

**INVITED PRESENTATIONS****EN3.01 MICROENDOSCOPY****EN3.01.01****USE OF MICROLAPAROSCOPY**

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'The terminology "microlaparoscopy" was firstly used in the early 90's and is, presently, defined as the use of a scope of 2 mm, or less, of diameter. The advances of technology have allowed to develop small scopes with good quality of visualization, as demonstrated by several comparative studies.

Many advantages of microlaparoscopy have been claimed: easier use under local anesthesia, lesser risks of complication, better cosmetic outcome with, indeed, better acceptability by the patients.

Some of them need, however, to be further properly evaluated.

Microlaparoscopy is used preferentially in three various main groups of indications:

- 1- Diagnostic under local anesthesia (mainly for infertility, chronic pelvic pain, acute pain, second look and emergency cases); the reduced pneumoperitoneum requires a good experience in laparoscopy. The reported failure rates vary from 1 to 12 %. A variant is the so called "Pain mapping", performed for chronic pelvic pain in patients under conscious sedation.
- 2- Diagnostic and operative under general anesthesia, especially in young children. If the strict definition is respected, the procedures thus performed are limited and dependant on the available instrumentation.
- 3- As an initial procedure for safer wall entry for patients with previous laparotomy. These patients have been shown to be at higher risk of complication during the installation phase of laparoscopy; a microlaparoscopy is initially performed at the Palmer's point to assess the internal umbilical area and insert under visual control the main umbilical trocar. The specific technical aspects and the assessment, based upon the latest reports, of each major indication will be presented.

**EN3.01.02****TRANSVAGINAL HYDROLAPAROSCOPY (THL) IN THE SUBFERTILE PATIENT**

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**Objective:** To evaluate the possibilities for the exploration of the pelvis by a vaginal access and using prewarmed saline as distention medium.

**Materials and methods:** The procedure is performed on an ambulatory basis with the patient in a horizontal decubitus position. After infiltration with a local anaesthetic of the posterior fornix, a specially developed Veress needle trocar system (Circon, USA) is introduced into the pouch of Douglas. A 30° angled 2.7 mm endoscope with a wide angle of 105° (Circon, USA) is used for the exploration.

We now performed the procedure in 157 patients referred for primary or secondary infertility and after informed consent. All patients had normal vaginal examination and normal ultrasound.

**Results:** Access was obtained and 149 patients (95%). In 6 patients the technique failed due to tenting of the peritoneum, mostly during our first experiences, or due to obesity. In 2 patients the procedure was aborted due to complications: one rectum perforation, treated conservatively with antibiotics during 6 days and one hematoma formation of the broad ligament also conservatively treated with expectant management. The findings were normal in 58.5%; endometriosis was diagnosed in 16.5% and adhesions in 17.5% of the patients; 7.5% other pathology was found. On a linear pain scale from 0 (no pain) to 100 (unbearable pain) 68% of the patients reported the pain to be lower than 30 and 24% between 30 and 50. Asked if they would have any objections to repeat the procedure under the same circumstances, 96% didn't object.

**Conclusions:** In our experience THL proved to be an accurate procedure in the exploration of the subfertile patient. In contrast to standard laparoscopy it is less invasive as it can be performed under local anesthesia. Furthermore it allows the inspection of the tubo-ovarian structures in their natural position without a need for supplementary manipulation.

**EN3.02 SECOND GENERATION ENDOMETRIAL ABLATION****EN3.02.01****ENDOMETRIAL ABLATION VIA THERMACHOICE BALLOON THERAPY**

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Of the 600,000 hysterectomies performed in the United States each year, 120,000 are performed for abnormal uterine bleeding with no evidence of uterine fibroids. Unfortunately, the majority of hysterectomies performed are still via an open abdominal route. Moreover, hysterectomy carries with it increased morbidity and even mortality. Endometrial ablation or endometrial resection performed via the hysteroscope has enabled successful treatment of menorrhagia without hysterectomy. Electrosurgical instrumentation, utilizing the rollerball, and the bare fiber Nd:YAG laser can be used to ablate the endometrium, while the monopolar resectoscope can resect endometrium. Unfortunately, these techniques are limited by physician expertise. Moreover, risks include uterine perforation, fluid overload, and inadvertent bowel burn.

Because of the morbidity related to the invasiveness of hysterectomy as well as secondary to the expertise required to perform endometrial ablation or resection via the hysteroscope, other techniques of endometrial ablation have come to the forefront. Originally introduced as a latex balloon, the ThermaChoice Balloon Ablation system is now a latex free silicone balloon. The balloon, fills with or D5W check with Mary normal saline and expands against and covers the endometrium. This fluid is then heated to 87 degrees centigrade to destroy the lining of the uterus.

Studies in the United States as well as abroad reveal amenorrhea rates slightly less than 20% with significant reduction of blood flow and patient acceptance on par with roller ball endometrial ablation techniques. The ThermaChoice Balloon is easy to use and has been proven to be cost effective and safe.

**EN3.02.02****SECOND GENERATION ENDOMETRIAL ABLATION: PHOTODYNAMIC THERAPY**

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Endometrial ablation, at outpatient, day surgery procedure has broadened the indications for surgical intervention for abnormal uterine bleeding. A range of therapeutic options now exist including laser, electrosurgery, radiofrequency, microwave, and thermal ablation (both hot and cold). All of these techniques share the potential for inadvertent uterine perforation and damage to adjacent structures. Recently a technique that selectively destroys the endometrium and adjacent myometrial layers without danger to surrounding structures had been developed in the animal model. Exposure of the monkey uterus to a natural precursor (5-amino-levulinic acid {ALA}) in the heme biosynthetic pathway, resulted in endometrial accumulation of the potent photosensitizer, Protoporphyrin IX. Subsequent exposure 3-4 hr later of the endometrial cavity to activating fiberoptic light (635nm @ 300 mW) resulted in highly selective full thickness endometrial destruction. The requirement for both photosensitized tissue and exposure to activating light offers tissue selectivity and adds an additional margin of safety.

Simplification of EA techniques may broaden the indications, however, failure rates with inadvertent pregnancies or the need for hysterectomy, and counselling re the need for combined hormone replacement therapy remain important issues that require monitoring.

**EN3.02.03****MICROWAVE ENDOMETRIAL ABLATION**

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Hysteroscopic endometrial ablation has become an accepted alternative to hysterectomy in the treatment of dysfunctional uterine bleeding. The possible complications of hysteroscopic endometrial ablation are fluid overload, electrolytes imbalance and rarely injury to internal organs. In order to find a simpler and safer technique, non-hysteroscopic