A prospective sibling study was carried out to evaluate fertilization rate and embryo quality during culture in the embryo GPS™ as compared to the currently-used Primaria™ easy grip™ dishes.

Material and Methods: In total, 47 cycles were included for the study. Inclusion criteria were: ICSI cycles, fresh or frozen ejaculated sperm, ≥8 mature oocytes. Embryo transfer was performed on day 3 or on day 5.

After injection, the sibling oocytes were randomly assigned to GPS™ or Primaria™ dishes and cultured at 37°C, 6.0% CO₂ and 5.0% O₂ in sequential Sage culture medium (CooperSurgical). Fertilization was assessed 16-18h after insemination by the presence of 2 pronuclei (PN) in the oocyte. Classification of day 3 embryos was based on the number and symmetry of blastomeres, percentage of fragmentation, vacuoles, granulation and multicellularity. Classification of day 5 embryos was based on the criteria of Gardner and Schoolcraft (1999). The overall embryo quality at the moment of transfer was classified into 4 categories: excellent (Q1), good (Q2), fair (Q3) and poor (Q4).

The Wilcoxon signed-rank test was used to compare the parameters studied within the cycles.

Results: Out of 47 ICSI cycles included in the study, 260 injected oocytes were cultured in GPS™ and 261 in Primaria™ dishes. No statistically significant difference in fertilization rate was observed between GPS™ (85.9%) and Primaria™ dishes (81.5%) (P = 0.12). The proportion of 1PN (2.41% vs 3.13%, P = 0.43) or ≥3 PN (1.56% vs 1.84%, P = 0.45) was also similar between the two groups.

No significant differences were observed between GPS™ vs Primaria™ for the different embryo-quality parameters, neither on day 3 (70.28% vs 65.8% Q1 + Q2, P = 0.25 and 27.9% vs 32.7% Q3 + Q4, P = 0.27, respectively) nor on day 5 ET (28.5% vs 28% Q1 + Q2, P = 0.96 and 35.6% vs 35.6% Q3 + Q4, P = 0.94, respectively).

Embryo transfer was performed on day 3 in 13 cycles, and on day 5 in 34 cycles. Always the best embryos were selected for transfers: only from the GPS™ arm in 11 cycles, only from Primaria™ in 18 cycles, and mixed in 18 cycles. In both arms, a comparable number of supernumerary embryos were cryopreserved.

Conclusions: The present preliminary validation indicates that embryo GPS™ can replace Primaria™ easy grip dishes for fertilization and embryo culture. However, a patient-to-patient randomisation trial is needed in order to assess the pregnancy rate.

POSTER VIEWING SESSION

PARAMEDICAL - NURSING

P-356 Nurse/midwife versus doctor performing ultrasound guidance of embryo transfer: a prospective randomized study

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Introduction: The use of ultrasound to assist the embryo transfer (ET) procedure has gained an increasing popularity among clinicians, and recently a Cochrane review has shown an increase in the chances of live birth, and ongoing and clinical pregnancies, when the ultrasound guided ET (UGE) was used compared to the classic “blind” or “clinical touch methods”

No prospective studies to date have correlated the level of US training of the assistant on IVF treatment outcomes.

We therefore decided to perform a prospective randomized study to compare results of IVF after UGET either by a midwife/nurse with no formal training in US, or by a doctor trained to guide ET procedure.

Material and methods: A total of 250 infertile patients with a mean age (36.8 ± 4.2) underwent in-vitro fertilization treatment by intracytoplasmic sperm injection (ICSI) during the period from June 2008 to June 2010. Patients were excluded from the study if they presented a decrease ovarian reserve with FSH level > 15 IU or if they had surgically retrieved spermatozoa. The patients underwent a standard ovarian stimulation protocol with GnRH analogue and follicle-stimulating hormone (FSH). All viable derived embryos were transferred on day three after insemination. On the day of ET the patients

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### Table 1. Population characteristics and results

