INTERNATIONAL SOCIETY REPRODUCTIVE SURGERY

ISRS

international society reproductive surgery & fallopian tube

NEWSLETTER & UPDATE

The International Society for Reproductive Surgery and Fallopian Tubes

Ms Ritu Rana

Hope you all had an enjoyable break. The society aims to make this year academically enriching by hosting various meetings and workshops on reproductive surgery and enhancement of fertility. With the excellent feedback from our previous meeting in Nov. 2017, we aspire to reach out to wider audiences, bringing to the forefront, the latest and controversial topics in the field of reproductive medicine & surgery.

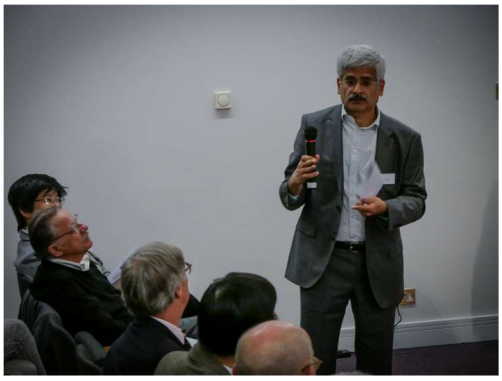
Events

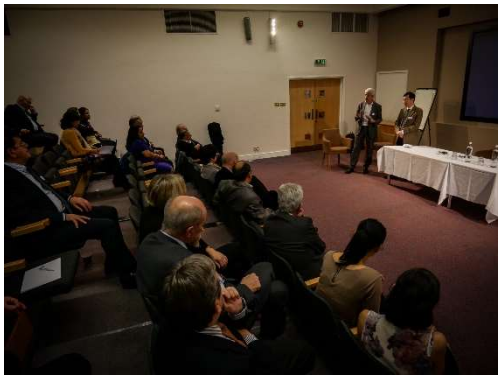
Reproductive Surgery: A review of a successful 2 day meeting of the International Society of Reproductive Surgery, Southampton, 28-29, November, 2017.

Parijat Bhattacharjee, FRCOG FICOG
(Consultant Obstetrician & Gynaecologist, London North West University Hospitals NHS Trust, London)

On a cold winter morning, Experts from across the globe met at Southampton on the 28th & 29th of November, 2017 to debate, discuss and assimilate the recent advances and their practices in Reproductive medicine and surgery. The format and the spread of topics ensured that the discussions were crisp yet comprehensive. Clinicians, Trainees and Scientists involved in Reproductive Medicine & Surgery gathered to exchange ideas and methods in the field. The topics encompassed almost the whole spectrum of the subject.

The session was inaugurated by Mr. Ertan Saridogan, President, ISRS and Consultant, Reproductive Medicine & Minimal Access Surgery, University College Hospitals, London. He took us through the history of the organisation from it's humble start when the idea was conceived at a meeting in Kolkata, India. He mentioned the ethos and aims of the





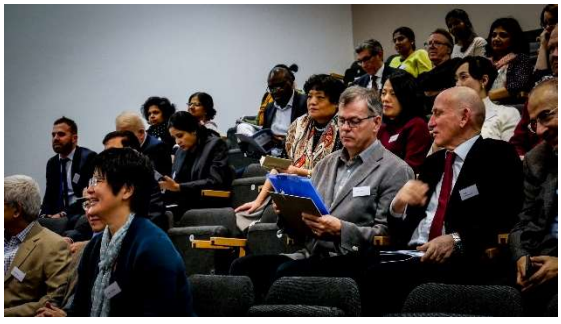
organisation in training and improving reproductive surgery. He mentioned the hard work put in by Professor Djahanbakhch and President elect, Mr Kamal Ojha in rejuvenating the group and its activities.

The first session was moderated by Professor Djahanbakhch, Professor of Reproductive Medicine, Barts NHS Trust, London and Mr. David Gillott, Senior Lecturer, St. George's Hospital, London. Professor Ying Cheong, Southampton University & Medical Director, Complete Fertility Clinic, put in her defence for the topic of the debate, 'Laparoscopy & dye test is no longer required as part of Infertility investigation when pelvic ultrasound is normal.' She put forward a convincing case having clarified her disclaimer, that this is oversimplification of a complex topic. She stated that a good 3D ultrasound followed by a Saline sonography and preferably a HyCoSy can replace Laparoscopy and dye test. Mild endometriosis is the only potential diagnosis that cannot be made at ultrasound but present evidence does not suggest a need for diagnosis and treatment of it at laparoscopy for fertility. Professor Stefan Gordts, Head & Scientific Director of Leuven Institute of Fertility & Embryology, Belgium, debated that Laparoscopy should be done practically on all women before undergoing Assisted Reproduction Techniques (ART). This is mainly to diagnose and treat any pelvic pathology including mild to moderate endometriosis that may have been missed on ultrasound and may affect the success of ART.

