Main results and the role of chance: The relative median fold difference of IGF2 gene expression in eCG and hMG cohorts resulted in a 2-3 times decrease in the expression levels of 0.23 ± 0.39 and 0.18 ± 0.13 versus 0.56 ± 0.7 in control (P < 0.05), while SIU Pergovers was comparable. H19 and IGF2r mRNA transcripts were equivalent between the groups compared to unstimulated control. Both the eCG and hMG cohorts displayed increased live birth rates of 67 and 75% (P < 0.05 and P < 0.001 respectively) compared to 50% in un-stimulated and Pergovers groups. Analysis of prognosis suggested ovarian stimulation also reduced the relative heart and lung weights of day 10 neonates compared to un-stimulated controls (P < 0.05).

Limitations, reason for caution: Gene homology between mice and human is estimated at 99% but mice are polyovulatory and have short cycles so the effects of ovarian stimulation in the mouse may differ from the human. Further, the gonadotrophins used for superovulation were heterogeneous although differences were observed between human recombinant and urinary preparations.

Wider implications of the findings: This study confirms and extends data in the literature to show that superovulation with specific gonadotrophin preparations may perturb expression of imprinted genes and result in abnormal organ development in the offspring. The incidence of the IGF2 related Beckwith Weidemann syndrome is known to be more prevalent in children born through assisted reproductive technologies. The results of the present study suggest that these effects may be related to the use of specific ovarian stimulation drugs.

Study funding/competing interest(s): Study funding came from the Nottingham university research and treatment unit for reproduction and embryology (NUTURE) and the University of Nottingham. The laser for trophotoderm biopsy was provided by Hamilton Thorne.

Trial registration number: N/A

O-181 Predictors for ovarian histological preservation after ovarian torsion, and the possible impact on future fertility

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Study question: Are there any clinical predictors of ovarian histological preservation? Study the impact of ovarian torsion on ovarian tissue, particularly the ovarian follicles.

Summary answer: The Oocyte Preservation Score (OPS) was developed in order to evaluate histopathological changes of ischaemia and infarction. Fever, leucocytosis, raised CRP and menopause where associated with lower oocyte preservation. In some cases, good ovarian preservation was observed even at prolonged periods of torsion.

What is known already: Good clinical outcomes are reported on detorsion of all torted ovaries, irrespective of appearance, in a clinical and ultrasound follow-up study (N = 102). They reported >91% subsequent follicular development in the previously torted ovary, of whom 66 had successful IVF. In rodents, the histological changes of ischaemia can resolve within 24 hours, when the torsion has occurred for less than 36 hours. Such a watershed time interval has not been shown in humans.

Study design, size, duration: Re-examination of pathology specimens and retrospective review of clinical notes at a major London teaching hospital. Study period from 1999 to 2010. A total of 72 patients with confirmed ovarian torsion at surgery were identified. 58/72 (80.5%) had a complete clinical and pathology data available.

Participants/materials, setting, methods: Two novel scoring systems (oocyte preservation score (OPS) and tissue necrosis score (TNS)) were developed to evaluate the effect of torsion on ovarian tissue. OPS grades: low (4, 6) and high (8, 10) preservation. Clinical predictors of ovarian histological preservation were assessed using parametric statistics and multiple linear regression modelling.

Main results and the role of chance: 58/72 had a complete set of clinical and pathology data. Mean age was 38 ± 4.2 (17-86) years. 44/58 (75.8%) pre-menopausal. 25/44 (56.8%) were premenopausal nulliparous, with mean age 26.7 (range 17-39) years. 5/4 (11.3%) during pregnancy (7, 13, 16, 20, and 34 weeks). 23/67 (34.3%) had no other pathology. 1/67 malignancy (adult granulosa cell tumour). 12/67 (17.9%) had suspected, but not proven, malignancy. They were older (mean 52.3 years) with significantly lower OPS (p < 0.001). 7/10 post-menopausal had OPS = 4. Predictors of significantly lower follicular preservation (OPS) were pyrexia > 38°C (p = 0.05, R² = 0.28), leucocytosis > 14.9 (p = 0.001, R² = 0.32), and CRP > 75 (p = 0.013, R² = 0.19). Torsions > 70 hours duration had significantly worse cortical necrosis (p = 0.03). The k-coefficient for low/high OPS score was 0.73.

Oocytes and ovarian follicles located in the ovarian cortex were the last part of the ovary to be affected (OPS 4 and 6).

Limitations, reason for caution: We are limited by the quality of documentation in clinical notes. Length of ischaemia was assumed to reflect length of time in pain during that clinical episode. There may be overestimate, underestimate and clinical documentation inaccuracy of pain duration. This may only be eliminated in a prospective study.
Wider implications of the findings: Our study complements an ultrasound follow-up study,\(^1\) that showed follicular formation in previously detorted ovaries. We found that fever, leukocytosis and raised CRP have overall poorer histological outcomes. Post-menopausal torsions radiologically resemble malignancy pre-operatively, and are less tolerant to ischaemia. Young patients with shorter duration (<12 hours) have better prognosis. Variation in preservation in prolonged periods of torsion (>70 hours) could be due to other factors, such as tightness at the neck of the torsion.

Study funding/competing interest(s): None

Trial registration number: Not applicable

O-182 Economic analysis of salpingotomy and salpingectomy in women with tubal ectopic pregnancy (the ESEP study)\(^1\)

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Study question: What is, in women with tubal ectopic pregnancy (EP) and a normal contra lateral tube, the impact of salpingotomy and salpingectomy on financial costs.