<table>
<thead>
<tr>
<th>Group I Non-leukocytospermia</th>
<th>Group II Leukocytospermia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycles (n)</td>
<td>53</td>
</tr>
<tr>
<td>Leukocyte count (x10^9/ml)</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Women’s age (years)</td>
<td>34.8 ± 3.5</td>
</tr>
<tr>
<td>Men’s age (years)</td>
<td>37.5 ± 6.3</td>
</tr>
<tr>
<td>Sperm parameter (WHO 2010)</td>
<td></td>
</tr>
<tr>
<td>Total concentration (x10^6/ml)</td>
<td>65.6 ± 5.0</td>
</tr>
<tr>
<td>Motility (%)</td>
<td>55.3 ± 18.1</td>
</tr>
<tr>
<td>Progressive</td>
<td>8.2 ± 6.1</td>
</tr>
<tr>
<td>Non-progressive</td>
<td>35.6 ± 16.6</td>
</tr>
<tr>
<td>Immotile</td>
<td></td>
</tr>
<tr>
<td>Metaphase II oocytes</td>
<td>7.3 ± 5.7</td>
</tr>
<tr>
<td>Fertilization rate</td>
<td>60.4 ± 28.3%</td>
</tr>
<tr>
<td>Embryo transfer</td>
<td>2.4 ± 0.9</td>
</tr>
<tr>
<td>Implantation rate</td>
<td>18.5% (20/108)</td>
</tr>
<tr>
<td>Clinical pregnancy rate</td>
<td>30.2% (16/53)</td>
</tr>
<tr>
<td>Miscarriage rate</td>
<td>6.5% (1/16)</td>
</tr>
<tr>
<td>Ongoing pregnancy rate</td>
<td>28.3% (15/53)</td>
</tr>
</tbody>
</table>

Conclusion: At present, the results indicate that leukocytospermia may not have a negative effect on outcome after ICSI cycles.

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P-354 Evaluation of sperm quality following cryopreservation of neat semen versus density gradient centrifuged semen

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Introduction: Cryopreservation is widely used for long-term storage of human sperm. Different methods of freezing sperm samples have been developed, however, a common problem is the relatively low post-thaw quality of the sperm. Neat semen is usually frozen with a cryoprotectant without any other preparation. However, round cells and other cell debris present in the seminal plasma, known to produce reactive oxygen species (ROS) could potentially have detrimental effects on the spermatozoa. Removing these cells with potential adverse effects by density gradient centrifugation prior to cryopreservation could theoretically be beneficial for post-thaw quality of the sperm. Our aim was therefore to examine if sperm vitality, motility and DNA integrity differed post-thawing when freezing neat semen compared to density gradient centrifuged semen.

Material and Methods: Semen samples from 60 men undergoing infertility work-up were collected. After liquefaction an aliquot of 0.4mL was cryopreserved. The remaining volume (max 3,5mL) underwent a density gradient centrifugation. After the preparation a second aliquot (0,4mL) was frozen in the same manner as the first aliquot. Sperm quality in terms of i) vitality ii) motility e.g. the percentage of progressive motile spermatozoa in the sample and iii) sperm DNA fragmentation, expressed as DNA fragmentation index (DFI), measured with the Sperm Chromatin Structure Assay (SCSA) were analysed both pre-thawing when freezing neat semen compared to density gradient centrifuged semen.

Conclusions: The present preliminary validation indicates that embryo GPS™ can replace Primaria™ easy grip dishes for fertilization and embryo culture. However, a patient-to-patient randomisation trial is needed in order to assess the pregnancy rate.
were prospectively randomized into two groups: group A (n = 128) had a nurse or midwife (with no experience in ultrasound) provide UGET assistance, and group B (n = 122) had UGET assistance from a trained gynecologist. For both groups, ET was performed by the same physician and the same embryologist. All patients were required to have a ‘comfortably full’ bladder and were placed in the lithotomy position.

In Group A patients a midwife assisted the procedure of ET by keeping the scan focussed on the optimal point for implantation for the physician performing ET. In Group B, a gynecologist performed ultrasonography during the whole procedure. In both groups, the rest of the ET procedure was the same.

The physician performing the ET categorized the procedure as easy or difficult according to the subjective difficulty of the ET, and US assistance as satisfactory or unsatisfactory according to the quality of uterus and catheter visualization.

Statistical analysis was performed evaluating quantitative variables using the Student’s t-test and qualitative variables using the chi-square test or the Fisher exact test. Statistical significance was set at P ≤ 0.05.