Mr. Kamal Ojha, Consultant & Honorary Senior Lecturer at St. George's Hospital, London & Director, Concept Fertility Clinic gave a detailed overview of various tubal patency tests. He reiterated the importance of a good 3D scan by an expert in not only diagnosing most pelvic pathology that can potentially affect fertility including endometriosis but also performing tubal patency tests including HyCoSy that is as effective as Laparoscopy & dye test. Using an ultrasound machine in operating theatre as a complementary tool, should be routine in the future. He also mentioned recent evidence regarding lipid based dye in HyCoSy associated with increased conception rate. It is a dynamic procedure and mobility of organs and tenderness provides additional information towards helping diagnosis.

Mr. Kanna Jayaprakashan, Fertility Unit Lead, Royal Derby Hospital & Associate Professor at University of Nottingham elaborated on the role of imaging before and during fertility promoting surgery. With the advent of 3D ultrasound, the vast majority of structural pathology related to fertility can be assessed before surgery, which may either alleviate the need for surgery or in most cases help plan surgery better.

This is particularly relevant for uterine malformations, ovarian cysts including endometriomas, hydrosalpinges and also endometrial polyps or classifying fibroids to plan surgery. In Type 2 submucous fibroid, assessing the depth of the fibroid and its

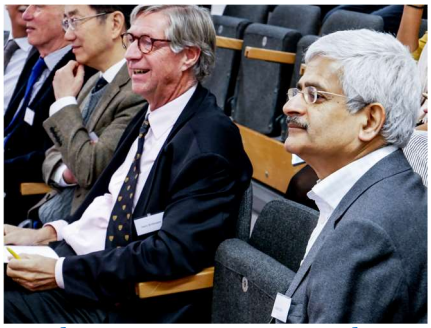


Images from the International Society of Reproductive Surgery, Southampton, 28-29, November, 2017

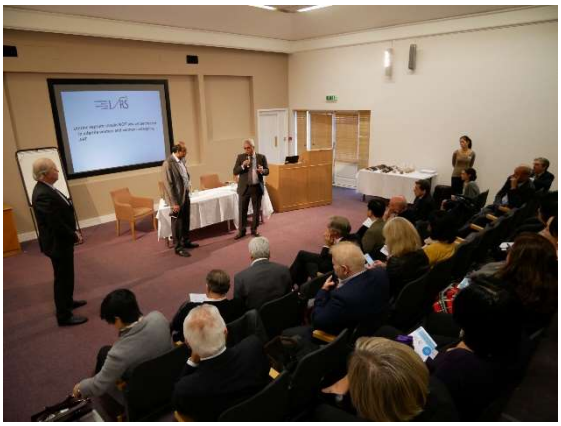
distance from the serosa may be invaluable in deciding the route of surgery, hysteroscopic or laparoscopic. The last session of the evening included debates and discussions on endometriosis and fibroid surgery in fertility management. The session was chaired by Professor Stefan Gordts of Leuven, Belgium and Mr. Sameer Umranikar of University Hospitals of Southampton & Senior Council Member, BSGE. Ms. Henny Lukman, Consultant, University Hospitals, Southampton set the scene for an exciting evening with her highly entertaining presentation in her own inimitable style on 'No place for surgery for endometriosis to improve fertility in the era of ART.' She brought out her drawing board and convinced the audience that ART is as effective and possibly more effective in achieving Live Birth Rate than surgery in Mild or severe endometriosis and also in presence of endometrioma. Regarding endometrioma, while surgery did not seem to improve the Live Birth rate, it may have a detrimental effect on ovarian reserve.

Professor Phillipe Robert Koninckx, from Gruppo Italo Belga forcefully put his point of view that surgery for endometriosis as is the case with any surgery should be done by surgeons adequately trained and competent enough in doing Fertility surgery. This involves efficient and quick laparoscopic surgery including complex endometriosis to preserve fertility and ovarian reserve, minimal exposure of the ovaries to Carbon di Oxide and minimal diathermy injury to ovarian tissue is of paramount importance as is adhesion prevention.

Dr. Antoine A. Watrelot, Consultant at Lyon Natecia Hospital, France & Past President, ISFT-RS made a wonderful presentation on 'When to remove Intramural & Subserous fibroids to improve fertility'. Current evidence suggests that submucous and large intramural fibroids (>3cm) affect fertility but not subserous or small intramural ones. The ones that are likely to affect fertility are therefore best removed since it increases clinical pregnancy rate.



Images from the International Society of Reproductive Surgery, Southampton, 28-29, November, 2017



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Even though there is no RCT but present evidence suggests that presence of submucous and large intramural fibroids does affect ART outcomes and reduce the Live birth rate, clinical pregnancy rate and miscarriage rate. He ended his presentation with surgical techniques in myomectomy to improve fertility including ways to reduce adhesion formation and uterine rupture. Removal of the myoma in a bag is controversial since excising the myoma without the bag would already contaminate the field if there are sarcomatous changes. Patient selection is of more importance. Pregnancy can be safe after 6 months of surgery, even though 3 months seems to be adequate.