Summary answer: Salpingotomy is more expensive than salpingectomy per randomised woman.

What is known already: We have recently reported that in women with tubal EP in the presence of a normal contralateral tube salpingotomy and salpingectomy result in equal pregnancy rates. Salpingotomy requires more operating time and bears the risk of persistent trophoblast (PT) necessitating additional treatment. Both after salpingotomy and salpingectomy there is a risk of repeat ectopic pregnancy. This implies potentially higher costs after salpingotomy. An economic evaluation of salpingotomy compared to salpingectomy including repeat ectopic pregnancy is not available.

Study design, size, duration: We performed a randomised controlled multicentre study between September 2004 and November 2011. Women were allocated to salpingotomy (n = 221) or salpingectomy (n = 233) in case of a tubal ectopic pregnancy and a normal contra lateral tube. Fertility follow-up was done up to 36 months. Participants/materials, setting, methods: We now compared direct medical costs of salpingotomy and salpingectomy until a spontaneous ongoing pregnancy within a time-horizon of 36 months. Direct medical costs included treatment for the index EP, re-interventions, PT and repeat EP. The analysis was done according to the intention to treat principle.

Main results and the role of chance: Ongoing pregnancy rates were 114 of 213 women (53.5%) in the salpingotomy group and 121 of 234 (51.7%) in the salpingectomy group. Data for the economic analysis were available in 447 of the 454 (98.5%) randomised women. After salpingotomy, direct medical costs were higher because of more surgical re-interventions, treatment for PT and repeat EPs. Per randomised woman, these costs were €3,408 for salpingotomy and €2,714 for salpingectomy (mean difference €694).

Limitations, reason for caution: These results are based on the cost structure of one hospital, whereas costs differ largely between countries. Sensitivity analyses will be required to evaluate the impact of differences in resource use and costs.

Wider implications of the findings: Per woman with an ectopic pregnancy, the costs of salpingotomy and salpingectomy cannot be compared, for no additional medical benefit. These results suggest that in women with tubal EP and a normal contra lateral tube, salpingectomy is the preferred treatment.

Study funding/competing interest(s): Supported by grants of the Netherlands Organisation for Health Research and Development ZonMw (920-03-328, 907-00-154) and the Health & Medical Care Committee of the Region Västra Götaland, Sweden.

Trial registration number: Current Controlled Trials ISRCTN37002267 and the Dutch trial registry (NTR115).

O-183 To lyse or not to lyse: results from a randomized controlled trial of adhesiolyis versus diagnostic laparoscopy in women with chronic pelvic pain

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Study question: We aim to test the hypothesis that laparoscopic adhesiolyis leads to significant pain relief and improvement in quality of life (QoL) in patients with chronic pelvic pain (CPP) and adhesions.

Summary answer: Removal of adhesions laparoscopically in women with chronic pelvic pain improves quality of life at 6 months.

What is known already: Many observational studies have shown that in patients with adhesions and CPP, the surgical removal of adhesions significantly alleviates CPP although this is not a universally shared view. Nevertheless, adhesiolyis is increasingly being performed for the treatment of CPP, although the effectiveness of adhesiolyis as a treatment of CPP is yet to be tested robustly by randomised controlled trials for treatment, the gold standard for evidence-based medicine.

Study design, size, duration: This is a double blind RCT randomising patients to laparoscopic adhesiolyis or diagnostic laparoscopy. It was conducted over 4 years in 2 hospitals in the UK. Women were assessed at 0.5 and 6 months for Visual analogue scale scores (VAS) and QoL measures (SF-12 and EHP-30).

Participants/materials, setting, methods: A total of 92 participants were recruited: 42 qualified to be randomised to laparoscopy to either adhesiolyis or not. Randomisation was computer generated with allocation concealment. The study was powered for a recruitment sample size of n = 200, with n = 100 randomised patients; an interim analysis planned.

Main results and the role of chance: There was no difference in the baseline characteristics between the study and control groups (age, baseline adhesion and QoL scores). Women who had adhesions scored significantly better at 6 months in SF-12 (both physical and emotional components) and EHP-30 (pain and emotional well-being domains) (p < 0.01). There was no significant difference in visual analogue score (VAS) at 6 months (p = 0.07). VAS scores at baseline were higher (worst) in those patients with bowel adhesions (median VAS score 49, IQR 22-66) compared to those without (median VAS score 18, IQR 7-51, p < 0.05). This study prematurely terminated due to significant differences in the main QoL outcome measures and the lack of continued funding over the prolonged duration of the study.

Limitations, reason for caution: Due to the premature termination of the study, we are unable to assess the impact of adhesiolyis on pain with sufficient power. Despite this, the significant findings in QoL improvement would suggest that it would be unethical to continue the study in its present form.

Wider implications of the findings: In the select population of women presenting to the gynecological clinic with chronic pelvic pain, adhesiolyis in those who had adhesions is of benefit in terms of improvement of their quality of life. However, these findings may be confined to tertiary hospitals in the UK with a specialised endoscopy service.

Study funding/competing interest(s): Moulton Charitable Foundation

Trial registration number: ISRCTN 43852269

SELECTED ORAL COMMUNICATION SESSION

Session 48: Challenges of AMH studies

Tuesday 9 July 2013 17:00 - 18:00

O-184 AMH assays: a review of the literature on assay method comparability

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Abstracts