Results: No significant differences were observed between the two groups regarding implantation rate (18.7% group A vs. 17.8% group B), clinical pregnancy rate (43.7% group A vs. 41.8% group B), ongoing pregnancy rate (32.8% group A vs. 30.3% group B), rate of extrauterine pregnancies (0.8% group A vs 1.6% group B), Difficult transfers (3.9% group A vs 3.2% group B) and unsatisfactory visualization of uterus and catheter (7% group A vs 6% group B) were also similar in both groups of patients.

Discussion: The analysis of the results suggest that inexperienced nurses/midwives may assist the UGET without interfering with the clinical outcome. When we analyzed the role of the assistant to UGET, it became evident that a transabdominal ultrasound scan of the uterus enabling visualization of the cervical uterine angle and endometrium is quite easy to obtain and maintain by simply gently moving the ultrasound probe around the sagittal plane during the ET procedure. Moreover, the physician performing the ET can verbally guide the nurse in order to obtain the proper scan.

We can therefore conclude that the use of an inexperienced nurse or midwife as ultrasonographic assistant during UGET procedure does not affect clinical results with the main advantage of the simplification of the intervention and consequently a decrease in the treatment costs.

P-357 The development of a child-rearing program for the next generation focusing on the generativity of infertile women

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Background and Objective: Participation in a “child-rearing program for the next generation” is necessary in order to release infertile women from infertility-related anguish. Participation in such a program would foster generativity in general childcare as a whole, not solely restricting parenting to one’s own children. The objective of the current study is to assess the two methods of intervention utilized in health education programs in child-rearing for the next generation directed at infertile women: an information-based education program and a participatory education program. The effectiveness of the methods was examined through a longitudinal analysis of the changes that occurred over the course of a three-month period of intervention.

Method: Participants consisted of 24 patients receiving infertility treatment at Hospital A. They were divided randomly into two groups, one set of participants placed in the information-based education group and the other in the participatory education group. A questionnaire was distributed consisting of 11 questions pertaining to the structural measurement of the awareness of child-rearing and 5 QOL questions.

The effectiveness and longitudinal changes of the respective methods were analyzed by two-way ANOVA based on the results collected.

The period of study was one year, from July 2008 to July 2009.

Results: The 12 participants in the participatory education group averaged 35.9 years of age (SD 3.9) with an infertility period of 35.77 months (SD 1.2). The 9 participants in the information-based education group averaged 37.3 years of age (SD 3.5) with an infertility period of 10.22 months (SD 1.7). In comparison to the information-based education group, the participatory education group demonstrated effects of interaction in their awareness of “the meaning of infertility treatment” (F = 8.158 p < 0.01) and in the main effect (F = 9.947 p < 0.01) between the groups prior to intervention and three months subsequent; in sum, the participatory education group was found to be beneficial. The effectiveness of the participatory group was further suggested by effects of interaction in their awareness of “generativity” (F = 8.609 p < 0.01) and in the main effect between the groups (F = 26.19 p < 0.01). With regard to QOL during treatment, the participatory education group demonstrated effects of interaction in “QOL of married couples” (F = 5.094 p < 0.05), which significantly increased subsequent to the group. In the information-based education group, effects of interaction were observed in “physical QOL” (F = 5.889 p < 0.05), which increased significantly during the course of the group.

Conclusion: The participatory education program proved effective in fostering generativity, and the information-based education program proved effective in physical QOL. These results suggest that it is necessary to combine both the information-based education program and the participatory education program in a child-rearing program for the next generation.

P-358 A study of men’s responses to assisted reproductive technology

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Introduction: In 2010, the authors undertook a study of the lifestyle choices of clients actively seeking successful assisted reproduction technologies (ART). While the results of the study provided a valuable picture of the lifestyle patterns of females in this patient group, the responses received from a limited number of male patients provided some important indicators for future research.

The Men’s Response to ART Questionnaire (MRQ) was developed to create a more detailed understanding of the lifestyle choices and the stress mitigation activities undertaken by males. Participation, which was voluntary, was offered to a random sample of male clients attending a clinic over a three month period.