Mr. Ertan Saridogan, Consultant Reproductive Medicine & Surgery at University College Hospitals London then gave a comprehensive talk on 'Submucous Fibroids: Is Hysteroscopic approach always the best?' His videos of his Hysteroscopic and laparoscopic resection techniques particularly of Type 2 fibroids not only made the presentation extremely interesting but the technique enforced the importance of preserving as much endometrium as possible for spontaneous conception or for ART. For FIGO Type 3 & 4 fibroids greater than 4 cm, Laparoscopic (or open) myomectomy is preferred. Careful and skilled dissection can ensure that the endometrial cavity is not entered but if entered can be sutured separately. It is the extent and depth of myometrial incision and involvement rather than if the endometrial cavity had been entered or not that would determine if a vaginal birth can be allowed or not. In the discussion that followed, it was stated that removal of adenomyotic tissue (as opposed to myoma tissue) never heals as well and a 'myometrial defect' persists. Mr. Saridogan suggested that with fibroid resection, healthy myometrial tissue is not removed, thus the healing is better.

A grand dinner in the neighbouring pub ensured enough relaxation and rest before a busy but enlightening day's lecture.

Day 2 started with 'Meet the Experts' on Hysteroscopy, HyCoSy and Fertilloscopy. Fertilloscopy being a relatively 'new' procedure generated a lot of interest. Mr. Antoine A. Wartrelot and Professor Stefan Gordts gave a short but interesting presentation on the technique and it's advantages and limitations. They have been performing them since 1998 in Leuven and in Lyon and now have a large database to establish safety including infection and risk of rectal injury that is rare and in almost all cases can be managed conservatively provided patient selection is proper. It can be done in outpatient setting and apart from diagnostic value including tubal patency testing, minor procedures can be done including adhesiolysis, salpingoscopy, and small endometrioma ablation or ovarian drilling. Single operating channel, limited viewing angle and a linear field of vision are some of the limitations.

The debates started with 'Uterine septum should always be treated in infertile women and women undergoing ART'. Professor Grigoris Grimbizis, Director, Department of Obstetrics & Gynaecology, Aristotle University of Thessaloniki, Greece spoke 'for the motion'. The session was chaired by Mr. Hugo Verhoeven, Medical Director, Private Centre for Reproductive Medicine, Dusseldorf, Germany and Mr Kanna Jayaprakashan. Professor Grimbizis mentioned that there has been a paucity of RCTs in this field. TRUST study, an RCT looked into miscarriage and recurrent miscarriage suggests a benefit but has it's limitations. It does not look into clinical pregnancy rate or live birth rates. Most studies do not look into conception rate either spontaneous or through ART. However, even if metroplasty reduces pregnancy complications, including miscarriages or preterm labour in women undergoing ART, it would still be worth considering since it will improve pregnancy

outcome. The Sheffield study by Saravelos et al adds to this evidence.

Mr. Gedes Grudzinskas, Honorary Consultant Reproductive Medicine & Surgery, St. George's Hospital, London in his bold and convincing style made a brief but succinct presentation including NICE guidelines confirming that present evidence strongly points to a lack of evidence of any benefit of metroplasty in improving pregnancy outcomes or live birth rates. Proper 3D evaluation of the uterus (including use of colour dopplers to check for vascularity, when diathermy instead of scissors may be better) is a must and with recent improvement in diagnosis and definition of defects, which includes arcuate uterus being a normal variant, decision making should be easier.

Professor T.C. Li, Director of Reproductive Medicine & Surgery, Prince of Wales Hospital, Chinese University of Hong Kong then presented a very informative and interesting talk on 'Intrauterine adhesion: What's new?' He included newer techniques and RCTs being conducted in University of Beijing, China that included placental graft (fresh and freeze dried). Various other techniques include intrauterine balloon to prevent secondary adhesion. However, stress should be on primary prevention, eg. Avoiding curettage at evacuation of retained products of conception, medical management of miscarriage, decreased use of diathermy particularly during fibroid resection. Techniques to treat adhesions include scissors and diathermy (loop is better for the endometrial margins). Invisible knife technique that involve hydrodissection of adhesions in an outpatient setting using upto 200 mm Hg pressure of hysteroscopy distension medium for adhesiolysis. Most patient tolerate it well and occasional lignocaine gel through the hysteroscope channel may help.

A very interesting presentation followed on 'Caesarean Section Scar Defects in Infertile women: do they really matter?' Professor Hans Brolmann, VU University, Netherlands & Member of ESGE Board of Directors introduced the audience to the presence of 'NICHE', the myometrial defect following caesarean section that is often filled with fluid or mucus and is hypoechoic on ultrasound. Saline sonography increases diagnostic accuracy. Vaginal spotting is the commonest symptom. It's presence, importance and effect on spontaneous conception or ART is being investigated by his team. Laparoscopic resection of the niche seems to have a beneficial effect on fertility.

The pre-lunch session was made exciting with presentations on Ovarian cryopreservation and Ovarian tissue transplantation. Professor Erik Ernst from Aarhus University, Denmark shared his vast experience in this novel technique on ovarian tissue transplantation for either hormonal replacement, when it can be placed subcutaneously and in small amounts or for oocyte replacement through laparoscopy and minilap for subsequent oocyte retrieval and ART (in the pelvic side wall). Professor Claus Yding Andersen, University of Copenhagen, Denmark & Head, Laboratory, Reproductive Biology explained the importance of ovarian tissue transplant and hormone replacement particularly in this age of changing demography and longer life expectancy. Dr. Kirsten Macklon of Copenhagen University Hospital, Denmark spoke about the logistics of setting up a cryopreservation service including legal and logistic issues.

