

Oral presentations

General Gynaecology

FC4.01

Prospective Study of one-stop diagnostic and see-and-treat outpatient hysteroscopy service at Royal Derby Hospital
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Introduction Abnormal uterine bleeding is the most common problem that a woman is referred with to a gynaecology clinic. This study evaluates the important role of a one-stop diagnostic, see-and-treat outpatient hysteroscopy service set up in an ambulatory gynaecology unit at Royal Derby Hospital.

Methods This is a prospective study of 762 consecutive patients attending ambulatory hysteroscopy clinics. Ambulatory clinic included outpatient hysteroscopy (OPH) clinic, one-stop postmenopausal bleeding clinic and polyp treatment clinic.

Results 323/762 (42.3%) patients were referred with postmenopausal bleeding (to one-stop PMB clinic); 148 (19.4%) with ultrasound diagnosis of endometrial polyp (to polyp treatment clinic); 262 (34%) with other menstrual disorders and other indications to other OPH clinics. Outpatient hysteroscopy was performed successfully in 694 cases (success rate of 91%). In further 39 cases, OPH was attempted but abandoned due to cervical stenosis ($n = 17$), poor views ($n = 10$), severe vasovagal attack ($n = 2$) or patient discomfort ($n = 10$). OPH was performed using vaginoscopic approach in 60% cases. Among those with recorded BMI, 60 women attending OPH clinics had BMI over 40.

223 endometrial polyps and 37 cervical polyps were removed successfully in one-stop setting. Endometrial polyps were treated using either bipolar electrosurgical versapoint electrode (58%), mechanical hysteroscopic devices such as polyp snare or grasping forceps under direct vision (15.5%) or more recently miniature hysteroscopic triclearmorcellator (26.5%) enabling diagnosis and treatment of this common lesion in the same setting. Hysteroscopic retrieval of IUCD with lost threads was done in 100% cases ($n = 22$).

Local anaesthetic was only required in 12% cases. In a patient satisfaction survey conducted in a random sample of 100 women, 94% said they were very satisfied or fairly satisfied with their OPH procedure and 89% reported pain scores of <2.9 on a visual analog scale (VAS) of 1–5.

59.7% ($n = 455$) seen in this one-stop clinic were reassured and discharged from the clinic with subsequent written notification of histology result; 31% ($n = 234$) had follow-up arranged for histology review either in oncology clinic if anticipated abnormal result or in general gynaecology clinic for any other reason to follow-up; 9.3% ($n = 71$) were added to waiting list for general anaesthetic procedure.

Conclusion OPH is a safe, minimally invasive surgical procedure not only for diagnosis in women with abnormal uterine bleeding, but is also a feasible, cost-effective and patient-friendly way of treating the causes of abnormal bleeding in majority of cases in the same sitting.

FC4.02

Is pelvic vein incompetence a problem?

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Introduction Dilated, refluxing pelvic veins have been implicated in chronic pelvic pain (CPP) and pelvic congestion syndrome (PCS) since 1949. Many women undergo treatment in the private sector despite little or poor evidence of benefit. Pelvic vein incompetence (PVI) remains poorly understood. The aim of this prospective study was to explore the symptoms experienced by women with PVI in a well-designed case-control study.

Methods Forty premenopausal cases aged 18–49 years with varicose veins and PVI confirmed on transvaginal ultrasound (TVU) were recruited over 8 months from the vascular clinic at a UK university hospital. Controls matched within 2 years to each case by age were women with varicose veins (VV) recruited from the varicose vein clinic (40 VV controls) or the open access ENT clinic (40 healthy controls). All controls were women aged 18–49, premenopausal with no history of PVI. All study participants were asked to complete a structured questionnaire on disease specific outcomes, health related quality of life and use of healthcare resources. Categorical data were analysed using chi-squared test or ANOVA where there were multiple groups.