Material and Methods: Based on the ART and stress management literatures and results arising from an earlier survey (Meunier and Callender, 2010), a questionnaire comprising 24 open and closed questions was developed. After ethics approval was granted, 153 copies of the survey were mailed to a random sample of potential male respondents using a response mechanism that assured patient anonymity.

Results: The principal results relate to the Body Mass Index (BMI), the period of active treatment, indicated stress levels and use of a wide range of mechanisms to respond to stress. The latter ranged from socially-based support to alcohol, tobacco and other recreational drug usage, supplemental drugs, alternative supplements, sports and exercise. In addition, a number of questions were asked about male patient’s perceptions about their relationship both emotionally and sexually.

As expected, respondents were typically aged 25 – 50 years, had a diverse educational and occupational background and had been undergoing ART with their partner for more than 24 months. Reported stress levels tended to be grouped around the mean of scale ranging from 1 (no stress) to 10 (stress associated with a major life event). While a small number of respondents reported experiencing minor stress levels arising from ART, a significant number reported mid-range and higher levels of stress. The coping mechanisms (30 possibilities were provided) ranged from spending time talking with friends and family to engaging in adventure sports. While nearly all respondents reported undertaking some exercise around 30% undertook daily exercise.

Respondents reported negligible use of recreational drugs and tobacco, and their reported alcohol consumption did not support the tentative findings of our previous research, that male ART patients consume alcohol at a rate higher than the national average (Meunier and Callender, 2010). However, the results do suggest that those males undertaking ART, who have high BMI, also consume more alcohol, are more likely to be sedentary and undergoing medical treatment for diabetes and/or hypertension than the rest of the survey population.

When asked about their relationship with their partner, over 20 per cent reported some level of change since commencing ART – half positive and the other half negative. However, when asked about the frequency of intercourse, more than 50 per cent reported that the frequency of intercourse was affected by treatment although most claimed ART did not affect spontaneity. Around 60 per cent felt they had regular sexual intercourse. “Regular” was defined as 3-4 times a week to around once per fortnight. Overall slightly less than 50 per cent reported being happy with their “sex life” and the remainder were not happy.

Conclusions: In summary, respondents were divided in their satisfaction with their sex life. While nearly all felt they had a healthy diet, were in full time...
employment, they also reported significant levels of stress which they ameliorated in ways that are not well understood. It was also noted that the obesity “epidemic” continues to impact on patient well-being and, possibly, successful ART.

POSTER VIEWING SESSION

PSYCHOLOGY AND COUNSELLING

P-359 Do women really understand age-related fertility decline?
I. Daly

Introduction: Increasingly women are waiting to have their children until their mid-to-late thirties when they are in fact facing the end of their reproductive lives. Accordingly, more women are finding themselves “involuntarily childless”. It has been estimated that 20% of UK women born in 1975 and after will remain childless. Reasons cited for this dramatic shift have included major changes in the social structure of modern society such as increased access to and uptake of contraception, education and work outside the home. However, this group of women are usually described as having postponed motherhood, a phrase that suggests they have intentionally put off having children, despite knowing the risks they incur. This paper which uses both interview and questionnaire data, challenges this notion. It investigates whether woman awareness of their own reproductive function and age related fertility decline in particular is influenced in the decision making process.

Method: The results incorporate findings from 30 qualitative interviews with childless women aged 28-32 as well as quantitative data from a large-scale survey (1000 +) of childless women from 18-46 years of age. While this survey has collected data from across the globe, only British data will be discussed. This questionnaire was designed to measure the different constructs of the Theory of Planned Behaviour (TPB). This theory emphasises that human behaviours are governed not only by personal attitudes, but also by social pressures and the persons sense of control over the behaviour.

Results: Results will be discussed in terms of how a woman’s perceived control over her fertility (the affects of age, the success of ARTs), and the social pressure she may (or may not) feel to have children (should she be concentrating on her career, are her friends having children), influences her attitudes towards starting a family. How this changes according to the age of the woman will be of primary concern.

Conclusions: This research is the first to try to combine the traditional reasons given for women postponing having children, such as the impact of education and career building, in conjunction with her potentially biased risk perception regarding fertility decline. It is imperative to understand whether women truly understand the affects of age on fertility, when they are making other private and professional life choices. Understanding the phenomenon of older first time mothers in a holistic, multifaceted way, is an important first step in reversing this trend.