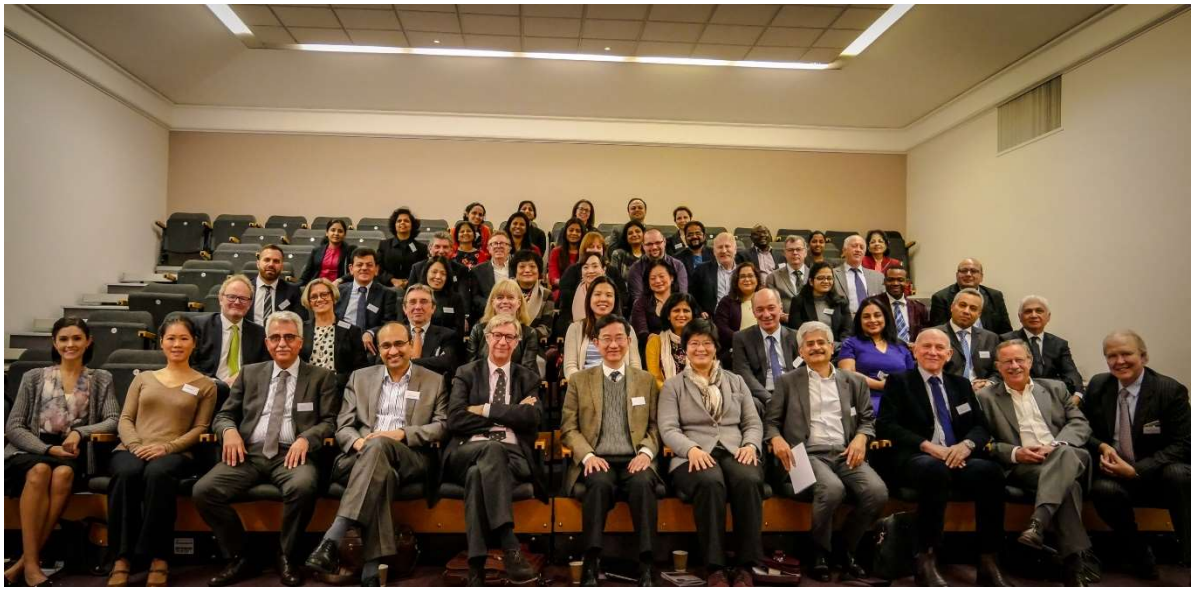
Post lunch, the audience were captivated by 3 young presenters including Tuhina Goel from AIIMS, New Delhi, India. She presented on 'Pre & Post treatment laparoscopic findings of Tuberculosis of female genital tract'. Deepika Deshpande presented an interesting case of Recurrent pregnancy outcome in horn of bicornuate uterus

Professor Ying Cheong of Southampton University & Mr. Ertan Saridogan chaired the next session. Dr. Annika Strandell, Associate Professor, Sahlgrenska Academy, University of Gothenberg, Sweden spoke for the motion, 'Hydrosalpinges: Salpingectomy should be performed prior to IVF'. She argued that there is a negative effect comprising of mechanical, chemical (toxic) and endometrial receptivity on conception and fertility. Professor Stephan Gordts countered that by giving evidence that in presence of tubal occlusion no treatment is as good.

Mr. Antoine Watrelot gave an interesting lecture on alternatives to salpingectomy for hydrosalpinges before IVF. Clips may not be appropriate for giant hydrosalpinx. In cases of frozen pelvis, salpingostomy is a better option. Professor T.C. Li suggested that surgery may be too risky from a fertility perspective in frozen pelvis and/ or high BMI. 7 surgeries would be needed for 1 extra pregnancy. One may need more cycles but IVF without any surgical treatment to the tubes may be a better option. Mr. Tarek El-Tourkey suggested Hysteroscopy diathermy to block the tubes is an acceptable alternative.

Mr. Tarek El- Toukhy, Consultant in Reproductive Medicine & Surgery & Senior Lecturer at St. Thomas's Hospital and King's College, London gave a very entertaining talk on controversies surrounding 'Endometrial biopsy with or without hysteroscopy prior to ART: Does it really help?' Implantation rate being the rate limiting step in ART, how much is endometrial receptivity a factor? Awaiting further knowledge, when and how would endometrial biopsy be done? He quoted 8 earlier studies till 2011, 6 were observational and 2 RCT. They showed Live birth rate increased, miscarriage rates were not increased. Possible explanations suggested are: endometrium-gene expressions, cytokines & endothelial growth factors and delay in embryo maturation (synchronise with embryo staging). In 2015, there were 13 RCTs that suggested there is no benefit (once bias is removed). 4 further RCTs have been published since. RCOG suggests there is a need for more studies.

Delegates from faraway places like China, India and Pakistan enjoyed the discussions. Professor Guanjing, Regional Representative for China, ISRFT also graced the event. The excellent and fruitful event could not have been a success without the enormous dedication and hard work put in by Karen Creed and the young Fertility trainees, Jo and Bonny and organised and supervised by Mr. Sameer Umranikar & Professor Ying Cheong. Aniruddh Ojha ensured photographic records of the proceedings. The highly successful event that saw 2 days of exciting debates and discussions on recent advances in Reproductive surgery by world experts was brought to an end after a vote of thanks by Professor T.C.Li and Mr. Kamal Ojha, President Elect, ISRSFT with an invitation to attend next year's meeting at Derby.



