetic counselling, and reproductive decision-making.

- **MTHFR gene testing: Why we should never do?**

Adel Shafik S. Abdel Razik,
Prof. Of OB/GYN, Ain Shams University (Egypt)

Session: Improving obstetric outcomes:

- **Does Frozen Embryo Transfer Predispose to Pre-eclampsia?**
  Hossam Fahem Abdel-Rahim, FRCOG, MD
  Professor & Head of O&G
  Al-Azhar University

Frozen embryo transfer (FET) is becoming the new "norm" in IVF cycles. There are many reasons for its growing popularity, e.g. avoiding OHSS, allowing embryo testing, managing uterine pathology, social reasons, preserving fertility, and because of its convenience.
However, FET seems to be not as innocent as innocent as it seems. Obstetric outcomes are known to be affected. There is growing evidence that the occurrence of pre-eclampsia increases after FET.
This presentation will discuss the theory and evidence supporting this claim.

- **Obesity and Cesarean Section epidemic in Egypt.**

  Mohamed Momtaz,
  Prof. of OB/GYN, Cairo University, (Egypt).

Obesity has emerged as a global health epidemic, and its impact on maternal and neonatal health during pregnancy and childbirth is a topic of increasing concern. Egypt, like many countries, has witnessed a rise in obesity rates, which has prompted a surge in the number of obese pregnant women. Cesarean section (C-section) is a common mode of delivery for this high-risk population due to a multitude of factors. This review article aims to provide a comprehensive overview of the clinical implications, challenges, and strategies related to cesarean sections in obese women in Egypt.

This presentation encompasses a synthesis of existing literature, focusing on the unique epidemiological trends and risk factors for obesity in Egypt. It delves into the maternal and neonatal outcomes associated with C-sections in obese women, considering the elevated risks of complications such as gestational diabetes, hypertension, and preeclampsia. Furthermore, the article explores the socio-cultural factors, healthcare system-related issues, and disparities in healthcare access that may contribute to the increased incidence of C-sections among obese women in Egypt.

We will also evaluate various strategies to optimize C-sections in obese women, including preconception counseling, antenatal care, and surgical techniques tailored to the needs of this population. Additionally, the potential role of multidisciplinary teams, comprising obstetricians, anesthetists, dietitians, and

mental health professionals, is discussed in promoting better outcomes for both mother and baby.

- **Guidelines for preterm labor management.**

Amal M. El Shahat, MD
Professor of Obstetrics and Gynecology, Faculty of Medicine,
Seuz Canal University.

The preterm labor is the leading cause of neonatal morbidity and mortality (75% of perinatal mortality and more than 50% of long-term neonatal morbidity).
In the USA care for preterm infants' costs about $25 billion annually, with higher individual costs associated with earlier gestational age at delivery. In 2021, 1 out of 10 babies is preterm birth. According to WHO, incidence across the world ranges from 4% to 16% in 2020, affecting 15 million pregnancies worldwide.
In Egypt, incidence is about 7% (1) to 13% (2) of live births.
The Pathogenesis of preterm labor PTL and the risk factors for preterm birth will be discussed in this talk.
Guidelines for prediction and prevention of preterm labor according to;
NICE Guideline 2022 **[**NG25] Published: 20 November 2015 Last updated: 10 June **2022**
ACOG Practice bulletin **2021**: prediction and prevention of spontaneous preterm birth
SOGC Guideline **2020:** progesterone for prevention of spontaneous preterm birth
Will be reviewed trying to adopt guidelines which could be applied in our community in Egypt, as regard:

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- **Uterine fibroids during pregnancy.**
  Mohamed El Sherbiny, (Egypt)
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- **Fertility preservation surgery for placenta accreta spectrum.**
  Ahmed M. Hussein, (Egypt)

- **High-risk pregnancy units, towards decreasing mortality and morbidity.**
  Waleed Basiouny,
  Asst. Prof. Ain Shams University, (Egypt)

Session: African Federation of Fertility Societies (AFFS)

- **Strategies to improve quality assisted reproductive technology (ART) in Africa**

  Silke Dyer, (South Africa)

This presentation will first describe and define the concept of "quality" in health care. Applying the strategies of ANARA (African Network and Registry for ART) to measure, share, and improve, the speaker will then demonstrate how real-world scientific data allow us to measure quality ART and learn from the findings without compromising the confidentiality of patients or ART centers. The 2nd half of the presentation will explore how by applying what is measured and shared, the quality of ART may be further improved at the level of each ART center, each country, our region, and of ART in Africa in the context of global ART.

- **Egypt IVF Registry: Interesting data to know based on our population characteristics.**

Eman El Gindy,
Prof. of OB/GYN, Zagazig University, (Egypt)

Egypt performed in 2018, 2019, 2020 and 2021 will be presented and analyzed. More than of 60% of cycles in Egypt are performed in the female age category of 34 years and younger. Interestingly, there is a decreasing trend in the number of transferred embryos without adversely impacting the ART outcome. In addition, there is a parallel increase in the number of frozen cycles. Clinical pregnancy increased in frozen cycles over the years with also parallel decrease in the number of frozen transferred embryos. Currently, there is a rising need to counsel our patients based on data coming from their specific population as ethnicity does affect ART outcomes. Further, the optimum outcome in our centers should be cumulative live birth rates. Other future perspectives will be presented to achieve our deserved worldwide recognition

- **Cryopreservation In Assisted Reproductive Technology (Art) In Africa - Where Are We Now?**

Edem Hiazdi,
Chief Executive Officer, Lister Hospital & Fertility Centre, (Accra, Ghana)

Cryopreservation is a conventional technique for the storage of gametes, embryos or tissues in Assisted Reproduction.

Increasingly, this technique is required for reasons of

a. Medical need
b. Efficacy or
c. Purely as the desire for fertility preservation for future use.

In the past two decades, this has become acceptable as a valuable alternative to fresh embryo transfer.

The development of more efficient stimulation protocols, improvement in culture media to allow for embryo development to blastocyst stage and the technique of

vitrification as compared to slow freezing has made cryopreservation more efficient and provides more options in the field of ART.

In this review, we look at world data on cryopreservation in general and compare it with data from the continent of Africa.

Reference will be made to data from the African Network and Registry for Assisted Reproductive Technology (ANARA) and individual surveys with ART experts on the continent through the African Federation of Fertility Societies (AFFS).

We will look at the peculiar challenges with the availability of and effective cryopreservation in Africa.

- **PGT-M for Sickle Cell Disease on the African Continent.**

  Ibrahim Wada,

  FWACS, FRCOG, MBA Consultant Gynaecologist Founder: Nisa Premier Hospital, 15/17 Alex Ekwueme Way, Jabi, Abuja.

- **Management of ectopic pregnancies by vaginal injection.**

  Rudolph K. Adageba, (Ghana)

Session: PCOS and ovulatory dysfunction:

- **FIGO ovulatory disorders classification.**

  Edgar V. Mocanu, (Ireland) Virtually

- **Misconceptions in the Polycystic Ovary Syndrome.**

  Mohamed Kandil, M.D.
  Professor & Chairman. Department of Obstetrics and Gynecology, Suez Faculty of Medicine
  Professor of Obstetrics and Gynecology, Menofia Faculty of Medicine
  Professor of Obstetrics and Gynecology, Armed Forces College of Medicine

Polycystic Ovary syndrome is a challenging one that accounts for 10% of infertility cases and is responsible for 75% of cases of anovulatory infertility. There are several misconceptions that every practitioner should be aware of

when dealing with patients affected with polycystic ovary syndrome. The first of these is the nomenclature of the syndrome. The name does not reflect the underlying pathology of the syndrome, namely insulin resistance and hyper-androgenemia. Several names have been suggested but none of them is fully satisfactory. Another misconception is the belief that there is no need to treat the syndrome if fertility is not an issue. This ignores the long-term complications of the syndrome. Lastly, many believe that the syndrome is curable. This is not true. Actually, the syndrome is treatable, not curable, and treatment should be directed to the presenting symptom in order to delay the appearance or progression of any long-term complications. These, among others, are important issues that should be **taught** to both gynecologists and women.

- **Two decades after Rotterdam Consensus: What do we need?**

Mohammad Emam (MD)
Prof OB & GYN Mansoura Faculty of Medicine/ Egypt
Mansoura integrated Fertility Center

Introduction: Polycystic ovary syndrome (PCOS) is dynamic topic. Three consensus workshops ESHRE/ASRM- (PCOS) had been held from (2003 to 2010). The first, was in Rotterdam, in 2003 (Diagnosis for PCOS), the second in Greece, in 2007 (Infertility management), and the third in Amsterdam, in October 2010 (gaps in knowledge of various women's health aspects). Many pitfalls have resulted after these consensuses, like: 1) The heterogeneity of the sub-phenotype groups which leads to controversy and debate of the results of any comparative study, 2) neglecting the role of insulin resistance, although PCOS is recognized as an important metabolic and reproductive disorder, 3) not solve the problem of PCOM in the absence of anovulation or hyperandrogenism (asymptomatic PCOM), 4) not consider a special category for adolescent PCOS, 5) not consider controversy of Antimullerian h. in diagnosis 6) Lastly an important pitfall is neglecting the difference between lean type or obese type of PCOS. On the other hand, many authors define a consensus generally as the business of politics, which is invoked only in situations where the science is not solid enough!

Objective: To highlight the pitfalls and drawbacks of the definition of PCOS according to the joint ASRM/ESHRE consensus meeting in Rotterdam, 2003. Also, to give a proposal of a useful and practical classification of PCOS.

Conclusions: Although the use of Rotterdam diagnostic criteria in the studies of PCOS has ended the debate between ASRM/ESHRE groups from the political point of view, we are still in need of an improved and more reliable multidisciplinary diagnostic criterion of PCOS, based on a scientific and Practical (not political) criteria.

