FERTILOSCOPY in the MANAGEMENT OF FEMALE INFERTILITY


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Introduction

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Equipment

As already stated, a relatively simple equipment is necessary

- Sponge forceps, a little cup for disinfectant, a cup and a 20 cc syringe for the methylene blue, some sponges, 1 liter of sodium chloride.
- A laparoscopic column and a 4.1mm hysteroscope without its sheath or a 2.9mm hysteroscope with its sheath
- One Collin's speculum
- One Pozzi tenaculum
- One methylene blue ampoule
- One Veress needle
- One 4 mm trocar, better if dedicated, and an intrauterine catheter for the tubal patency test.
- A set for the laparoscopic conversion should always be at hand.

Fertiloscopy: a technique for a thorough evaluation of the mechanical factors of female infertility

Fertiloscopy is the combination of different procedures:

- Transvaginal Hydrolaparoscopy
- Dye test
· Salpingoscopy
· Microsalpingoscopy
· Hysteroscopy

1. Transvaginal Hydrolaparoscopy or Hydropelviscopy
   Transvaginal Hydrolaparoscopy is the fundamental part of Fertiloscopy. It is performed injecting transvaginally, about 200 cc of saline to create a hydroperitoneum. This is done by inserting a Veress needle over the midline, 1 cm below the cervix: the saline should flow without hindrance, a sign that the needle is correctly inserted. The needle is then withdrawn and a Douglas transvaginal cannula or an optical trocar, variable in diameter up to 4 mm are introduced in the same axis. Finally, the telescope is introduced into the central channel of the cannula. The inspection of the pelvic organs is carried out in underwater examination which allows a detailed visualization able to put in evidence the presence of even minimal abnormalities.

2. Tubal Patency Blue Test
   The Dye Test is performed injecting concentrated methylene blue into the uterine cavity by means of a dedicated device. It allows the study of the tubal patency.

3. Salpingoscopy
   This part of the examination consists of introducing the scope into the tubal ostium to bilaterally explore the tubal mucosa. It is straightforward to carry out, either by entering directly into the fimbriae or by stabilizing the fimbriae with a grasping forceps (diameter 5 French) introduced into the operating channel. During intratubal examination, low-rate irrigation should be continued.

4. Microsalpingoscopy
   Microsalpingoscopy is a complementary procedure which has to be routinely performed. Thanks to the optical magnification, the examination the cells of the tubal mucosa after the blue dye test is easy to carry out. Staining of the tubal cell nuclei provides an effective means of assessing the functional capacity of the Fallopian tubes: the more colored are the nuclei, the less functioning is the mucosa.
6. Hysteroscopy
Hysteroscopy is the last part of the procedure. With the same optics, this time introduced into the uterus, it is possible to visualize the uterine cavity and remove abnormalities as polyps, myomas or synechiae or perform biopsies to treat endometrial dysfunctions.

The entire Fertiloscopy takes 10 to 15 minutes. The patient can be dismissed immediately if fertiloscopy has been performed under local anaesthesia or the same day in case of general anaesthesia. The type of anaesthesia is chosen by the patient. Since there is not any vaginal suture, the only recommendation is to avoid using tampons and to abstain from sexual intercourses for five or six days.

Indications to Fertiloscopy
Fertiloscopy can be considered a valid alternative to diagnostic laparoscopy in the work out of infertility. In particular, the main indications are:

- Unexplained infertility (patients with normal hysterosalpingography). Specially indicated are the patients selected for assisted fecundation.
- Suspect for tubal pathology. In this case salpingoscopy will be of utter importance in the therapeutic strategy.
- Before and after tubal surgery.
- In the follow-up of medical treatment of endometriosis.
- Generally, Fertiloscopy can be advocated when laparoscopy is considered difficult or more dangerous. It is the example of obese patients, in which fertiloscopy can be less troublesome or risky than laparoscopy. On the opposite, in presence of evident pathology that needs surgical treatment, a immediate laparoscopy will be performed.

Advantages of Fertiloscopy
Several are the advantages of fertiloscopy both for the patient's compliance and for medical reasons.
- Fertiloscopy is, with limits, an alternative to laparoscopy in the diagnosis of female infertility. It allows to avoid a certain number of diagnostic laparoscopies.
- It is a physiological examination. Fertiloscopy permits a very physiological approach since it is not necessary to mobilize tubes and ovaries to have a thorough examination. The "direct" observation of the ovulation when the exam is performed in that precise menstrual period will permit, in the future, to make progresses in the understanding of ovum tubal pick up.
Moreover, being minimally invasive and substantially harmless, Fertiloscopy is well accepted by the patients and easily counseled in case of necessity. Furthermore, it is easily performed even in obese patients.
- It is a low risk procedure. Although complications are always possible, it has to be emphasized that
the fact that this procedure can be performed under local anaesthesia, without requirement of CO₂ insufflation or Trendellenburg position and in absence of risk of injuries to the major vessels makes this technique a low risk investigation in comparison with traditional laparoscopy.
· It is a quick procedure lasting an average of 10 to 15 minutes.
· It is easy to learn.
Fertiloscopy, far from being an alternative to laparoscopy, seems to gain importance in the study of the female infertility allowing an accurate diagnosis and a better selection of therapeutic alternatives.
The concomitant development of surgical capabilities will help to cut down the number of laparoscopies performed for minimal lesions as mild endometriosis.

**Limits and Contraindications to Fertiloscopy**

**Contraindications:**

All the contraindications to fertiloscopy must be avoided.
In particular, the following situations advice against the procedure:
· Evident pelvic pathology: in this case, laparoscopy is required due to its operative possibilities.
· Pelvis masses occupying the pouch of Douglas: posterior myomas, ovarian cysts or fixed uterine retroflexion.
· Cul-de-sac obliteration as in deep infiltrating endometriosis or recto-vaginal septum endometriosis. Pelvic and ultrasound examination will be helpful in the diagnosis of these situations.

**Limits:**
· Impossible visualization of the anterior aspect of the uterus and utero-vesical fold. In practice, the chance that this areas will be localization of isolate endometriotic lesions in absence of other implants of endometriosis is very low (less than 1% of cases)
· Low operative capacity. Even if it possible to perform sharp or blunt adhesiolysis, biopsies or ovarian drilling, at the moment fertiloscopy has to be considered a diagnostic procedure.
References:

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Web Sites
http://www.fertiloscope.com

Source URL: http://www.obgyn.net/laparoscopy/fertiloscopy-management-female-infertility

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