Images from the International Society of Reproductive Surgery, Southampton, 28-29, November, 2017

What's new on the horizon?

Amongst many, there have been reviews and studies published around management of endometriosis and have explored newer modalities of treatment for common gynaecological issues affecting female fertility.

Endometriosis

Two very informative articles were published on treatment of deep rectovaginal endometriosis. Deciding on conservative management or surgery and further the type of surgery is always a dilemma in cases of deep endometriosis involving the rectum. It is always challenging to balance between residual symptoms, functional loss and short and long term complications while deciding the management. Recent review article in Fertility Sterility [1], reveal a relatively higher complication rate of rectovaginal fistulas, anastomotic leakage, delayed haemorrhage, and long-term bladder catheterization after bowel resection compared with shaving and disc excision. Surprisingly the review does not demonstrate any higher risk of recurrence in cases of shaving. It concludes that rectal shaving should be considered as a first-line surgical treatment for rectovaginal DE, regardless of nodule size. If unsatisfactory then disc excision can be performed with reserving the segmental resection for advanced lesions responsible for major stenosis or multiple nodules infiltrating the rectosigmoid junction or sigmoid colon. However there does not seem to be any consensus regarding the choice of technique or the timing of surgery. A randomized controlled trial has been published in Human reproduction [2] compares the functional outcome and benefit of conservative surgery vs resection. This trial does not show a statistically significant superiority of conservative surgery for mid-term functional digestive and urinary outcomes in this specific population of women with large involvement of the rectum and there was higher risk of rectal stenosis after segmental resection. The study though has got limitations as the results cannot be extrapolated to small nodules as only large nodules were operated in this trial. Recent publication in Human Reproduction [3] highlights shared decision making approach as beneficial whenever a complex choice should be made between medical and surgical treatment of severe endometriosis

After a long time, there is an article published on diagnostic aspect of endometriosis in

Fertility and Sterility [4]. This comprehensive article reveals that TVS as the first-line imaging technique due to its availability and relatively low cost. Ureteral involvement, which is unlikely to be picked up by this can be addressed by doing transabdominal scan of the kidneys as these can detect hydronephrosis. Sonovaginography (SVG-combination of TVS with the introduction of a gel or saline solution into the vagina) has a higher sensitivity and specificity as compared to the sonography alone. Give more figures.

Intrauterine adhesions

A practice report has been published by AAGL (American Association of gynaecological Laparoscopists) in collaboration with ESGE regarding management of intrauterine adhesion [5]. A very interesting and promising new development in management of intrauterine adhesion is the use of bone marrow-derived stem cell (BMDSC) treatment which has been hypothesized for a long time. Recent human studies documenting successful pregnancy outcomes for bone marrow-derived stem cell (BMDSC) treatments are reported. This shows return of menstrual function and few spontaneous pregnancies [6]. However a very high quality data to demonstrate efficacy is required before being introduced as a treatment option of Intrauterine adhesions.

Fibroids

After the FDA statement on morcellation we are still at loss as to what should be the best approach for myomectomy. BSGE has opened a survey to look into this. American surveys and studies since the FDA statement have suggested an avoidance of minimal access techniques and morcellation leading to poorer outcomes associated with open surgery such as increased blood loss, prolonged recovery etc. Hence a consensus on practice in UK is very much needed.
Research is also undergoing for a possibly new treatment for fibroids based on the concept of remodelling the ECM (Extracellular matrix) in leiomyoma [7] . Given that uterine □fibroids are primarily composed of an abnormally formed matrix, degradation of the ECM is critical for the resolution of the bulk symptoms caused by these tumours. This review discusses the involvement of ECM in leiomyoma pathogenesis as well as current and future medical treatments that target ECM directly or indirectly.

Fertility

What is the optimum oocyte stimulation to give best efficacy and safety profile? key question with an uncertain answer.

Evaluating data taking both efficacy and the most serious safety aspects into account, is a new approach and of crucial importance both for patients undergoing IVF and their physicians. Recent publication in Human Reproduction of a study showed that Live birth delivery rate in fresh IVF cycle increased up to 11 oocytes retrieved with a live birth rate was 30.3% however the cumulative delivery including fresh transfer and all subsequent transfers of frozen-thawed embryos (FET cycles) per oocyte retrieval, increased up to approximately 20 oocytes where the live birth rate reached to 45.8%. The OHSS was significantly increased if more than 18 oocytes were retrieved [8].

Reproductive epidemiology

Another interesting reproductive epidemiological study showed that maternal age at birth had a relationship on childlessness of their daughters. Compared with women born to 20–24-year-old mothers, those born to mothers aged 25–29, 30–34 and ≥35 years were more likely to be childless [RR (95% CI): 1.21 (1.14–1.29), 1.30 (1.22–1.39) and 1.40 (1.31–1.50), respectively]. This finding gives a different perspective of dealing with subfertility, at a public health level [9]

Significantly reduced live birth rate after IVF/ICSI in women with previous unilateral oophorectomy?

