International Seminar 6: State-of-the-art: Reproductive Medicine
（共催：武田薬品工業株式会社）

2) Is there ever a role for surgery in the treatment of infertility?

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With the appearance on the scene of IVF in 1978, it became apparent that most infertility could be treated with in vitro fertilization rather than with surgical procedures. The increase in the number of cycles that are done per year is evidence of this. At the same time, though, video laparoscopy became possible and many more surgical procedures were carried out with a minimally invasive technique. We will discuss the role of tubal surgery, treating endometriosis and intercavitory lesions as well as intramural myomas. To be considered are cost of IVF vs. other therapies, what patients want, and outcomes, of course, being the primary thing, with live babies being the standard.

There is very little help as far as evidence-based surgery is concerned. But needless to say neosapinogosotomy carries very low success rates, about 5–10% if you look at live birthrates and, therefore, has been pretty much replaced by in vitro fertilization. Tubal anastomosis is a different story. These are fertile patients and, if they are younger than 37, this is an option. The difference is that patients want to be pregnant immediately and with tubal anastomosis, it can take up to two years. It is still unknown how robotic surgery will change this.

In regards to endometriosis, there are two factors to look at: endometriosis itself and, to look at a profound form of endometriosis, endometriomas. If endometriomas don’t confirm infertility, then can endometriosis itself, to a lesser degree, be responsible? The national registry shows that fertility rates for patients with endometriosis are equivalent to other disease entities. Metanalysis carried out by Barnhart showed that patients with type one to two and three to four do have diminished fertility rates with IVF, implying that surgery would be the way to treat it. On the other hand, in patients with endometriomas, there seems to be very poor evidence that treating these patients has any impact on fertility. Therefore, the recommendation, as odd as it seems, is that if a patient has endometriosis, especially stages 1 and 2, fertility rates are greater if they are operated on, whereas if they have endometriomas, which are stage 3 and 4, it doesn’t improve fertility rates to operate on these patients. Now this is not treating patients for pain or treating them for infertility per se, it is to prepare them for IVF. Another quandary in regards to treating patients with endometriosis is the diminished ovarian reserve because of tissue removal. The answer to this seems to be no.

As far as fibroids are concerned as well as polyps: intercavitory lesions definitely have lower implantation rates. The contested areas are intramural myomas. Here the rule seems to be if they impact on the cavity in anyway and if they are greater than 5 centimeters, then they should be removed. On the other
hand, the smaller endometrial cavities do not matter. Most patients are evaluated by three-dimensional ultrasound.

In conclusion, one has to remember that most infertility can be treated short of in vitro fertilization and surgery itself. In regards to what the patient wants, certainly as IVF becomes cheaper, the fact that you can become pregnant in a much quicker timeframe is appealing to patients and certainly this relates to outcome as well.