Correspondent:

Mohammad Emam:
Professor OBS & GYN, Mansoura Faculty of Medicine, Egypt
Mobile: 002/01223475579
E-mail: mae335@hotmail.com

- **Controversies in Clinical Forms of Polycystic Ovary Syndrome.**

Lali Pkhaladze1, Archil Khomasuridze1
1 Prof. Zhordania and Prof. Khomasuridze Institute of Reproductology, 0112, Tbilisi, Georgia
lpkhalazde@yahoo.com
+995 599 58 41 09

Background: Polycystic ovary syndrome (PCOS) is a highly heterogeneous condition presenting in different clinical forms. The presence of two out of three following findings: hyperandrogenism (HA), ovulatory dysfunction (OD), and polycystic ovarian morphology (PCOM) recognized as Rotterdam Criteria, are required for PCOS diagnosis. Accordingly, four phenotypes of PCOS are generated: A - characterized by the presence of all the criteria, B- exhibiting HA and OD, C- presenting HA and PCOM, and D - characterized by OD and PCOM. Phenotypes A, B, and C are recognized as endocrine-metabolic disorders and D - as a condition of ovarian origin. These Phenotypes don't fully reflect the pathogenic aspects of the disease and require a reassessment.
Objective: Distinguish the clinical forms of PCOS based on the pathogenesis of this disorder.

Methods: A retrospective and prospective study of 2549 women with PCOS, aged 18-49 years, at Zhordania Institute of Human Reproduction, Tbilisi, Georgia, was conducted.

Results: Three clinical types of PCOS were distinguished: Primary PCOS -a genetically determined classic disease with severe clinical manifestations, hyperinsulinemia and ovarian hyperandrogenism; Secondary PCOS - based on primary disorders in the hypothalamus with mild or moderate clinical manifestations and hormonal disturbances; Combined PCOS - developed due to the simultaneous presence of disorders in ovarian and adrenal steroidogenesis, with wide spectrum of clinical manifestations and mixed hyperandrogenism.

Conclusions: Three clinical forms of PCOS reflect different pathogenic pathways of the disease, which is very significant for the highly effective pathogenic therapy for each one.

- **PCOS: Evidence-based guidelines.**

Tarek K. Al-Hussaini, MD, FRCOG
Professor Emeritus of Obstetrics and Gynecology, Assiut University, Assiut, Egypt

Introduction: Polycystic ovary syndrome (PCOS) is one of the most common metabolic and endocrine disorders in women of reproductive age, affecting 5% to 10% of these women. Anovulatory infertility is a common consequence of PCOS, and the incidence of PCOS in women with anovulatory infertility is higher at 70% to 80%.

Aim: To Highlight most of the recent 2023 ESHRE clinical guidelines for the diagnosis and management of PCOS.

Results:

1- Diagnosis is very important using Rotterdam Criteria.
2- Main presentation: Infertility and Hirsutism.
3- Use of Aromatase inhibitors, CC, and Gonadotrophins as first-line treatment.
4- PCO Drilling (When to drill).
5- PCOS and IVF/ICSI.

Conclusions: By the end, the audience would be able to know how to diagnose PCOS and the various lines of treatment of this condition which is seen frequently in daily practice.

- **Ovarian Function Maintenance in Females Diagnosed with PCOS.**

Manana Mgaloblishvili,[1] **Nata Nakaidze[2]** and Lela Malania.[1]
[1]Center for Reproductive Medicine, Tbilisi, Georgia.
[2] Professor Zhordania and Professor Khomasuridze Institute of Reproductology, Tbilisi, Georgia.
Corresponding Author: Nata Nakaidze dr.natanakaidze@gmail.com; +995595334355.

Context: Polycystic Ovarian Syndrome (PCOS) is a hormonal disorder that affects reproductive-aged women. The exact cause of PCOS is not fully determined, but it involves a combination of genetic and environmental factors, which results in increased infertility rates. The most common clinical manifestations include oligomenorrhea, hyperandrogenism, insulin resistance, weight fluctuations, and depressive mood. An ultrasound of PCOS ovaries typically reveals characteristic features such as enlarged ovaries and an increased number of follicles.

Objective: Assessment of ovarian reserve maintenance in women with PCOS aged ≥38 and its comparison to the women who have normal ovarian function.

Materials and Methods: In a retrospective study the patients were divided into a group of 50 women with a previous diagnosis of PCOS and 50 patients in a control group. Transvaginal ultrasound imaging was used to assess ovarian follicular apparatus.

Results: In the study group women had better ovarian reserve than in the control group.

Conclusions: The number of ovarian follicles as well as the size of the ovary is higher and bigger in women diagnosed with PCOS.

Session: Adenomyosis & endometriosis:

- **Arabic perspective on the medical treatment of endometriosis and chronic pelvic pain.**

  Moamar Al-Jefout, (Jordan)

Prevalence for surgically confirmed endometriosis (12.9% among women undergoing laparoscopy for any indication; 24. % among infertile women; 12.2% among women hospitalized for pelvic pain; 1.28% in a population-based setting) was similar to European ancestry populations (5–10% among women undergoing laparoscopy; 5–50% among infertile women; 5–21% among women hospitalized for pelvic pain; 2–43% among asymptomatic women seeking tubal ligation). The diagnostic delay from the first onset of symptoms to diagnosis was 11.61 years among Arab women. Within this, the interval from the first onset of symptoms to the first gynecological consultation was 6.01 years, and between the first gynecological consultation to diagnosis was 6.96 years. In Middle Eastern women with endometriosis, demonstrating that dysmenorrhea severity is negatively correlated with physical, social, and environmental domains ($p = 0.028$; $p = 0.013$; $p = 0.033$, respectively). HRQoL scores were significantly impaired in women with endometriosis, as demonstrated in the Physical Composite Scores and Mental Composite Scores in the symptomatic control group ($p = 0.001$; $p = 0.003$, respectively) and the asymptomatic control group ($p < 0.001$; $p < 0.001$, respectively). Susceptibility and severity of multiple pain syndromes and infertility in women with endometriosis was the main indicator of lower HRQoL. Anxiety ($p = 0.007$) and depression ($p = 0.005$) were significantly associated with endometriosis, in comparison to symptomatic controls.

- **Management of uterine adenomyosis: a dilemma for the gynecologist.**

  Jacques Donnez, (Belgium)

- **Ultrasonographic diagnosis for deep infiltrating endometriosis. Tips & Tricks.**

  Mariona Rius (Spain)

Endometriosis is found in around 40% of infertile patients. In this talk, we will discuss and review the ultrasonographic key points in order to suspect and diagnose this disease with practical videos and tips.

- **Endometriosis management: the challenge is to treat the patients rather than the lesions.**

  Charles Chapron, (France)

- **Enzian classification, new description for endometriosis.**

  Waleed Tawfik, (Egypt)

Advances in preoperative diagnostics as well as in surgical techniques for the treatment of endometriosis, especially for deep endometriosis, call for a classification system, that includes all aspects of the disease such as peritoneal endometriosis, ovarian endometriosis, deep endometriosis, and secondary adhesions. The widely accepted revised American Society for Reproductive Medicine classification (rASRM) has certain limitations because of its incomplete description of deep endometriosis. In contrast, the Enzian classification, which has been implemented in the last decade, has proved to be the most suitable tool for staging deep endometriosis, but does not include peritoneal or ovarian disease or adhesions. To overcome these limitations, a comprehensive classification system for complete mapping of endometriosis, including anatomical location, size of the lesions, adhesions and degree of involvement of the adjacent organs, that can be used with both diagnostic and surgical methods, has been created through a consensus process and will be described in detail—the #Enzian classification.

- **The possible mechanism in AUB associated with adenomyosis and polyps.**

  Moamar Al-Jefout, (Jordan

Molecular changes in adenomyosis enhance bleeding tendency. activin A modulated endometrial vascularization by stimulating ESCs to produce VEGF, one of the most potent angiogenic factors. The increased activin A alters the microenvironment in adenomyosis by affecting the inflammatory response and neoangiogenesis. In both eutopic and ectopic endometria of adenomyosis, the expressions of MMP-2, MMP-9 and VEGF are significantly greater than that in normal endometrium with a positive correlation between VEGF and metalloproteinase expression. Tissue factor (TF) is involved in heavy menstrual bleeding. Subtle channels between eutopic and ectopic lesions in adenomyosis may explain excessive bleeding in adenomyosis. A-MC are rare in both endometrium and adenomyotic lesions, yet abundant in surrounding myometrium. Secreting mast cells can induce or enhance angiogenesis and as a result, an increase in blood vessel density would be expected. Mast cells are the major producers of histamine & heparin. Histamine makes the blood vessels dilated & swollen. The metabolic products of the mast cells in adenomyosis and polyps—heparin, histamine, may be responsible for excessive bleeding in these women through stimulation of endometrial stromal cells to produce MMPs.