A cohort study published in Human Reproduction shows a significantly reduced live birth rate with IVF/ICSI in women with previous unilateral oophorectomy as compared with women with intact ovaries in this large multicentre cohort. However, this study is likely to have limitation due to bias of patients selected for unilateral oophorectomy and possible confounding factors e.g. endometriosis, although adjusting for all known confounders did not affect the general results [10]

Endometrial scratch injury has shown to have some benefit in IVF according to some studies.

As in IVF cycles, IUI cycles have a similar challenge of plateauing pregnancy rates upto 25%. The role of ESI is being similarly looked in stimulated IUI cycles where success limiting factor could as well be implantation failure. The review and meta-analysis of RCT's published in Fertility & Sterility show that ESI during the follicular phase of the same cycle of IUI, may improve clinical pregnancy and ongoing pregnancy rates in these cycles [11].

A study published in Fertility & Sterility [12], shows the role of Serum Kisspeptin to discriminate miscarriage from viable intrauterine pregnancy. This study demonstrates Kissipeptin assay stability in serum and its potential clinical utility as a biomarker for miscarriage.

Breakthrough

An article in Fertility & Sterility published first delivery in a case of acute myeloid leukaemia survivor after transplantation of cryopreserved ovarian tissue [13]. Ovarian tissue was harvested during complete remission, and re transplanted after intense tissue evaluation.

Opportunities.

We hope to see excellent participation in our Southampton meeting in November, making the most of the buffet of knowledge through the lectures and interaction by various eminent speakers I the field of reproductive surgery.

Forthcoming meetings & Courses

Annual International Society of Reproductive Surgery Conference With hands on workshop Advances in Reproductive Surgery for Fertility enhancement 15-16th November 2018.

Last Date for Abstracts Submission - 1st of August, 2018.

With the advances in endoscopic techniques ISRS-FT believes that reproductive surgery has a special place in treating women undergoing infertility treatment. This meeting will be focusing on advances in reproductive surgery to explore the scientific evidence, emerging technology and research in this field.

The programme will cover a range of topics within the field of reproductive surgery including laparoscopy and tubal assessment

tests, hysteroscopy, imaging in infertility, endometriosis, fibroids, uterine septum, intrauterine adhesions, caesarean section niches, ovarian tissue transplant and ovarian cryopreservation. There will be a variety of debates, case based discussions, lectures, and question and answer sessions.

Transvaginal ultrasound Workshop
Venue Derby Hospital, Derby
Date 6th-7th September 2018

Transvaginal workshop Gynaecology and Early pregnancy
Venue St Georges Hospital, London
Date 8th March 2019

Travelling Fellowships

The society encourages exchange of knowledge and skills in the field and has links with centre in Leuven, Belgium.

Forum

The society plans to start a forum for its members. It would provide a good platform to discuss challenges, management of various cases pertaining to the field.

References

1. Donnez O, Roman H, Choosing the right surgical technique for deep endometriosis: shaving, disc excision, or bowel resection; Fertil Steril. 2017 Dec;108(6):931-942. https://doi:10.1016/j.fertnstert.2017.09.006.

2. Horace Roman, Michael Bubenheim, Emmanuel Huet, Valérie Bridoux, Chrysoula Zacharopoulou, Emile Daraï, Pierre Collinet, Jean-Jacques Tuech; Conservative surgery versus colorectal resection in deep endometriosis infiltrating the rectum: a randomized trial, Human Reproduction, Volume 33, Issue 1, 1 January 2018, Pages 47–57, https://doi.org/10.1093/humrep/dex336

3. Paolo Vercellini, Maria Pina Frattaruolo, Riccardo Rosati, Dhouha Dridi, Anna Roberto, Paola Mosconi, Olga De Giorgi, Fulvia Milena Cribiù, Edgardo Somigliana; Medical treatment or surgery for colorectal endometriosis? Results of a shared decision-making approach, Human Reproduction, Volume 33, Issue 2, 1 February 2018, Pages 202–211, https://doi.org/10.1093/humrep/dex364

4. Bazot M, Daraï E. Diagnosis of deep endometriosis: clinical examination, ultrasonography, magnetic resonance imaging, and other techniques. Fertil Steril. 2017 Dec;108(6):886-894. https://doi: 10.1016/j.fertnstert.2017.10.026.

5. AAGL Elevating Gynecologic Surgery. AAGL practice report: practice guidelines on intrauterine adhesions developed in collaboration with the European Society of Gynaecological Endoscopy (ESGE). Gynecological Surgery. 2017;14(1):6. https://doi:10.1186/s10397-017-1007-3.

6. Santamaria X, Cabanillas S, Cervelló I, et al. Autologous cell therapy with CD133+ bone marrow-derived stem cells for refractory Asherman's syndrome and endometrial atrophy: a pilot cohort study. Hum Reprod. 2016 May;31(5):1087-96. https://doi:10.1093/humrep/dew042.

