

The impact on ovarian reserve after laparoscopic ovarian cystectomy

To the Editor:

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The importance of ovarian preservation in patients with infertility related endometriosis has long been debated (1). Endometriomas do impair fertility and studies have demonstrated improved IVF outcomes after ovarian cystectomy and treatment of endometriosis in matched controlled studies (2). The article by Tsolakidis et al. (1) deserves praise for several points and also raises some concern, as others may use this information as a guide in the treatment of their patients with endometriomas.

With the techniques described including method of removal, use of different energy sources, etc, it is not surprising that AMH levels in the second group of their patients are higher than those having complete resection of the cyst (1).

It has been our experience that the techniques we have described before causes minimal destruction of the healthy ovarian tissue (3, 4, 6, 7). We use diluted vasopressin (20 units in 200 cc of normal saline) to dissect the cyst wall off the ovarian stroma. We use three graspers with teeth. Two of the graspers are used to stabilize the ovary while the third is used to remove the capsule (Figures 1, 2). With this technique, one is able to remove the ovarian cyst with minimal to no bleeding. The final result is complete resection with minimal damage to the ovary and no unnecessary use of cautery if the surgeon is in the right plane. More figures available upon request.



Figure 1. Three grasping forceps are used. No bleeding observed.



Figure 2. Two grasping forceps with teeth stabilize the ovary while the third dissects the cyst capsule from the ovarian stroma.

In 1992, Nezhat et al. described a new classification of endometriomas (4), seven decades after Sampson's original model (5). In this theory, confirmed by pathology, endometriomas were divided into two groups. Type I or primary endometriomas, originate from invagination of endometrial glands and stroma into the cortex. These are true endometriomas usually between three to five centimeters or smaller. Type II or secondary endometriomas are functional cysts that have been invaded by endometrial glands and stroma (6).

We do not vaporize or coagulate endometriomas because the cyst wall can be as much as 5 mm thick (3). This leads to inadequate treatment and destruction of the ovarian stroma. The result is increased risk of recurrence and further unnecessary surgery.

Currently, many of our referrals have a history of multiple failed IVF cycles and/or recurrence of their endometriomas previously aspirated by ultrasound.

During surgery on these patients, we have observed a severe inflammatory process if we operate on them without preoperative suppressive therapy. We presume this to be from leakage of "chocolate material" and blood from a previous aspiration.

Presently, we start these patients on GnRH suppressive therapy for 2-3 months and then proceed treatment of endometriosis and removal of the ovarian endometrioma(s). Thus, we convert at least two, sometimes three surgeries, into one and have noted rare recurrence of endometriomas. Also, by not using laser, electrocautery and not avulsing healthy ovarian tissue, we preserve ovarian function. We continue to have good results (2, 3). We plan to begin assessing serial AMH levels in our patients prior to and after surgery. As in the above mentioned article, we anticipate our technique to show increased postoperative levels.

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