2ND DAY

Friday December 1st, 2023

Plenary III

- **AUB and Myoma,**

  Yutaka Osuga, Japan (virtually)

Leiomyoma seems to be the most common cause of AUB, especially HMB. Many factors are involved in the formation and growth of uterine leiomyoma, such as genetic and epigenetic factors, epidemiologic factors, extracellular matrix, chemokines, and cytokines. In addition, estrogen and progesterone are the key drivers to develop fibroids. Regarding heavy menstrual bleeding, the increase in endometrial surface is one of the most plausible reasons. Fragile and engorged blood vessels may also be a cause. Other suggested mechanisms include defective decidualization, reduced vasoconstriction, reduced hemostasis, uterine venous ectasia, increase in TGFbeta3, endometrial inflammation, etc. For medical treatment of fibroids, COCs, progestins, LNG-IUS, SPRM, GnRH agonist, GnRH antagonist, and GnRH antagonist add-back are used. All COC, Progestin, and LNG are effective for reducing HMB, since the drugs make the endometrium thin. However, in terms of bulk-related symptoms, these drugs are not effective since they are unable to shrink the size of uterus. SPRM is a new class of progesterone receptor ligands. Ulipristal acetate (UA) is one of SPRMs, which works as progesterone antagonist in fibroid treatment. Compared to GnRH analogues, which mainly act on the pituitary, SPRM acts on the fibroid and the endometrium in addition to the pituitary. At the same time, UPA does not lower serum estradiol levels, while GnRH analogues decrease them significantly. However, European Medicines Agency (EMA) issued a recommendation that UPA should be used in a very restricted manner due to its adverse effect of serious liver injury which led to liver transplantation. Recently, oral GnRH antagonists have been developed and now they are in the market. Both GnRH agonists and GnRH antagonists finally suppresses estradiol levels. The difference is that GnRH agonist increases serum estradiol levels during the first one or two weeks while GnRH antagonist quickly suppresses serum estradiol levels. Recently, GnRH antagonist with add-back therapy has been developed to overcome the problem of the bone loss associated with GnRH antagonist monotherapy. In GnRH antagonist with add-back, HMB reduces as well as in the monotherapy while the bone less is much less than in the monotherapy. However, size reduction of fibroid is little in GnRH antagonist with add-back therapy. For non-medical treatment of fibroid, hysterectomy, myomectomy, hysteroscopic resection, uterine artery emobolization, and focused ultrasound are used. Hysterectomy is a gold standard for those who don't need to preserve their fertility. In hysteroscopic surgery, hysteroscopic morcellation and bipolar resectoscope are the current standard. Using GnRH antagonist before surgery to reduce the size may make surgery easier. Uterine artery embolization (UAE) is another choice. Regarding, focused ultrasound, high intensity ultrasound (HIFU)

is mainly performed in China and MRI guided focused ultrasound (MRgFUS) is used in the rest of the world.

- **Classification and staging of endometriosis.**

  Ghassan Lotfy,

  Consultant in Obstetrics & Gynecology
  Saudi German Hospital Dubai
  President of the Emirates Endometriosis League, (UAE)

Endometriosis is becoming increasingly a more commonly identified and diagnosed chronic inflammatory disease among females of all reproductive ages. Much debate exists about the etiology, pathogenesis, and even more treatment protocols for different types and stages of endometriosis. The absence of a unified and internationally recognized classification and staging of the disease makes this task even more difficult for clinicians to communicate and report endometriosis cases and treatment outcomes. This presentation is trying to shed light on the history of endometriosis classifications and staging and the challenges ahead of a unified system for identifying this disease and the management approach to it.

- **Premature ovarian insufficiency (POI)- is there hope for fertility?**

  Duru Shah, (India) (virtually)

Premature Ovarian Insufficiency (POI) affects approximately 1-2% of women before 40 yrs. of age. It affects not only female fertility, but also causes long term complications of estrogen withdrawal like cardiovascular disease, osteoporosis, and mental health issues. POI is different from Menopause as all ovarian function is not lost as seen in Menopause.
The possible etiologies of POI range from genetic, autoimmune, metabolic, iatrogenic, infectious, or environmental with, almost 75-80% of causes being idiopathic. Hence the cause of POI is still a mystery.
POI is unpredictable, with few women who continue to ovulate erratically, while few may show a significant decline in oocytes and subsequently amenorrhea.
While only 5% of women may conceive naturally, most of them need to resort to IVF or accept oocyte donation. Hence we need to exercise caution before labeling

any patient with absolute infertility, which can be immensely emotionally draining. Oocyte cryopreservation may be advised for women with a known genetic risk for POI, or those who need to undergo cancer therapy.

Previous studies have demonstrated that in women with overt POI, the ovarian follicles fail to respond to FSH stimulation due to their luteinized status. Hence, timely diagnosis and preconceptional counselling are important elements to enhance their chances of conception. Optimizing fertility outcomes using ovulation induction is known to have minimal success rates and no protocol can be justified as ideal in such patients. Few studies suggest frequent Follicular monitoring at least every 2-3 weeks to use the opportunity of a growing follicle. However, emerging approaches may offer a ray of hope for POI women in the near future.

Recent studies have been reported with the use of Mesenchymal stem cells derived from adult tissues which have great regenerative abilities. The use of stem cells combined with PRP (Platelet Rich Plasma) has been shown to improve folliculogenesis, rather than PRP alone. Another developing area of research is using certain activators or suppressors that assist primordial follicle activation. These include Invitro activation of oocytes or mitochondrial activation techniques.

In conclusion, while the use of the above techniques shows promising outcomes in the near future, larger clinical trials are needed. Currently, there are no treatment options that can improve the existing oocyte number and quality. Until then, such women can be offered oocyte donation to gain favorable results, with a good cumulative pregnancy rate of almost 80% after 3 cycles. At the same time, their overall well-being including cardiovascular, bone, and emotional health should be addressed without fail with adequate hormone therapy.

- **Managing the Menopause in Cancer Survivors**

  Mourad W Seif, MSc. Dip (manag). PhD. FRCOG., UK

Women's health and the quality of life (QoL) after menopause are of prime importance. It is well recognized that hormonal therapy (HT) is the most effective treatment for vasomotor and genitourinary symptoms of menopause, in addition to its effectiveness in preventing osteoporosis.
With the ongoing improvement of current therapeutic strategies and of the prognosis and survival rates for most cancers, there is an increasing number of women who become menopausal at a younger age.
Lifestyle modifications and non-hormonal therapies are often considered first-line treatments and may be effective for mild or some of the symptoms.
The evidence from randomized trials, observational studies, and meta-analyses on the impact of HT use on the recurrence and survival of breast and other gynaecological cancer survivors remains controversial. Furthermore, recent

evidence does not conclusively render HT a contraindicated approach for all patients.
For example, theoretically, the risk of HT in breast cancer survivors may not be increased in women taking concurrent tamoxifen due to the very high binding affinity for the oestrogen receptor. Also, generally, there is lower concern regarding systemic absorption of low and ultra-low dose topical oestrogen, which is minimal and could be acceptable where systemic therapy in contra-indicated.
The management should be customized to fit individuals' risk factors and informed consent and shared-decision- making is essential for HT use in symptomatic female cancer survivors.
Recent evidence for on the role of HT for gynaecological and breast cancer survivors will be presented and discussed.

- **The place of blastocyst transfers and PGT-A in IVF today.**

  Mohamed Aboulghar, (Egypt)

- **Intramural myoma should be removed prior to ART.: Yes,**

  George Pados, MD, PhD,

  Professor OBGYN, Aristotle University, Thessaloniki (Greece) virtual

Infertility and recurrent miscarriage may be symptoms of intramural myomas with mechanisms including disruption of the junctional zone, impaired blood supply, greater uterine contractility-defective endometrial receptivity, and gene expression.

Recent systematic reviews (Wang et al., 2018; Rikhraj et al., 2020) found that women with non-cavitary distorting intramural myomas undergoing IVF had 44% lower pregnancy rate compared with the control group. Factors, which contribute to this are dimension of the myoma, the number of these, and proximity to the endometrium. On the other hand women with asymptomatic cavity-distorting myomas FIGO type 2-5 have a certain impact not only in pregnancy rates after IVF, but also in the spontaneous abortion rate (increase 20-47%) and cumulative obstetrical outcome.
Studies addressing the impact of myomectomy on conception are scarce and the scientific value of these is rather low. On the other hand, possible risks of myomectomy should always be taken into account. A recent Cochrane review (Metwally et al., 2020) failed to give any definite answer to this. Non-surgical management of intramural myomas includes the administration of GnRH agonists, which induce a reduction in myoma size within 8-10 weeks, with an efficacy rate of about 80%, while GnRH antagonist administration has got FDA approval only for heavy menstrual bleeding.

- **Intramural myoma should be removed prior to ART.: No,**

  Mohamed Yehia Soliman, (Egypt).

Plenary IV

- **Personalized Leuteal Phase support in ART.**

  Gamal Serour, (Egypt).

- **Obstetric outcomes of ART short and long term.**

  Eric JAUNIAUX, MD, PhD, FRCOG
  EGA Institute for Women's Health, University College London (UCL), London, UK.

Singleton pregnancies achieved by assisted reproductive technology (ART) are at higher risk than spontaneous pregnancies for adverse perinatal outcomes, including perinatal mortality, preterm birth (PTB), and low birth weight (LBW). Interestingly spontaneous pregnancies in untreated infertile patients are also at higher risk for obstetrical complications and perinatal mortality than spontaneous pregnancies in fertile patients [1]. In both groups of patients, these

risks are mainly linked to advanced maternal age (AMA). Many patients who need ART because of infertility problems are older than the average pregnant woman. Risks for chronic diseases such as obesity, diabetes mellitus, chronic hypertension, cardiovascular disease (CVD), and cancer are known to increase with age and these pre-existing medical conditions have a direct impact on both spontaneous and ART pregnancies [1]. Similarly, the increased risks of congenital anomaly in fetuses resulting from ART are likely to be linked to AMA and there is still no evidence for an increase in chromosomal abnormalities [2].

Multiple pregnancy gestations (MPGs) are without any doubt the main complication of ART [3]. All MPGs starting with twin pregnancies are associated with a higher obstetric risk for both the mother and her fetuses [4]. Patients with unexplained infertility are older and more likely to be primiparous but after adjusting for age and parity they have a higher incidence of pre-eclampsia, abruptio placentae, PTD, emergency Caesarean section, and induction of labour in comparison with the general population [1]. In addition, ART pregnancies may be exposed to additional chronic diseases unrelated to maternal age such as polycystic ovary syndrome (PCOS) or thyroid disorders which may increase the risk of an abnormal perinatal outcome. Patients requiring ART are also more likely to have had previous pelvic surgery and IVF/ART procedures can damage the uterine endometrium leading to a higher risk of placenta previa cesarean scar ectopic pregnancies and placenta accreta spectrum (PAS) in subsequent pregnancies [5].