7. Islam MS, Ciavattini A, Petraglia F, Castellucci M, Ciarmela P,Extracellular matrix in uterine leiomyoma pathogenesis: a potential target for future therapeutics. Human Reproduction Update, Volume 24, Issue 1, 1 January 2018, Pages 59–85. https://doi-org.rcog.idm.oclc.org/10.1093/humupd/dmx032

8. Magnusson A, Källen K, Thurin-Kjellberg A, Bergh C. The number of oocytes retrieved during IVF: a balance between efficacy and safety. Human Reproduction, Volume 33, Issue 1, 1 January 2018, Pages 58–64. https://doi.org/10.1093/humrep/dex334

9. Basso A, Weinberg CR, D'Aloisio AA, Sandler DP. Maternal age at birth and daughters' subsequent childlessness. Human Reproduction, Volume 33, Issue 2, 1 February 2018, Pages 311–319. https://doi.org/10.1093/humrep/dex350

10. Lind T, Holte J, Olofsson JI, Hadziosmanovic N, Gudmundsson J, Nedstrand E, Lood M, Berglund L, Rodriguez-Wallberg K. Reduced live-birth rates after IVF/ICSI in women with previous unilateral oophorectomy: results of a multicentre cohort study. Human Reproduction, Volume 33, Issue 2, 1 February 2018, Pages 238–247. https://doi.org/10.1093/humrep/dex358

11. Vitagliano A, et al. Endometrial scratch injury before intrauterine insemination: is it time to re-evaluate its value? Evidence from a systematic review and meta-analysis of randomized controlled trials. Fertil Steril. 2018 Jan;109(1):84-96.e4. https://doi: 10.1016/j.fertnstert.2017.09.021.

12. Sullivan-Pyke C, Haisenleder DJ, Senapati S, Nicolais O, Eisenberg E, Sammel MD, Barnhart KT. Role of Kisspeptin as a new serum biomarker to discriminate miscarriage from viable intrauterine pregnancy. Fertil Steril. 2018 Jan;109(1):137-141.e2. https://doi: 10.1016/j.fertnstert.2017.09.029.

13. Shapira M, Raanani H, Barshack I, Amariglio N, Derech-Haim S, Marciano MN, Schiff E, Orvieto R, Meirow D. First delivery in a leukemia survivor after transplantation of cryopreserved ovarian tissue, evaluated for leukemia cells contamination. FertilSteril. 2018 Jan;109(1):48-53. https://doi:10.1016/j.fertnstert.2017.09.001.

A Practical Approach to Reproductive Surgery meeting

(28th and 29th November 2017, Chilworth Manor, Southampton)

Abstracts

The meeting received several abstracts. Five of the selected abstracts are presented below.

1. **Joanne. Horton, M. Sterrenberg, A. Maheshwari, T.C. Li, Y.Cheong 'The life course impact of endometriosis from oocyte to birth' *(Winner Presentation)***

Endometriosis is known to cause hormonal, cellular and immunological alterations within the endometrium as well as DNA damage to oocytes, resulting in subfertility. It is unclear if and how such early aberrant reproductive development relates to later pregnancy outcomes and a "healthy baby rate" in endometriosis and if these are subtype or mode of conception specific. A systematic literature review identified all comparative and observational studies published between 1980 and 2016 in any language on endometriosis (all severity stages and subtypes) and fertility, obstetric and neonatal outcomes. 1493 papers were reviewed by title and abstract. 210 full texts were reviewed, 140 papers were included for narrative or data extraction and 103 papers were selected for data extraction with a standardized checklist to evaluate quality.

Endometriosis overall was associated with a reduced clinical pregnancy rate (OR 0.92; CI 0.91-0.93, p=0.003) and live birth rate (OR 0.94, CI 0.93-0.95, p<0.00001). IVF/ICSI studies found an association with reduced oocyte yield, reduced mature MII oocytes and reduced implantation rate. NC studies demonstrated an increased risk of preterm delivery and lower segment caesarean section rates. NC/ART studies showed an increased risk of placenta praevia, small for gestational age foetus, lower segment caesarean section delivery, postpartum haemorrhage and neonatal admission. IVF/ICSI studies found an increased risk of preterm delivery in endometriosis (OR 1.39, CI 1.01-1.91, p=0.05).

Stage I-II endometriosis specifically was associated with reduced fertilisation rate per oocyte (OR 0.82, CI 0.67-0.99, p<0.00001) and increased risk of miscarriage (OR 1.32, CI 1.00-1.73, p+0.05). Stage III-IV endometriosis was associated with reduced implantation rate (OR 0.82, CI 0.67-1.00, p=0.05), reduced oocyte yield (MD -1.21, CI -1.88,-0.53, p=0.0004) and reduced live birth rate (OR 0.73, CI 0.57-0.93, p=0.01) with increased risk of miscarriage (OR 1.47, CI 1.20-1.79, p=0.0002) and preterm delivery (OR 3.38, CI 1.95-5.84, p<0.0001). Patients with adenomyosis were found to have lower pregnancy rate (OR 0.50, CI 0.28-0.91, p= 0.02) and live birth rate (OR 0.27, CI 0.13-0.5, p= 0.0005) with an increased risk of miscarriage (OR 4.41,CI 1.64-11.88, p=0.003).

Endometriosis may have subtype-specific impacts across the entire reproductive process. In seeking diagnostic and therapeutic strategies, a reproductive life course systems approach and reporting a healthy baby rate is necessary in order to achieve useful long-term reproductive health impact.