Results Mean age (\pm SD) was: cases (40 ± 5.2), VV controls (38.5 ± 7.7) and healthy controls (41 ± 7.2). Mean quality of life score (95% CI) was 0.81 for PVI cases compared with 0.77 for VV controls and 0.91 for healthy controls using the EQ-5D-3L ($P < 0.001$). Pelvic pain was reported by 38 of 40 (95%) PVI cases, compared with 25 of 40 (62%) VV controls, and 27 of 40 (68%) healthy controls ($P = 0.001$). Pain was generally

experienced throughout the month and was dull in nature. The menstrual cycle was regular in 94% of PVI cases compared with 62% VV controls and 65% healthy controls ($P = 0.002$). Pain extended into the thighs in 42% of PVI cases compared with <10% in both control groups ($P < 0.001$). PVI cases were greater users of healthcare resources with 35 of 40 (88%) visiting a hospital doctor within the last year compared with 10 of 40 (25%), VV controls and 13 of 40 (33%) healthy controls ($P < 0.002$).

Conclusion Women with PVI report a greater frequency of pelvic pain with a reduced quality of life compared with matched controls. We now plan a definitive case-control study to determine the prevalence of PVI in women with and without CPP, and an RCT assessing transvenous occlusion as a form of treatment.

FC4.03

First 50 cases of outpatient endometrial ablation at New Cross Hospital: acceptability, tolerance and cost-saving when compared to inpatient treatment Tewary, S; Pattni, S; Saeed, M

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Introduction Novasure® (Hologic Inc, Bedford, MA, USA) endometrial ablation is routinely performed as an inpatient procedure for the management of menorrhagia and has been shown to be 90% effective in managing symptoms. Few centres are performing this in the outpatients, provided as a walk in-walk-out service. Here we present the tolerance and acceptability by the patient and also the cost savings of outpatient Novasure® ablation as compared to inpatient ablation.

Methods This was a qualitative, prospective audit looking at the first 50 cases we performed. A questionnaire was given to all patients. This assessed the patient's pain score, acceptability and tolerance of having this procedure done under local anaesthetic. We also costed this service as an inpatient and as an outpatient procedure.

Results Patients tolerated this very well under local anaesthetic. 47 patients (94%) went home within 1 h of treatment. Of the three patients who stayed longer than 1 h, one stayed overnight due to vomiting and two got delayed while waiting for their transport. Over 95% of patients had a pain score of 5 out of 10 or less. Most (90%) of the patients would recommend this procedure to a friend.

The first 20 patients have now been followed-up at 4 months. Of these 20 patients, 18 (90%) are fully satisfied with the outcome and report complete amenorrhoea or a significant reduction in menorrhagia.

The cost of endometrial ablation as an inpatient procedure including the day surgical bed, nursing staff, anaesthetist, surgeon, drugs and the operating kit is £958.68. The cost of the procedure on an inpatient basis is £423.

Conclusion Performing outpatient endometrial ablation under local anaesthetic results in an effective and efficient walk in and walk out service. There are real benefits for the patient and this

has been reflected in their reviews. Having the procedure under local anaesthetic rather than general anaesthetic means that no fasting is required, patients can perform day-to-day activities within a few hours and can get back to work the next day. There is also no preoperative visit required. There is not only a saving of £535.30 (55%) on each endometrial ablation performed as an outpatient, it is also safe, well tolerated and acceptable by patients.

FC4.04

Proteomic analysis of peritoneal fluid in identification of endometriosis markers

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Introduction Endometriosis is an important problem in modern gynaecology. It can be assumed that there are local factors conducing to vital activity of endometrioid cells outside the uterine cavity, therefore the study of peritoneal fluid (PF) composition is of great scientific interest. Prevalence of the process and severity of clinical presentations of endometriosis indicate that at present its diagnostics is imperfect. An innovative method in the search of biomarkers of this disease is the study of proteomic profile of PF that will assist in the improvement of prediction methods and early diagnostics of endometriosis development. The aim of this study was to use proteomics-based approach to compare proteomes of PF of women with and without endometriosis.