Conclusion: maternal conditions and single embryo transfer are essential to global management strategies of pregnancies resulting from ART and in obtaining evidence-based epidemiologic data.

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- **Non-invasive prenatal testing (NIPT) Achievements and challenges**

Wolfgang Holzgreve, M.D., MS, MBA, FACOG, FRCOG
Medical Director and CEO
University Medical Center Bonn

New genetic testing approaches as well as a constant progress in the imaging technologies of the fetus have changed the practice of prenatal diagnosis during the past decade fundamentally. The greatly improved non-invasive risk assessment for common fetal aneuploidies by recent cell-free DNA (cfDNA) testing technolgies on maternal plasma (NIPT or NIPD) has been well received by pregnant women and their doctors as well and resulted in a significant decline of invasive testing requiring chorionic villus sampling or amniocentesis. Exclusion of fetal aneuploidy is still by far the most frequent indication for prenatal testing, but the growing number of options (chromosomal structural anomalies and single gene mutations) must be addressed as an offer in special counseling situations as well as in routine care of all pregnancies. Ethical and legal concerns have to be discussed carefully with the ever increasing possibilities of NIPT.

Session: Recurrent implantation failure & recurrent pregnancy loss

- **The new international guidelines on the management of recurrent miscarriage (RM).**

Eric JAUNIAUX, MD, PhD, FRCOG
EGA Institute for Women's Health, University College London (UCL), London, UK.

Over the past decade, considerable effort has been made to reach a consensus on pregnancy loss terminology and definitions. There are also important differences between the definitions used to clinically describe RM. Firstly, the ASRM guidance includes only clinically recognized pregnancies and requires either ultrasound or histological confirmation of pregnancy [1], whereas the RCOG guideline, which considers pregnancy from conception, includes biochemical pregnancies (i.e., based on a prior positive pregnancy test that becomes negative without ultrasound confirmation of pregnancy) as well [2]. Secondly, the RCOG [1] and ESHRE [3] guidelines include all spontaneous pregnancy losses before 24 weeks and 22 weeks of gestation after the last

menstrual period (LMP), respectively, whereas the ASRM only refers to the fact that the majority of pregnancy loss or recurrent early pregnancy loss (REPL) occurs prior to the 10th weeks of gestation age [1]. The RCOG and ESHRE definitions refer to the limits of viability specifically in high-income countries (HICs), even though <10% of all pregnancies in the world occur in these regions. Considering that all individuals/couples are at risk for considerable psychological distress, including anxiety, depression, post-traumatic stress disorder, and the risk of suicide [4], after a pregnancy loss, regardless of where they are in the world and whether they have had two or more consecutive or non-consecutive miscarriages, there is an urgent need for national and international specialist organizations and patient support groups to adopt standardized terminology and definitions that can also be used in middle- and low-income countries (MLICs).

Overall, the guidelines agree that: Couples experiencing only one first-trimester abortion should receive relevant information, but not necessarily be evaluated formally. One should discourage exposure to cigarettes and alcohol, yet not necessarily ascribe cause and effect in an individual case. Patients with RM should be tested for APS using standardized criteria, including antiphospholipid antibodies (aPLs), such as lupus anticoagulant (LAC) antibodies, anticardiolipin antibodies (aCL, IgM and IgG), and anti-β2–glycoprotein antibodies (aβ2GPI, IgM and IgG). Many nongenetic causes of RM have been proposed, but very few are proven and the efficacy of treatment is often uncertain. Uterine anomalies have been associated with second-trimester losses, but the evidence is weak in RM.

Conclusion: In RM, the overall prognosis is good even without therapy. The subsequent live birth rate approaches 60% to 70%, even with up to four losses and no prior liveborn infants.

Further randomized controlled trials are urgently needed to determine effective treatment strategies for RPL.

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epidemiological, physical, psychological, and economic costs of early pregnancy loss. Lancet 2021;397:1658–67.

- **Reproductive Outcome after hysteroscopic metroplasty in infertile women with septate uterus**

Tamari Arkania, MD[1], Prof. Arsen Gvenetadze [1], *[1] Reproductive Clinic of Zurab Sabakhtarashvili, Tbilisi State University, Georgia.* ***Prof. Asher Bashiri [2,3]*** *,[2] Director Recurrent Pregnancy Loss Clinic, [3] Director Maternity C, Department of Obstetrics and Gynecology, Soroka University Medical Center, Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer-Sheva, Israel.* ***Prof.Manana Gegechkori[1], Ana Gvenetadze MD[1], Lela Iremadze PhD[1], Diana Chanukvadze PhD[1].***

Context: Incomplete resorption of the mullerian duct during embryogenesis leads to mullerian anomalies which may cause poor reproductive outcome of the patients. The mean incidence of uterine defects in infertile women is 4.3%. Septate uterus is the most common congenital uterine anomaly, comprising approximately 55% of mullerian duct anomalies.

While there is association between uterine septum and poor reproductive outcomes, the effectiveness of hysteroscopic metroplasty to improve live birth, especially if they are incidentally diagnosed, is unproven and debatable. While high-quality evidence on the efficacy and safety of surgical treatment to improve reproductive outcome is lacking, controlled studies have indicated that hysteroscopic septal division reduces miscarriage rates, resulting in improved live birth rates. Therefore, the main aim of our study was to evaluate reproductive outcome among infertile women with septate uterus with and without hysteroscopic metroplasty.

Objective: To evaluate the reproductive outcome of hysteroscopic metroplasty performed in women with septate uterus and infertility.

Methods: Retrospective study has performed at Reproductive Clinic of Zurab Sabakhtarashvili (Tbilisi, Georgia) between May 2016- May 2022 to evaluate the impact of hysteroscopic septum resection on the reproductive outcome of patients with a history of infertility.

Patient(s): Hysteroscopic septum resection was performed on 96 patients with a history of infertility. The septum resection was performed using

monopolar resectoscope. 49 women with infertility and septate uterus, who didn't undergo Hysteroscopic septum resection, were enrolled as control subjects.

Intervention(s): Hysteroscopic resection of the uterine septum.

Main Outcome Measure(s): The main outcome measures were clinical pregnancy, live birth, and miscarriage rates.

Result(s): In the study we involved 145 patients with infertility and septate uterus. In the group (A) of 96 patients with a history of infertility, septate uterus and septum resection, after at least 12-months of follow-up period, pregnancy rate was 69,8% (67 patients). Among these 67 patients live birth rate was 89.5% (60 patients) and miscarriage rate 10.4 % (7 patients). In control Group (B) of 49 patients with a history of infertility and septate uterus, who didn't undergo hysteroscopic resection of the uterine septum, pregnancy rate was 55,1% (27 patients). Among these 27 patients live birth rate was 70.3% (19 patients) and miscarriage rate 29,6 % (8 patients).

Conclusions: Hysteroscopic septum resection is an effective and safe approach for the removal of septum. Hysteroscopic septum resection in women with septate uterus significantly improves the live birth rates and decreases miscarriage rates.

- **Recurrent implantation failure; Myths Vs facts.**

Sherif Gaafar,

Assist Prof of obstetrics, gynecology and reproductive medicine Alexandria University, (Egypt)

Implantation is a critical step in human reproduction. The success of this step is dependent on a competent blastocyst, receptive endometrium, and successful cross talk between the embryonic and maternal interfaces. Despite increasing literature on RIF, there is still no widely accepted definition or standard protocol for the diagnosis and treatment. Implantation failure can result from several different factors including the maternal immune system, genetics of the embryo and parents, anatomic factors, hematologic factors, reproductive tract microbiome, and endocrine milieu, which factors into embryo and endometrial synchrony.

The recently published ESHRE guidelines provide a comprehensive approach for investigating and managing these cases. However, worldwide surveys found a big gap between evidence and practice. Finally, some researchers believe that almost all good prognosis couples can get pregnant after repeated ART cycles and the incidence of RIF is less than 5%.

Role of platelet-rich plasma (PRP) in recurrent implantation failure.

Eslam El Sayed Sultan,
Lecturer OB/GYN, Al Azhar University, (Egypt)

Recurrent implantation failure (RIF) is a fertility problem for which no exact mechanism or efficient treatment has been described. We can study the effectiveness of autologous platelet-rich plasma in improving the live birth rate of women with RIF who require IVF. Intrauterine infusion of PRP in patients with RIF who undergo IVF may increase the chance of live birth.

- **Preterm Birth (PTB) Following Recurrent Pregnancy Loss (RPL): What is the Nature of Relationship?**

Aisha M Elbareg[1]*, Fathi M Essadi[2]
[1]Professor & Senior Consultant, Head of the Obs & Gyne. Dept., Al-Jazeera International Hospital & Faculty of Medicine, Misrata University, LIBYA.
[2]Senior Consultant, Obs & Gyne. Dept., Misrata Medical Centre, LIBYA.

Background & Objectives: RPL, defined by ESHRE & ASRM as 2 or more failed clinical pregnancies & accounts for 2-3% of all miscarriages. PTB, births before 37 completed weeks of gestation with an incidence of 5-18% of births worldwide. Our review aim was to find out the impact of RPL on the risk of PTB in the following pregnancies and what might be the nature of their relationship.

Patients & Interventions: Systematic review of the relevant studies published up to date using PubMed, EMBASE & Google Scholar databases and investigating the relationship between RPL & PTB including patients with and without a RPL history.