2. **Tuhina Goel. 'Effect Of Anti-Tubercular Treatment On Laparoscopic Findings In Genital Tuberculosis- A Hospital Based Study'**

Female genital tuberculosis is a common extra-pulmonary manifestation of TB and is often described as disease of the young women. Fallopian tubes are most common site followed by uterus and ovaries. This study was done on 49 women with infertility and genital tuberculosis between the age of 20 and 45 years. These women had laparoscopy before and after antitubercular treatment to visualize the effect of the treatment.

Prior to ATT, Fitz-Hugh-Curtis adhesions were most common [28/49 (57.1%)] followed by pelvic adhesions [21/49 (42.8%)] and tubercles in pelvic peritoneum [21/49 (42.8%)]. In Fallopian Tubes prior to ATT, most common finding was hydrosalpinx [17/49 (34.7%)] followed by non-visualization of tubes [12/49 (24.5)]. In chromopertubation, most common finding prior to ATT was absence of spill in Right [28/49 (57.2)] as well as Left tube [25/49 (51.0)]. On comparison of proportions, normal findings for abdomen and pelvis were significantly increased (p-0.0005) and number of tubercles in pelvis, fallopian tubes and ovary decreased significantly (p-<0.0001) following ATT. The authors concluded that ATT significantly increases chances of normal pelvic and abdominal findings and decreases number of tubercles. Rest of the characteristics although improved due to ATT were not significantly different.

3. **Dr Sian Mitchell, Dr Deepika Deshpande, Mr Kamal Ojha. 'Case series of tubo-ovarian abscess in women of reproductive age in a tertiary centre'** ***(Winner Poster)***

The case series aimed to investigate all cases of tubo-ovarian abscesses in women of reproductive age in a tertiary centre from September 2014 – September 2017, looking at management outcomes for these women and the impact that this could have on their future reproductive potential. 67 cases of tubo-ovarian abscesses were identified in women of reproductive age and analysed retrospectively. Data was gathered on patients' age, parity,

predisposing risk factors for tubo-ovarian abscesses, serum CRP levels on admission to hospital, location of TOA abscess as described on ultrasound, microbiology swab results at time of admission and the management outcome for each patient.

Analysing the predisposing factors in the cohort's history revealed 31% of patients had an IUCD, 15% had previous PID/ TOA and the remaining patients had no contraception or no risk factors recorded. 34% of patients had CRP levels from 4-100, 27% had CRP 100-200 and 26% had CRP levels of 200 or greater. The majority, 48% of patients were found to have a left side TOA, 39% were found to have a right side TOA and 13% were found to have bilateral TOA.
70% of patients had negative swabs. 7% of patients were chylamdia positive. 2 cases were found to have actinomycetes on IUCD and 1 case had streptococcus milleri on IUCD. 78% were treated solely with PID protocol antibiotics (either oral or intravenous route) and 9% of patients had laparoscopy and drainage of TOA. 2 patients had a laparoscopy and bilateral salpingo-oophrectomy and 1 patient had a laparoscopic salpingectomy. 2 patients required a laparotomy with TOA drainage with one patient requiring ITU stay secondary to sepsis from tubo-ovarian abscess. Organ preserving techniques are important to consider in women of reproductive age, as tubo-ovarian abscesses are associated with high morbidity with subsequent fertility problems.

4. **Deepika Deshpande, Sian Mitchell, Christopher Harte, Sridevi Rao, Kamal Ojha. 'A case study of Reproductive outcome in a case of recurrent pregnancy in the same side of a bicornuate pregnancy'.**

A 32 year old lady, G3P0+2, 12+0 weeks pregnant by dates was referred to the acute Gynaecology unit for management of missed miscarriage from a district general hospital (DGH). She has had previous two miscarriages and had placenta accrete. It was treated by Triple X procedure successfully. The pregnancy was in the right horn of the uterus this time as well. She had a medical management of third pregnancy, This was the 3rd pregnancy in the same horn. She was found to have a missed miscarriage. During the course of medical management with mispoprostol of this miscarriage, rupture uterus was suspected. She was transferred to St Georges Hospital (UK), where she underwent a hystertomy. Women with uterine defects are known to have morbidly adherernt placentas and Triple P procedure in these cases can prevent hysterectomies.

5. **Sameul George, Sourav Das. 'A simple innovation making laparoscopic ligation safer and more reliable'**

Reliable data for sterilization comes from 1996 US Collaborative Review of sterilization, or CREST study. The relative risk of failure of fallope ring was less than the spring clip application. We designed an instrument based on application of Fallope ring. The instrument takes a full thickness biopsy after application of the Fallope ring,

which implies that the surgical procedure was done correctly and helps in risk management of the institution. Regions of dysplasia within tubal epithelium were termed ‘tubal intraepithelial carcinoma’ and in most cases these areas demonstrated high levels of p53 accumulation. As noted previously TP53 mutations are present in almost 100% of Type 2 high grade serous ovarian carcinomas. Subsequent studies show that BRCA mutations have also shown that even benign areas overexpress p53. These areas known as p53 signatures can be picked up in the full thickness tubal biopsies and can therefore stratify the risk of developing epithel