Methods 20 women of reproductive-age (average age: 29.3 ± 0.3 years old) were included in study, 10 patients with external genital endometriosis of the stage 3–4 of the disease according to r-AFS classification and 10 patients – without endometriosis. The material of the study was PF taken from the space behind the uterus during laparoscopy. Proteins of PF have been separated by two-dimensional electrophoresis. Proteins of interest (spots that were significantly increased or decreased) were identified using matrix-assisted laser desorption/ionization time-of-flight mass-spectrometry.

Results Four proteins performing important functions are down-regulated in endometriosis ($P < 0.05$). Among them there was sex hormone-binding globulin controlling the activity of steroid hormones, apolipoprotein A-IV taking part not only in metabolism of lipoproteins, but also possessing anti-inflammatory and anti-oxidant action, complements C4-B and C3 – main components of inflammatory reaction. Five differentially expressed proteins are down-regulated in endometriosis ($P < 0.05$). Among them there was non-enzymatic antioxidant haptoglobin, alpha-1-antitrypsin protease inhibitor playing an important role in anti-inflammatory response, Sp α protein participating in the regulation of immune response and apoptosis. Also transthyretin, involved in the metabolism of thyroid hormones and immune reaction, was decreased. Pigment epithelium-derived factor is one of the most powerful antiangiogenic and antiproliferative factors.

Conclusions The conducted study indicates that the development of endometriosis occurs against the background of the change in

production of certain important proteins, which participate in the regulation of the action of hormones, redox processes, apoptosis, angiogenesis, inflammation and immune response. The received results of proteomic analysis of PF allow to detect certain molecular mechanisms, which make it possible for endometrial cells to function outside the zone of physiological growth, and to reveal differentially expressed proteins of PF that may be used in the diagnostics of endometriosis.

FC4.05

Role of mifepristone in conservative management of fibroids

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Introduction Uterine fibroids, also called leiomyofibroma, myoma, fibroma and leiomyoma, are the most common tumours of the uterus and female pelvis. The term fibroid was coined and introduced in 1860 by Rokitansky. The incidence among women is generally cited as 20–25%. Prevalence ranges 5–21%. Menorrhagia and infertility are the most common presenting complaints. Although hysterectomy and myomectomy are usually the traditional surgeries done for fibroids, there is need for conservative management in women where surgery is contraindicated. Mifepristone, an antiprogesterone was found effective in reducing the size of fibroids and also gives symptomatic improvement of fibroids by Murphy et al. in 1993. Our objective was to study the effect of mifepristone on the symptoms and size of fibroids.

Methods An observational prospective 'before-after' study was conducted on 36 women who attended tertiary care hospital OPD of South India in between 1 October 2011 and 30 September 2013. Patients with symptomatic fibroid >2.5 cm were administered 50 mg of mifepristone once a week for 6 months. They were followed up at 1, 6 and 9 months. SPSS 17 was used to analyse the data. Three dimensions of the fibroid was measured by ultrasound and volume measured by multiplying the three dimensions in cm³. Blood loss during menstrual cycle was assessed using PBAC chart. Endometrial pathology was assessed at baseline and 6 months. Haemoglobin and liver function test was also assessed before treatment and also at 6 and 9 months.

Results The study population comprised 44% women of the menopausal age group 41–45 years and 14% of young infertile women. 88.89% of the patients had menorrhagia as the presenting complaint. Mean fibroid volume reduced by 44.57% (mean fibroid volume of 204.08 cm³ at baseline reduced to 113.16 cm³; $P \leq 0.001$). Amenorrhoea was observed in 88.89% of the patients at 1 month. Mean PBAC score reduced from 111.7 to 7.12; $P \leq 0.001$, which was statistically significant. Thereafter, it was noted that mean Hb raised from 9.18 to 10.82; $P = 0.001$, which was statistically significant. Endometrial biopsy revealed 2 patients (6%) had complex hyperplasia without atypia. It was also observed that there was transient rise in AST/ALT.