Results: RPL was associated with an increased incidence of both, PTB (< 37 weeks of gestation and very PTB (<32 weeks) and with a high recurrence rate. An increased incidence of cesarean section in a subsequent pregnancy than in those

who did not have a history of RPL. A short interpregnancy interval (< 3 months) was associated with significantly increased odds for PTB and very PTB that might be due to shared etiology of genetic, uterine including mechanical damage to the cervix and with increased risk for endometrial tissue breakdown, or placental function.

Conclusion: Strong need for specialist obstetric care with additional counselling and more intensive monitoring during a subsequent pregnancy for those who have had RPL, particularly in relation to the risk of PTB, with the goal of avoiding or reducing the associated harmful effects.

Session: International Federation of Fertility Societies (IFFS):

Add on treatments and procedures in ART: Where is the evidence?

- **Introduction**

  Luca Gianaroli, Italy **Virtual**

- **Adjuvants or innovation? Clinical practice.**

  Richard Kennedy, (UK)

Infertility affects approximately 1 in 12 women there is now effective treatment for most cases. Provision of ART services has expanded rapidly in the last decade but for many access remains difficult and costly. In many low and middle-income countries to cost of IVF in proportion to personal GDP is high and it can lead to catastrophic financial hardship. Many additions to “standard” IVF have been developed, and designed to improve success rates, however many of these “add-ons” have been adopted without evidence of efficacy. Along with their adoption has come increased cost and many clinics around the globe are “sold” with the promise of a better chance of a baby without the evidence to back this up. Infertile couples desperate to do whatever it takes to have a baby are highly vulnerable to this expectation and are an easy sell for the add-on and additional cost. In some cases, add-ons can double or triple the base cost of an IVF cycle. If the couple achieves success in their first attempt, then it will be deemed worth the cost. As is all too often the case and treatment fails, the couple may have no further resources for further treatment.

There has recently been a professionally led backlash to the widespread use of add-ons and their escalating costs with calls for a more ethical approach. The UK regulator, the HFEA introduced a "traffic light" scheme for a range of add-ons to provide information to those seeking treatment. Basically, a red light means advised against, and so on. Of all the possible add-ons currently available there were not many green lights to go. More recently ESHRE in conjunction with the HFEA and other organizations has issued guidance in this area.
This lecture looks critically at the current evidence for a number of commonly used add-ons in the context of routine IVF. Whilst the evidence base has changed a little over time, the broad conclusion remains that many add-ons still lack evidence for efficacy let alone cost-effectiveness, and supports the consensus view expressed by ESHRE, HFEA, and others.

- **Adjuvants or innovation? Lab practice.**

  Mohamed Fawzy,

  IVF lab director, Banon, IbnSina, Amshaj, IVF centers, Egypt.

  Founder of Cairo Consensus Group on IVF Culture Conditions; Founder of Cairo Consensus Group on Research Integrity. Coauthor of several RCTs, cohort studies, meta-analysis and a publication related to machine learning and AI to predict best embryo for transfer.

We have seen a real shake-up in the world of in vitro fertilization labs, what with all these advanced technologies coming to fore. And here is my aim - I want to slice and dice this technology-heavy landscape, shaking out those game-changing innovations from your solid also-rans. My beam is on figuring out how these new kids on block either thoroughly turn around or gently polish IVF lab practices—gaining an insight into their part played in bettering clinical results.

IVF innovation, in essence, indicates its ability to profoundly amend clinical results or switch up the methods. On the flip side, assistive technologies throw in additional perks by subtly refining existing procedures without a dramatic overhaul of them really taking place. Right now we will take a look into transformative potential that is boiling beneath emergent techs like AI involvement and CRISPR gene modifications and so on...and then line them against rather subdued advances such as enhancing culture mediums, incubators for cultivation purposes and techniques related to freezing tissues among other stuff. We are keenly interested in sifting out those technologies

which actually stir IVF norms fundamentally from those just adding minor improvements.
Immerse yourself in the captivating study cases that showcase both groundbreaking and supplementary tech. Like, have you heard about using AI for selecting embryos? Yeah! Quite innovative right? Now picture an advanced culture medium and its potential to boost embryo quality—talk about incremental improvements doing great miracles.
We are going to make some educated guesses about where IVF technologies might be headed while we keep ethics and practicality squarely in view. What I am saying here is that technology needs to be welcomed with open arms - however! We always need to keep a balance as well, ensuring both patient safety and efficacy do not get sidelined as we further technological progress.

In wrapping up, the presentation applies special emphasis on spotting the difference between bona fide innovations and mere helper technologies in IVF labs. It robustly supports a wise weaving together of technological elements which should be steered by sturdy clinical proof along with ethics at heart. The idea is to polish how IVF works till it shines; focusing keenly upon patient needs and striving to draw better clinical success thus catalyzing dawn of a fresh age in reproductive medicine.

- **Innovation and research to improve results.**

  Luca Gianaroli, (Italy) Virtual

Session: European Board of Colleges of Obstetrics & Gynecology (EBCOG)

Environmental and Climate Factors and Women's Reproductive Health.

- **Environmental and climate factors and women's health: an overview.**

  Tahir Mahmood CBE, MD, FRCPE, FACOG, FRCOG
  Past President European Board and College of Obstetrics and Gynaecology (EBCOG), Currently Chair Standing Committee of Standards of Care and Position Statements EBCOG

Climate change is a major risk factor for overall health, including reproductive health, and well-being. Increasing temperatures, due mostly to increased greenhouse gases trapping excess heat in the atmosphere, result in erratic weather patterns, wildfires, displacement of large communities secondary to

armed conflicts, and stagnant water resulting in vector-borne diseases that, together, have set the stage for new and devastating health threats across the globe. These conditions disproportionately affect disadvantaged and vulnerable populations, including women, pregnant per sons, young children, the elderly, and the disabled.

Drought can increase food insecurity and migration, and disrupt both provision of—and access to—health services. Food insecurity is associated with HIV acquisition risks through behavioural (eg, transactional sex) and mental health (eg, alcohol use, depression) pathways. Food insecurity has also been associated with increased sexual risk practices among HIV-positive youth in sub-Saharan Africa and increased transactional sex and reduced safer sex efficacy among HIV-positive women. It has been linked with reduced condom efficacy among adolescents and reduced condom use with adults.

Pregnant people are especially vulnerable to the health harms resulting from climate change, namely, preterm birth, small for gestational age, hypertensive disorders of pregnancy, and other adverse reproductive health and birth outcomes. There are also adverse effects of, toxic chemicals and vector-borne diseases on male and female fertility, and the developing fetus.

- **Global events and sexual reproductive rights (SRHR).**

Sambit Mukhopadhyay, (UK)

Consultant Gynaecologist, Norfolk and Norwich University Hospital, Norwich. Treasurer, EBCOG

Sexual and Reproductive health and rights are fundamental to people's health and survival, economic prosperity, and sustainable development. Significant health gains have been achieved since world leaders enshrined reproductive right as basic human right at the ICPD conference at Cairo, Egypt in September 1994. However full attainment of SRHR remains elusive for many nations. In 2015, the international community reaffirmed the commitment of putting "people, planet and prosperity" at the centre of sustainable development and leaving no one behind, when it adopted the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs). Targets 3.7 and 5.6 explicitly mention sexual and reproductive health rights and it was envisaged that incorporating these targets at national policies and strategies could lead to transformational changes at country level. While efforts by the international community showed favourable trends of SDG, global events like changes in population size and composition, displacement and conflict, climate change, socio-cultural determinants, COVID pandemic, laws, policies, and programmes affecting health care and technology and innovation in the last decade had significant impact on the progress of SDG.

The European Board and College of Obstetrics and Gynaecology (EBCOG) represents over thirty European countries and is committed to improve health of

women and their babies. At global level it is a strong advocate of SRHR and has worked with UNFPA, ESCRH (European Society of Contraception and Reproductive Health) in supporting the development of a comprehensive national framework for SRH using a life course approach from birth to post reproductive years. EBCOG fully supports UNFPA to achieve its ambitious key SRHR and universal health care targets in SDGs by 2030.

- **Impact of emerging global environmental changes on Fertility and Assisted Reproduction.**

  Basil Tarlatzis, (Greece) Virtual

- **Global epidemic of Obesity and the practice of Obstetrics.**

  Frank Leuwen, (Germany) Virtual

Session: Andrology & male factor infertility:

- **What to do in failed sperm retrieval in non-obstructive azoospermia?**

  Medhat Amer; Andrology department, Faculty of Medicine, Cairo University; Chairman of Adam International Hospital Giza, Egypt

In the context of non-obstructive azoospermia (NOA), couples face significant challenges in achieving conception without Testicular Sperm Extraction-Intracytoplasmic Sperm Injection (TESE-ICSI). A management dilemma arises when patients with NOA have previously undergone unsuccessful sperm retrieval attempts using less exhaustive techniques such as Testicular Sperm Aspiration (TESA) or multiple/single biopsy TESE for ICSI. In such cases, the retrieval of sperm remains unsuccessful, leaving the patients in a dilemma about whether to proceed with a redo Microdissection TESE (micro-TESE) in the hope of increasing the chances of successful sperm retrieval. Presently, micro-TESE stands as the standard of care in redo circumstances; however, its success is contingent on being coupled with an extensive sperm search performed by a dedicated and skilled team. There is currently limited published data available regarding the management and outcomes of patients in this group, and the chance of successful sperm retrieval is highly dependent on the retrieval

technique employed and the laboratory processing procedures. Ineffectiveness in these aspects denies couples a valuable treatment opportunity.

