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#### **Ovarian drilling: comparison between laparoscopic and fertiloscopic approach**

Ovarian wedge resection has been described long time ago as a treatment in Polycystic ovarian syndrome (PCOS) patient.

Results in term of pregnancy were rather good but post operative pelvic adhesions were very often encountered. It was logical since ovary appears to be the only intra abdominal organ not covered by peritoneum. As a result this procedure became less and less popular, in the eighties also due to the efficacy of the new gonadotrophins

It was then demonstrated that drilling the ovaries gave the same results as wedge resection. Laparoscopy was a mini-invasive way to do it and ovarian drilling regains a part of its interest.

Nevertheless, the risk of adhesions formation after laparoscopic ovarian drilling remained and several publications emphasized that side effect.

Also different energies were tested: monopolar, bipolar currents, or CO2 laser. They all proved to be effective in the same manner but with a similar risk of adhesion formation.

In 1997, after the initial work of Gordts, we described fertiloscopy as the combination of an hydro laparoscopy, a dye test, a salpingoscopy and a microsalingoscopy.

One of the main innovations compared to the old culdoscopy was the use of saline solution instead of CO2 as distending medium.

In 2000, Fernandez proposed to perform ovarian drilling through fertiloscopy. In addition to the mini-invasiveness of the procedure it seemed interesting to perform the drilling in liquid medium since it has been proved a long time ago that hydro flotation is a good, even if basic, mean to prevent post operative adhesions formation.

The first results shown a cumulative pregnancy rate identical as those obtained by laparoscopy.

Still remains the question of post drilling adhesion formation. We have first tried to improve the quality of the procedure by doing ovarian drilling directly in a medium known to prevent adhesion formation.

This medium has to be reasonably cheap and also completely trans- lucid like saline solution to allow a good examination. We found that one liquid was responding to these prerequisites: the 4% Icodextrin Solution(Adept™)

Out of 120 cases, only few of them have had a second look, by fertiloscopy (n=7) or by laparoscopy (n=5)

Interestingly no visible adhesions were found during second look laparoscopies and only minor non connective adhesions during second look fertiloscopies the difference being that hydroflotation and magnifications allows to detect subtle abnormalities like that, thus providing new imaging of peritoneal adhesions.

If we compare with the literature, adhesions are rather frequent after laparoscopic ovarian drilling.

We therefore think that it is a good argument to use mini invasive technique and liquid as medium instead of CO2 to prevent adhesions formation.