Conclusion It was concluded that mifepristone 50 mg once a week for 6 months is efficacious and acceptable for the treatment of symptomatic fibroids.

FC4.06

Innovations in vaginoplasty using fibrin glue along with vacuum expandable condom mold

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Background We present three cases of müllerian dysgenesis that underwent McIndoe vaginoplasty with the use of fibrin glue. Fibrin glue has been used in other surgical procedures such as skin graft, bone grafts, nerve repairs etc. Additional use of vacuum expandable condom mold was done which made insertion and removal of mold easy with better graft stabilisation.

Case Three patients of vaginal agenesis presented between June 2012 and June 2013. Two of them had MRKH syndrome and one had more complex type III müllerian anomaly, along with pelvic kidney. McIndoe vaginoplasty was planned. Space was dissected between bladder and rectum. Simultaneously, split thickness skin graft of was taken from thigh. A vaginal mold was created by using sterile foam wrapped around a rubber tube and covered with condom. The distal end of the rubber tube could be attached to the suction machine. The diameter of the mold could be decreased by creating negative pressure through the rubber tube. After spreading graft over the mold, the edges of graft were approximated using fibrin sealant Tisseel® (Baxter Healthcare, Berkshire, UK), instead of conventional use of sutures and glue was applied over rest of the graft. Once the mold was adequately placed in the neovagina, suction pressure was released. The mold expanded to its original size, sealing any space between graft and the cavity, thereby leading to a good apposition. While removing the mold on seventh postoperative day, its size was reduced again with negative pressure. Removal was easy without friction. Cavity was inspected and graft was taken up well. On follow up visit, all three had adequate length of vagina and there were no fibrosis or contractures.

Conclusion Failures with McIndoe vaginoplasty are due of haematomas resulting in graft loss, or early removal of the stent by noncompliant patients. Our patients had successful graft uptake with fibrin glue with no complications. Fibrin glue is US Food and Drug Administration (FDA) approved. It quickly sets to form a white, elastic mass which firmly adheres to the tissue and achieves hemostasis, gluing and wound healing. These properties helped in complete graft uptake and reduced hematoma formation. Thus, it makes the procedure easier, faster and, with better outcome. The possibility of volume reduction with vacuum mold has distinct advantage of better graft stabilisation without any dragging of the tissues. Thus, these innovations are promising and need to be widely applied.

FC4.07

Role of levonorgestrel intrauterine system (LNG-IUS) in controlling symptoms of adenomyosis with or without associated endometriosis

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Introduction The aim of this research was to study the effect of levonorgestrel intrauterine system (LNG-IUS) on adenomyosis with or without associated endometriosis.

Method A prospective cohort study was carried out at Spectrum Clinic & Endoscopy Research Institute, Kolkata from July 2010 to January 2012. Fifty-eight women with adenomyosis confirmed by transvaginal sonography and magnetic resonance imaging (MRI) with uterine cavity length (UCL) up to 14 cm had insertion of LNG-IUS. They were divided by laparoscopy into Group A (only adenomyosis, $n = 44$) and group B (adenomyosis with endometriosis, $n = 14$). Women with adenomyosis and endometriosis had laparoscopic surgery concomitantly at the time of insertion. All patients were followed-up for a minimum period of 18 months. Relief from dysmenorrhoea, heavy menstrual bleeding (HMB), chronic pelvic pain (CPP) and reduction of uterine volume were monitored by visual analogue scale, pictorial blood-loss chart, pelvic pain calendar and MRI respectively.