In instances of failed TESE or micro-TESE, it is crucial for all men to undergo a comprehensive evaluation, including detailed medical history, thorough clinical examination, and semen analysis, preferably with an extended sperm search. Furthermore, hormonal assays and genetic tests, if not previously conducted, are advisable to aid in the diagnostic and prognostic processes. A careful review of surgical, laboratory reports and histopathology slides is essential to gain valuable insights into the underlying causes of unsuccessful sperm retrieval. This approach may potentially spare a proportion of men from requiring further surgery and enable the selection of the appropriate patients for micro-TESE.

- **Azoospermia.**

  Khaldoun Sherif, (Jordan)

Azoospermia, originally thought to be an untreatable form of infertility, affects 5-8% of investigated infertile men. However, with a better understanding of patho-physiology, and the advent of surgical sperm retrieval (SSR) and intracytoplasmic sperm injection (ICSI), many azoospermic men can now father children. But as often in medicine, even with highly successful treatments such as SSR and ICSI, there remains a hard core of cases that are very difficult to treat and challenge the most experienced practitioners.

The state-of-the-art management of azoospermia, the use of Artificial Intelligence to improve the results as well and how to improve the prediction of SSR results will be discussed in the lecture.

- **Antibacterial Evaluation of *Punica Granatum* as Therapeutic Agents Against Multidrug Resistance Bacteria Isolated from Infertile Male's Semen**

  Khalid M. Swidan, MSc.; Gamal M. El-Sherbiny PhD; **Aziza M. Mansour MD**; Mohammed H. El haw PhD.; Ahmed A. Askar PhD. and Mohammed A. El-Badry PhD.

Aim of work: Investigate the bacterial species from semen and evaluate susceptibility to (antibiotics extracted from Punica granatum). **Patient and methods:** One hundred seminal fluid samples were collected from different

males attending the fertility clinic at the International Islamic Center for Population Studies and Research, Al-Azhar University, Cairo, Egypt. All semen samples included in this study were examined for physical characteristics. Twenty bacterial isolates were isolated from the infected samples by agar streaking method onto MacConkey agar, mannitol salt agar, and blood agar media. Separate colonies were selected for manual identification based on morphological and biochemical parameters.

Results: Three genera of bacterial isolates were obtained, and these include Escherichia coli, Staphylococcus aureus, and Pseudomonas aeruginosa, with the highest counts recorded for eight isolates as Escherichia coli (40%), eight isolates as Staphylococcus aureus (40%) and four isolates as Pseudomonas aeruginosa (20%). Antibiotic susceptibility for these isolates was studied and showed resistance potency. The ethanolic extracts of Punica granatum exhibited antibacterial activity against all bacterial isolates. Gas Chromatography-Mass Spectroscopic analysis of Punica granatum showed that this plant has many active compounds to fight multidrug resistance bacteria in males associated with the semen of infertile males.

Conclusion: Ethyl iso-allocholate (C26H44O5) is our study's most important and active compound against bacteria. Pomegranate contains large amounts of it, antibacterial activity may be indicative of the presence of secondary metabolites. The inhibitory effect of these compounds could be related to adsorption to cell membranes, interaction with enzymes, substrate, and metal ion deprivation.

Keywords: *Semen; Bacterial contaminate semen; Punica granatum; G.Cmassspectroscopy*

- **Intrauterine Insemination in Treatment of Infertility.**

Shawky Badawy, MD, Kazem Chohan, PhD, HCLD, Jonathan Franceschini, MLS

Department of Obstetrics and Gynecology and Clinical Pathology
SUNY Upstate Medical University
Syracuse, New York

Infertility treatment progressed greatly using advances related to improvement in sperm biology and delivery of sperm to the uterine cavity. The sperm then has to swim to the tubal lumen to reach the oocyte. Following

fertilization, the early embryo moves to the uterine cavity to implant and continue its development until the delivery of the baby.

For Intrauterine Insemination the sperm must be prepared by a special process known as a sperm wash. This sperm wash removes the seminal plasma and dead sperm, leaving the good sperm with improved motility to be ready for insemination.

The insemination is done by connecting the syringe containing the washed sperm to a special thin catheter. The catheter is introduced through the cervical canal to the uterine cavity and then the sperm is injected to reach the tubal lumen. The catheter is then removed and the patient rests on the table for about a half-hour before she moves out. A serum pregnancy test is performed in ten to fifteen days to check for pregnancy.

Session: Free Communications:

- **Progesterone-induced blocking factor (PIBF) – the marker of early pregnancy loss.**

Nina Davidova, (Georgia)

Nina Davidova[1], Lali Pkhaladze[1], Nana Kvashilava[1], Archil Khomasuridze[1,2]
[1]"Prof. Zhordania and Prof. Khomasuridze Institute of Reproductology", Tbilisi, Georgia
[2]Ivane Javakhishvili Tbilisi State University, Tbilisi, Georgia

Context: Pregnancy loss is one of the main issues of modern Reproductology. Pregnancy, obviously, is an immunological phenomenon. The Progesterone-Induced Blocking Factor (PIBF), produced in CD56+ cells and mononucleocytes, participates in the maintenance of pregnancy.
Objectives: Determining the diagnostic value of PIBF for early pregnancy loss.
Methods: 31 women, aged 18-35 years, were divided into two groups: Group I – those who conceived (n=21), and group II- the non-pregnant patients (n=10). The group I was divided into two subgroups: IA – patients with delivery (n=11); IB – patients with pregnancy loss (n=10). PIBF and progesterone levels were measured on the 7-8th day after ovulation.

Results: In groups I and II PIBF level was not statistically different (12.9 ± 5.2 ng/ml and 10.1 ±5.5 ng/ml, respectively) p>0.05, but statistically different was PG level (18.6 ± 6,1 ng/ml and 6.3 ± 4.4 ng/ml, respectively) p<0.001. The mean PIBF level was statistically significantly high in group IA compared to group IB (15,4 ± 4,6 ng/ml and 10,3 ± 4,7 ng/ml, respectively) p<0.05 and between groups IA and II (15,4 ± 4,6 ng/ml and 10,1 ± 5,5 ng/ml) p<0.05, but no statistically significant difference was found between groups IB and II (10,3 ± 4,7 ng/ml and 10,1 ± 5,5 ng/ml) p>0.05. The mean PG level was statistically significantly high in group IA compared to group IB (p<0,05) and group II (p<0.001), and also within the groups IB and II (p<0.001).
Conclusions: PIBF may be considered as a possible prognostic marker of early pregnancy loss.

- **Effect of Esomeprazole on prolongation of gestation in patients with early onset preeclampsia (ESOPE Trial).**

Mohamed Mahmoud Abdallah, (Egypt)

Obstetrics and Gynecology, Faculty of Medicine- Assiut University, Assiut, Egypt

Objectives: To evaluate the effect of Esomeprazole on the prolongation of gestation in patients with early onset preeclampsia (EOPE).
Methods: A randomized, triple-blind, placebo-controlled study (NCT03213639) was conducted in a tertiary University hospital between March 2018 and July 2020. Patients diagnosed with PE without severe features were included if they carried a singleton pregnancy between 26 and 32 weeks. We randomly assigned all participants in a 1:1 ratio into one of two groups: esomeprazole group: patients were given a single dose of Esomeprazole 40 mg orally once a day and placebo group: patients were given an inert placebo tablet. The primary outcome is the prolongation of gestation measured from the time of enrolment to the time of delivery in days.
Results: The study included 205 patients assigned into esomeprazole group (n=102) and placebo group (n=103). The mean gestational age at inclusion was 29.6±1.6 weeks in esomeprazole group vs. 30.1±1.2 weeks in the placebo group (p=0.113). Kaplan-Meier survival analysis of patients from randomization until termination of pregnancy was done. The mean survival time for Esomeprazole group was slightly longer than the placebo group (10.8±9.7 [95% CI= 8.9, 12.7] vs. 10.6 ± 6.7 [95% CI= 9.3, 11.9]) but this difference was statistically not

significant (p=0.461). There was no statistically significant difference in the rate of maternal or fetal complications between both groups.
Conclusions: Esomeprazole has no effect on prolongation of the duration of gestation in patients with EOPE. Furthermore, it has no effect on decreasing the rate of maternal or fetal complications.

- **Diosmin in ART.**

Ahmed Samy Abdel Azim Saad, (Egypt).

Professor of OB & GYN, Banha University
drahmedsaad@live.com

Background: OHSS (Ovarian Hyperstimulation Syndrome) is the most serious iatrogenic complication of ovulation induction. The pathophysiology of OHSS is characterized by increased capillary permeability, leading to leakage of fluid from the vascular compartment, with third-space fluid accumulation and intravascular dehydration. Diosmin is a flavonoid that demonstrated to anti-platelet, anti-ischemic, anti-allergic, and anti-inflammatory activities. Diosmin can also reduce the release of inflammatory mediators, such as prostaglandin E2 (PGE2) and thromboxane A2 (TxA2) &VEGF.

Objective: This work will express the possible new uses for Diosmin in ART based on 3 separate research by our group which have been either published in a journal or presented at international conferences such as RCOG & ESHRE. Evaluation of Diosmin use for prevention of OHSS & fluid re-accumulation in case of the presence of endometrial cavity fluid on the day of oocyte pickup.

Conclusion: Our results concluded that diosmin was more effective in preventing severe OHSS and decreasing OHSS occurrence rates than cabergoline when used in high-risk patients by 1 study. Then in another study, we combined the use of Diosmin and Cabegoline Vs Cabergoline and the results were significant. In the last study, we tried Diosmin in case of endometrial cavity fluid accumulation on the day of oocyte pickup with a significant effect with a decrease in fluid reaccumulation giving the choice for fresh embryo transfer with a good chance of pregnancy.