P-360 Attitudes towards disclosure and future contact with offspring among 226 identity-release oocyte and sperm donors in Sweden
C. Lampc, A. Skoog Svanberg, G. Sydsvjo

Introduction: The use of identifiable oocyte and sperm donors is becoming increasingly common and is based on donor offspring right to information about their genetic origin. Women and men who enrol in programs for identity-release donors accept that they in the future may be contacted by donor offspring. However, there is limited knowledge regarding their attitudes towards disclosure and future contact with potential donor offspring. Sweden was the first country to instate legislation on identity-release gamete donors. According to this legislation, offspring have the right to obtain identifying information about their donor when they reach the age of majority, i.e. 18. Although this legislation has been in force since 1985, few donor offspring have made use of this right. The aim of the present study was to investigate attitudes towards disclosure, issues and potential contact with donor offspring among oocyte and sperm donors in Sweden.

Material and Methods: The present study is part of the prospective longitudinal “Swedish study on gamete donation” including recipients and donors in all fertility clinics performing donation treatment in Sweden. Of 220 eligible women accepted for donation of oocytes that were approached, 181 women (82%) accepted participation and completed the first questionnaire prior to donation. Of 156 eligible men accepted for donation of sperm that were approached, 119 men (76%) accepted participation. Participants in the present study included those donors who responded to a follow-up questionnaire two months after donation, after exclusion of 34 participants who donated to a specific/know couple; 140 oocyte donors (64% of the eligible sample) and 86 sperm donors (55% of the eligible sample). Participants completed a questionnaire on attitudes towards disclosure to offspring (six items, 5-point Likert scale) previously used by our research group, and nine items on perceived consequences of the donation adapted from previous research (5-point Likert scale). Data analysis was performed with Mann Whitney U-test. A p-value of 0.05 was applied.

Results: A majority of participants (88% of oocyte donors and 77% of sperm donors) agreed that parents should be honest with their children with regard to their genetic origin. There were significant group differences, with oocyte donors reporting stronger support regarding offspring right to information about their genetic origin (p < .0001) and less concern that disclosure could damage the relationship between offspring and the non-genetic parent (p < .0001) than did male donors. A majority of participants agreed that it is in the best interest of the offspring to be able to know the identity of the donor (70%) and were positive towards the possibility that an offspring might contact them in the future (62%). Remaining participants gave neutral or undecided responses and 12% were not positive towards future contact with offspring. A majority of donors (94% of women and 85% of men) wanted to know if the donation resulted in a child. A significantly larger percentage of the male donors (30%) than the female donors (6%) stated that they would feel responsibility for the offspring if anything happened to his/her parents (p = .001). Few donors (6 men and no women) expressed a need for additional counselling regarding the implications of the donation. Significantly more men (70%) than women (52%) stated that they wanted to donate again (p < .0001).

Conclusion: Identity-release oocyte and sperm donors in Sweden support disclosure to offspring and have overall positive or neutral attitudes towards future contact with donation offspring. The findings on disclosure are in line with previous findings of recipients of donated gametes, gynaecologists, obstetricians and the general population in Sweden, and indicate overall positive attitudes towards disclosure to donor offspring.

P-361 How can supportive presence influence the pregnancy rate?
N. Fryk, O. Shyshak

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Introduction: Supportive presence of a partner is well studied in the context of stress coping during the infertility treatment and recently explained in terms of neuroscience: brain would be most effectively active when regulated by a partner or even a stranger. The condition is high relational satisfaction (partner effect - the effect of another closely associated person). Our study is an attempt to conduct clinical research based on a practical need of psychological counseling during IVF. The aim is to measure the hypothetical link between the pregnancy rate and woman’s peculiarities for care-seeking behavior during the treatment directed toward her life partner or other important attachment objects and the role of psychological support program as a facilitator of adequate care seeking activity and relational adjustment.

Care-seeking is defined as a motivation to seek proximity to a specific person who will comfort desires, protect and help to organize one’s feelings.

Material and Methods: This pilot ongoing study was started in August 2010 and was conducted in Ukraine (Medical Centre Intersono), in outpatient IVF