Results One woman was lost for follow-up and the device failed in six (10.34%). Group A had a reduction of dysmenorrhoea $-89.54 \pm 10.29\%$, HMB $-86.75 \pm 9.44\%$, CPP $-92.3 \pm 5.04\%$ and uterine volume $-27.83 \pm 8.96\%$. Group B achieved reduction of dysmenorrhoea $-87.65 \pm 11.76\%$, HMB $-84.91 \pm 10.76\%$, CPP $-88.02 \pm 6.08\%$ and uterine volume $-28.68 \pm 9.57\%$. There was significant overall reduction of symptoms ($P = 0.002$) and uterine volume ($P = 0.016$). Eleven patients (21.56%) had prolonged amenorrhoea. The clinical effects were comparable in two groups. Expulsion rate was higher (44% versus 4%) in the women with UCL >10 cm. Incidence of inter-menstrual bleeding was 37.25% which was self-limiting.

Conclusion LNG-IUS offers excellent benefit for adenomyosis alone or with laparoscopically treated associated endometriosis. UCL is the major determinant of outcome.

FC4.08

Minilaparotomy: a minimally invasive approach for abdominal hysterectomy

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Introduction Minilaparotomy hysterectomy is a minimally invasive procedure for performing abdominal hysterectomy through suprapubic transverse incision, no longer than 6 cm. It is an effective alternative to conventional abdominal hysterectomies and laparoscopic hysterectomies.

Method It is an ongoing prospective study of 156 abdominal hysterectomies performed by minilaparotomy at Virar Maternity

and Nursing home since January 2006. Patients with benign uterine pathologies were selected for the study. Size of the uteri varied from normal to 26 weeks size. Incision taken was <6 cm. Specially designed Z-shaped retractors with concave blades were used for good exposure. Bipolar vessel sealing cauterly was used. **Results** Mean incision = 5 cm; mean time for surgery = 44 min; mean hospital stay duration = 48 h; blood loss <350 cc; postoperative pain score – though subjective, definitely less; intraoperative complications = 1 (patient had bladder injury); postoperative complications = 8 cases (minimal collection in the wound).

Conclusion Minilaparotomy hysterectomy procedure offers advantages of being highly cost effective with low morbidity, shorter hospital stay, less blood loss and good cosmetic results. The procedure can be easily mastered in short period.

FC4.09

Case study: non descent vaginal hysterectomy – by using special instruments

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Background Hysterectomy is the most commonly performed gynaecological surgery. Vaginal hysterectomy is the safest minimally invasive and least expensive technique. I am introducing five instruments invented by me for this procedure: (1) Panicker's super bipolar forceps – this is a breakthrough invention in electrosurgery. With this instrument any vessel or any tissue can be safely and effectively coagulated; (2) Panicker's universal ligation forceps – this is a modification of right angled forceps. I have introduced a 60° curvature behind the 90° curvature of the right angled forceps. This can be used as a thread carrier, suture carrier, tissue separator and also as aneurism needle. (3) Panicker's unbreakable knife – once a blade is inserted into this handle the blade will become unbreakable. (4) Panicker's non slip bulldog forceps – these are very useful to grasp and pull tough tissues. (5) Panicker's lighted speculum – this is a vaginal speculum to which fiber optic light cable can be directly attached.

Cases Total number of cases: 972. Period: January 2008–July 2013. Indications: uterine fibroid (481); adenomyosis (81); DUB (186); cervical polyps/fibroids (79); benign adenexal pathology (36); secondary PPH due to adherent placenta? fibroid (8); prolaps uterus (58); pelvic inflammatory disease (29); endometriosis (14); complication (bladder injury; 4)

Conclusion This technique of vaginal hysterectomy is very safe with minimum blood loss, minimum postoperative pain and minimum expenditure. The steps are almost similar to TLH but done vaginally using simple instruments - bladder dissected and the UV Fold opened. The Pouch of Douglas is also opened. The cervix is pulled down and parametrium pierced with PUL forceps as high as possible and is coagulated and divided. The same procedure is repeated on the opposite side and for upper pedicles including uterine and ovarian vessels. Large uteri are moisolated and removed. Teh vault is transfixed to the Meckenrodt uterosacral ligament and the vault is then closed.