- **Effect of lidocaine gel in transrectal ultrasonography in virgins in pain reduction.**

  Ahmed El Sherbiny, (Egypt)

- **Balloon Vaginoplasty 20 years Egyptian experiences**

Ali M El Saman [1], Hesham Abou-Taleb, Mohamed Khalaf, Mohamed H Salama, Dina M Habib, Mostafa Bahlol, Alshymaa H Eleraky, Dina A El Saman, Sabaa Shogaa Eldeen, Sherif A Shazly

Women Health Hospital, Department of Obstetrics and Gynecology, and Faculty of Medicine, Assiut University, Assiut, and the Department of Obstetrics and Gynecology, Ain Shams University, Cairo, Egypt; the Department of Obstetrics and Gynecology, Sanaa University, Sanaa, Yemen; and the Department of Obstetrics and Gynecology, Mayo Clinic, Rochester, Minnesota.

Background: Vaginal agenesis is a Mullerian anomaly characterized by congenital absence of the vagina. In several case series, the author describes a novel, minimally invasive technique using micro port entry for the treatment of complete vaginal agenesis.
Experience: in the present talk the different developments and refinements of the technique will be presented. Balloon vaginoplasty was done for 787 cases with vaginal agenesis during the period from 2003 until now. Preoperative vaginal depth ranged between 0.5 and 4 cm. The procedure was well tolerated with only 8 cases non serious intraoperative and postoperative complications. Patients achieved neovaginal depth between 8 and 13 cm and penetrations scores increased to 80-90%.
Conclusion: balloon vaginoplasty is a feasible and effective procedure for the management of vaginal agenesis.

- **Isolated Unilateral Symptomatic Pleural Effusion -An Atypical Presentation of Ovarian Hyperstimulation Syndrome- A Case Report.**

Sangeeta Sinha, (India)

Reporting a case of late-onset ovarian hyperstimulation with Unilateral Pleural Effusion and Respiratory distress as a sole manifestation after Embryo transfer.

INTRODUCTION

OHSS is one of the iatrogenic complications of controlled ovarian stimulation, with clinical manifestations varying from mild to severe. Pulmonary manifestation accounts for 7.2% of severe OHSS.

But the Isolated finding of pleural effusion without ascitis as the main presenting symptom of OHSS is not frequently reported and its pathogenesis is unkown.

CASE HISTORY

28yr old married for 8yr, mild endometriosis no spill stimulated for 10 days at the time of HCG injection E2 – 4440, and 8oocyte retrieved, D3 transfer was done and discharged.

Seven days post ET patient had a complaint of right side chest tightness, abdomen soft, no ascitis, X-ray showed severe pleural effusion right side.

Patient was managed with a multidisciplinary approach, tapping was done twice, recovered in 2 days, her beta HCG was negative and was discharged is good condition

DISCUSSION

Here patient was young, low BMI, presented 6 days after transfer and was managed conservatively.

Pathogenesis of isolated pleural effusion may be increased permeability of ovarian capillaries, Other may be because of mildly increase of intrabdominal pressure leading to drive ascitic fluid through weak diaphragmatic defect more commonly seen in females.

CONCLUSION

Pleural effusion may be the only manifestation of OHSS and implies careful management of patients with pulmonary complaints after treatment with gonadotropin. So awareness about this isolated extra-ovarian problem is very important for early and better management**.**

Session: Gynecological surgery & Endoscopy:

- **Laparoscopic Myomectomy.**

Amro El Houssieny,

Prof. of OB/GYN, Ain Shams University, (Egypt).

- **Hysterectomy - which route?**

Sambit Mukhopadhyay MD DNB MsC FRCOG

Consultant Gynaecologist, Norfolk and Norwich University Hospital, Norwich. Treasurer, EBCOG

The use of vaginal hysterectomy dates to 120 BC, when it was reported by Soranus of Ephesus. The first abdominal hysterectomy in England was performed by Charles Clay in 1843 but unfortunately, the patient died in the immediate postoperative period. In 1929, Edward Richardson performed the first total abdominal hysterectomy to prevent cervical cancer and discharge from the retained cervical stump. With the use of anaesthesia, blood transfusions, antibiotics, and antisepsis, hysterectomy became safer. However, apart from

the introduction of transverse incision by Johannes Pfannenstiel in the 1920s, there was little change to the surgical techniques used until Harry Reich performed the first laparoscopic hysterectomy in Pennsylvania in 1988.

In 2009, the American College of Obstetricians and Gynaecologists stated that vaginal hysterectomy is the safest and most cost-effective method to remove the uterus for reasons other than cancer. This is also reflected in Cochrane review. Although new treatment modalities have decreased the use of hysterectomy for benign conditions, hysterectomy remains one of the most frequent gynaecologic surgeries. The main focus of development has been around laparoscopic techniques with the use of bipolar coagulation for hemostasis. From the available literature, however, it is evident that the vaginal route is both the safest route and the one with the quickest recovery time. Despite this, only 20% of all hysterectomies performed for menorrhagia or fibroids in the UK during 2006–2010 were vaginal. Whilst the route of hysterectomy depends on local facilities and surgeon's familiarity with techniques and safety, the place of vaginal hysterectomy for benign diseases (excluding prolapse) in the era of minimal access surgery is presented.

- **Efficacy of trans-vaginal bilateral uterine artery ligation (vbual) as a treatment for adenomyosis with abnormal uterine bleeding.**

Afaf Aly Ismail, (Egypt)

Faculty of medicine -Al Azhar university for girls

Background:
■ Abnormal uterine bleeding (AUB) has a significant impact on psychosomatic sexual health of women and health care costs. FIGO classification 2011 included nine categories of AUB arranged according to the acronym. PALM-COEIN one of the objective visual criteria is adenomyosis (AUB-A). About 70% of women with adenomyosis have an AUB in the form of excessive menstrual blood loss. A number of minimally invasive surgery options are now available, but the final consensus on the best treatment modality is still to be determined. The novel operation of bilateral uterine artery ligation (BUAL) operation as an alternative to hysterectomy seems to be a promising treatment for both menorrhagia and benign uterine pathology.

Objective:
■ To evaluate the success and safety of treatment using transvaginal bilateral uterine artery ligation (VBUAL) operation as a conservative minimal invasive surgery to control AUB due to adenomyosis.

Patients & Methods:
■ This is an interventional clinical study.
■ A total of 30 premenopausal, multiparous women with adenomyosis & AUB
■ For all patients, other types of medical &hormonal therapy had failed to control bleeding. The patients were recruited from the gynecology outpatient clinic of Al-Azhar University Al Zahraa University hospital, Cairo-Egypt.
■ For all cases pre & post operative clinical assessment by ultrasound & doppler study were done to evaluate the changes.

Results:
■ At 12 months post operative follow up there was a significant statistical decrease in the following measured outcomes; menstrual blood loss (76.7%) dysmenorrhea (80%), dyparennia (53.3%) uterine volume (33.3%).
■ There was a rise in the impedance to uterine blood flow (PI:3.82) which is a good marker for success of the procedure.

Conclusion:

■ VBUAL is a minimally invasive surgery to control abnormal uterine bleeding due to adenomyosis.

- **Future of hysteroscopy.**

***Ghassan Lotfi*, M.D.**

FSSOG, FNSGO, FFGA
Consultant and chair of WHD at Saudi-German Hospital- Dubai
Master Surgeon MIGS
EMEL President

Hysteroscopy was introduced in the last three decades and has since revolutionized the knowledge and science about the uterine cavity, endometrium, and their respective pathologies.
The evolution of hospital and office-based hysteroscopic procedures has created a novel concept of dealing with such pathologies.
This lecture aims to look into the past and future of hysteroscopy with an accent on physiopathology and fertility preservation for patients with indications for hysteroscopic intervention.

- **Use of Hysteroscopy in adolescence and women with intact hymen.**

Radwa Mansour, Assistant Professor of Obstetrics And Gynecology

Ain Shams University. MRCOG, (Egypt)

Vaginoscopy or hysteroscopy with “no touch “technique has been an adopted outpatient technique for hysteroscopy use now for more than 30 years. The idea was to “see and treat” patients in an outpatient setting. This would ensure a quick, less risky, and less painful treatment if compared to the traditional way of doing hysteroscopy.

In our culture and communities, the vaginoscopic hysteroscopy has been of great value in adolescent women and women preserving their hymen intact. It facilitated diagnosis and treatment even when used under anesthesia. This presentation will look at the use of hysteroscopy in the diagnosis and treatment of gynecologic problems in adolescents and women with intact hymen on the background of Ain Shams University Hospital experience.

- **Hysteroscopic resection of cesarean scar defect (niche) in women with postmenstrual spotting: a randomized controlled trial.**

Abdel Haseeb Salah Saad,
Asst. Professor, Menofeia University (Egypt)

Aim: to look at the effectiveness of hysteroscopic resection of post-cesarean scar defect (niche) in women manifested by postmenstrual spotting versus control cases not getting any intervention.

Methods: We planned a randomized controlled study comparing hysteroscopic niche resection to no intervention. We studied women with postmenstrual spotting after a CS with a niche with a residual myometrium of at least 4 mm during transvaginal ultrasonography or sonohysterography. After obtaining informed consent, eligible women were randomly allocated to hysteroscopic resection of the niche or expectant management and followed up for 3 months after niche resection. The primary outcome is the effectiveness of niche resection in eliminating the postmenstrual spotting the secondary outcome is any complications of the procedure.

Results: Twenty-seven women were included in this study. Follow-up was performed monthly for 3 months (or three cycles) after surgery. Postmenstrual spotting disappeared after the first cycle in 77.8% of patients and after the second cycle in 88.9% and after the third cycle in 96.3 % of women; however, one patient 3.7 %, was still symptomatizing. However, patients in the expectant group showed no improvement after three months follow-up.

Conclusion: Hysteroscopic resection of cesarean scar defect (niche) seems to be a safe and effective technique, especially in patients with RMT of > 4 mm

Keywords: Caesarean section niche, Hysteroscopic resection, postmenstrual spotting.

Session: Gynecological problems

- **Contraception. The Georgian Story.**

Archil Khomasuridze.

Prof. Zhordania and Prof. Khomasuridze Institute of Reproductology", Tbilisi, Georgia
Ivane Javakhishvili Tbilisi State University, Tbilisi, Georgia

The presentation includes a short description of the current situation of artificial abortion and contraception in Georgia with the stress of its specific features. The second part of the material is devoted to the principles of elimination of restrictive policies on artificial abortion and contraception. The final and main topic of the material represents the author's thoughts and philosophy on abortion and life issues.

Keywords: Artificial abortion, Contraception, Reproductive health.

- **Abnormal uterine bleeding. Clinical approach.**

El Sayed Elbadawy Awad,

Prof. of OB/GYN, Alexandria University, (Egypt)

Abnormal uterine bleeding is a common symptom in females at all ages. It represents about one third of all cases seen in gynecology clinics

A clinical approach with different case presentations will be presented.

- **Adolescent reproductology.**

Jenaro Kristesashvili, (Georgia)

Deputy Director of Center for Reproductive Medicine" Universe"
Professor of OB/Gyn, Reproductology Department of Medical Faculty of I.Javakhishvili Tbilisi State University;
Phone: +995 593 306 294
Email: jenarakrist@hotmail.com

The establishment of basement of reproductive health begins from adolescence. In 1972, Department of Formation of the Reproductive Function was founded at I. Zhordania Institute of Human Reproduction.

Since opening, ongoing progress of reproductology was positively reflected in the work of the department. All the latest modern methods have been implemented step-by-step and used in the management of adolescents: US, hormonal and genetic testing, adequate hormone therapy, endoscopic surgery (with maximum preservation of reproductive potential), effective use of COC-s in the treatment of functional ovarian cysts, dysfunctional uterine bleeding, ovarian dysfunction, PCOS, etc.

Due to early diagnosis and treatment of PCOS, hyperprolactinemia, NCAH, hypogonadisms, ovarian dysfunction with metabolic disorders, thyroid gland dysfunction, sexual development anomalies in adolescents, severe reproductive disorders, including infertility, were observed less frequently in same individuals during the adulthood. At the same time intensive scientific work on adolescent reproductive problems was ongoing in the department.

Employees of the department were actively involved in conduction of the adolescent reproductive health surveys, conducted in Georgia by UNFPA in 1999-2010, which helped to determine the average age of menarche, level of awareness, knowledge, attitudes, and needs of adolescents in the field of reproductive/sexual health in Georgia. Educational programs for adolescents have been developed and implemented with active participation of department's employees, which resulted increasing of applying of adolescents to modern RH/SH services, decreasing of the rates of artificial abortions among adolescents by 2.5 times, and 2 times increase usage of contraception, especially at the expense of modern methods.

Diagnosis and treatment of reproductive-endocrine disorders in adolescents is a prevention of severe disorders, including infertility, as well as long-term complications in adulthood. Thus, care for reproductive health should start from adolescence. It is important to promote healthy lifestyles and proper reproductive and sexual behavior among adolescents.

- **Obesity and Menstrual Disorders.**

Mourad W Seif, MSc. Dip (manag). PhD. FRCOG., UK.

Obesity is a global and public health concern, and the rates have continued to rise. The prevalence of obesity in children and adolescents is raising further

concerns. According to the WHO (2015), obesity is defined as a BMI ≥ 30, while overweight is defined as a BMI ≥25.

Obesity is often associated with various metabolic and hormonal disorders including raised fasting insulin levels, raised oestrogen, testosterone, and lower sex hormone binding globulin levels.

In Women, the association between obesity and subfertility, polycystic ovarian syndrome, and a range of menstrual disorders including earlier menarche, premenstrual syndrome, heavy menstrual bleeding (HMB), dysmenorrhea, and amenorrhoea has been investigated. Furthermore, the relationship between obesity, and endometrial hyperplasia and cancer is well documented.

Obesity's adverse effects extend from adolescence to the menopausal and postmenopausal periods, the details of which will be presented.

The management of menstrual disorders in obese women poses further clinical challenges regarding the choice of investigations and appropriate therapeutic modalities. This requires an individualized approach in order to formulate the appropriate management plan. New developments both in medical and surgical modalities should allow clinicians to optimize treatment strategies that would be provided to such a complex patient population.

- **Microbiomes in Gynecology. The second human genome.**

  Mohamed Salama Gad,

  Professor of OB/GYN Department, Menofia University, (Egypt)

The human body contains 10-fold more microbial cells than the human cells and accounts for 1%–3% of our total body mass. There is symbiotic relationship and complex interaction occurs in nearly every part of the body.
The human microbiome's impact on reproductive safety and outcomes. Advances in genome sequencing techniques have empowered the field of metagenomics. Knowledge regarding the interactions between the microbiome and the human reproductive axis is growing rapidly. A deeper understanding of normal physiology, identification of different dysbioses, and characterizing the microbiome's impact on reproductive outcomes promises meaningful enhancements in clinical care.
The human microbiome affects all facets of reproduction from gametogenesis, to fertilization and embryo migration, to implantation with implications in

Pregnancy failure to involvement in late pregnancy loss, and poor obstetric outcomes during gestation and parturition in terms of intrauterine infection and preterm birth, amongst other things. A more complete characterization of this complex symbiosis is imperative as we understand its implications in human health and disease. So, the human microbiome has been termed the "second human genome".

- **Unconventional Protocols of Ovulation induction in IFV/ICSI cycle: Where are we?**

Mostafa Fouad,
Department of OB/GYN, Ain Shams University, Egypt.

COH is a crucial step in the process of IVF aiming at producing multiple fertilizable oocytes. Classically, controlled ovarian hyperstimulation (COH) cycles are started during the early follicular phase. Current evidence suggests that multiple cohorts or waves of antral follicles are recruited continuously during a menstrual cycle. Depending on this concept unconventional protocols for ovulation induction as luteal phase stimulation, dual stimulation, random start stimulation and progestin-primed stimulation have been developed and increasingly used. The effectiveness and safety of these protocols are now in the focus of interest of the community of ART

Session: Egyptian Representative Committee of the RCOG (ERC):

- **Experience of Vaginoscopy in early childhood cancer.**
  Amr Elnoury, (Egypt)
- **Deep Endometriosis and Infertility; Laparoscopy versus ART.**
  Hassan Morsy, (Egypt)
- **Uterovaginal Prolapse and Fertility.**
  Wafaa Benjamin, (Egypt)

- **Myometrium Restoration Surgery for Placenta Accreta Spectrum. Myometrium restoration in placenta accreta spectrum; a new conservative technique**

Omar Yousry Elshorbagy MD MRCOG PhD
Lecturer and consultant of obstetrics and gyneacology
Alexandria University

Authors
Mahmoud A HAMDY, MD, Omar Y ELSHORBAGY, MD, MRCOG, PhD, HASSAN N SALLAM, MD, PhD (LONDON), FRCOG, Manal S SWEILAM, MD, PhD, Wafaa M ABOU EL ENIEN, MD, PhD, Tarek A KARKOUR, MD, PhD
Department of Obstetrics and Gynecology, Faculty of Medicine, University of Alexandria, Alexandria, Egypt.

Objectives: In this study, we describe a new technique in which myometrial defects resulting from complete placental separation are closed without resection of the bed. The study evaluates the success of myometrial defect's closure in different degrees of the placenta accreta spectrum (PAS) and evaluates its efficiency in cases of lateral and posterior uterine wall invasion.

- **Methods:** This is a prospective cohort study that was carried out on 159 patients admitted to El-Shatby University Hospital from July 2020 to April 2023 and diagnosed with any of the three degrees of the placenta accreta spectrum. The study was divided into three groups according to the ultrasound diagnosis. The study included 56, 57 and 46 patients diagnosed with placenta accreta, increta and percreta, respectively. Conservative surgery was attempted by a single multidisciplinary accreta team in all patients by complete placental separation followed by repair of the resulting myometrial defects. Fetal membranes were pealed from the fundo-posterior uterine wall to identify a plane of cleavage then the placenta was separated from the uterine wall followed by lateral and anterior walls. The resulting myometrial defects in the placental bed were then closed using continuous absorbable sutures, transversely or longitudinally. Operative details were reported, and demographic data and complications were compared. The sample size was calculated by estimating a single proportion distribution at 0.05 significance.
- **Results:** The uterus was spared in 95% of patients with a mean (±SD) blood loss of 2220.8 (±990.4) ml. Hysterectomy was done in only 10.9% of patients in percreta group and 5.3 % in increta group (p=0.031). The mean (±SD) repair time from complete placental separation to complete closure of the first layer of the uterus was 12.4 (± 6.5) minutes. The mean (±SD) estimated blood loss increased significantly from 1631.3 (±689.6) ml in accreta to 2231.6 (±800.3) ml in increta and 2925 (±1061.4) ml in

percreta (p<0.001). A mean (±SD) packed red blood cell of 2.9 (±1.7) units were transfused with significant difference between the groups (p<0.001). The mean (±SD) of the hospital stay was 3.2 (±1.1) days with significant difference between the three groups (p<0.001). 20.8% were admitted to the ICU. Internal iliac artery was ligated in 10.1%, while the bladder was injured in 11.9% of the cases with significant difference between the three groups (p<0.001).

Conclusion: Using this new technique, conservative treatment of placenta accreta spectrum is possible in 95% of the patients including those with posterior and lateral wall invasion. It avoids the psychological impact resulting from hysterectomy in young age population in countries with high cesarean section rates.


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