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LAPAROSCOPIC TREATMENT OF POLYCYSTIC OVARIAN SYNDROME

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The oldest treatment for anovulatory infertility associated with polycystic ovarian syndrome (PCOS) is bilateral ovarian wedge resection. This procedure, however is associated with a high incidence of periadnexal adhesions that may jeopardize fertility. Clomiphene citrate is today the first line of treatment for anovulation, but 25% of anovulatory women do not respond to clomiphene. Those who do not respond to clomiphene may be treated with gonadotropins or pulsatile luteinizing hormone releasing hormone, but neither modality of treatment is universally successful. An alternative surgical treatment is laparoscopic ovarian drilling. This technique is less invasive than ovarian wedge resection by laparotomy, is associated with less adhesion formation and produces excellent results. The average ovulation rate after ovarian drilling is 80% with a conception rate of 60%.

The ovary is first immobilized with a grasping forceps (Fig. 13.1). Ovarian drilling can be done using a unipolar needle electrode or laser. The use of an insulated unipolar needle electrode is associated with less adhesion formation and higher pregnancy rate than laser. As most of the uninsulated part of the needle is inside the ovary, the risk of sparking is reduced. The needle is inserted as perpendicular as possible to the ovarian surface. A short duration of cutting current of 100 W is used to aid the entry of the needle.

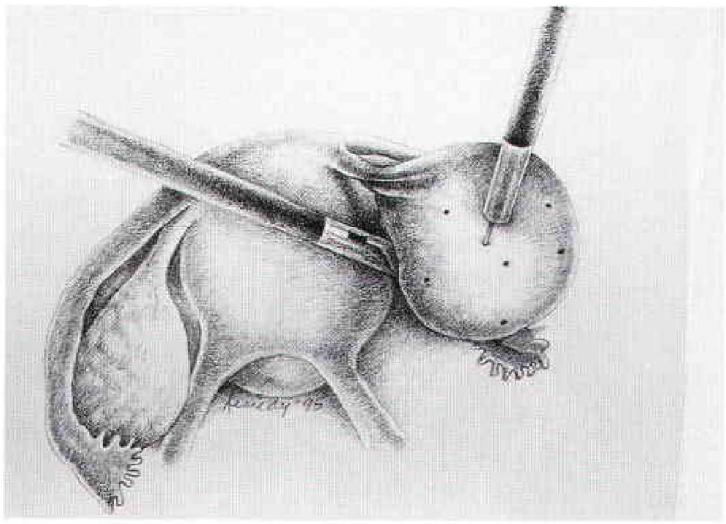

Figure 13.1 *Ovarian drilling using an insulated unipolar needle electrode. From Tulandi T: Operative laparoscopy, In Thompson JD and Rock JA* (eds) Te Linde's Update in Operative Gynecology, *1997. Reproduced with permission.*

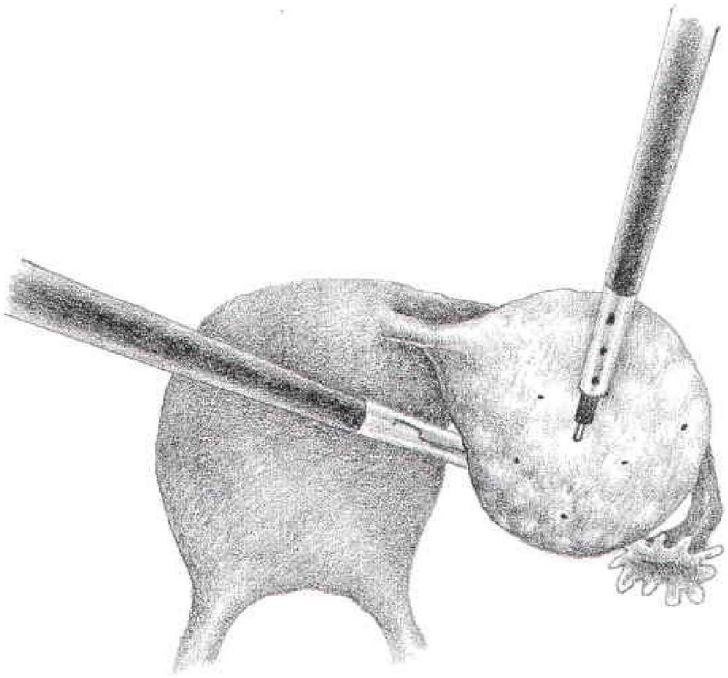

Figure 13.2a

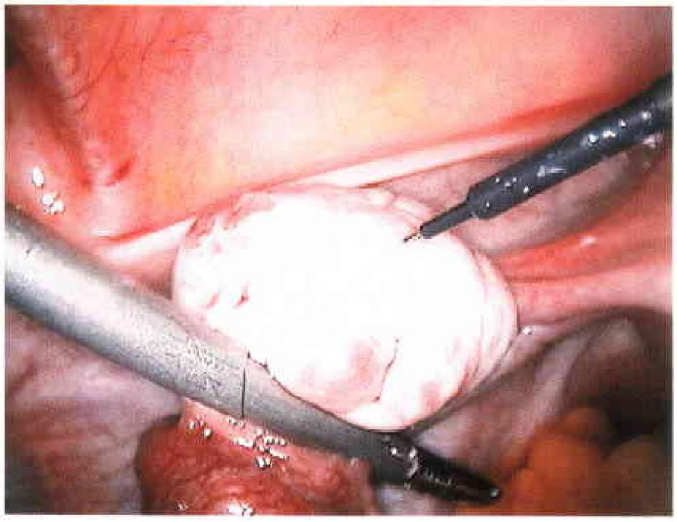

Figure 13.2b

Figure 13.2 *Ovarian drilling of the anterior aspect of the ovary.*

The whole length of the needle (8 mm) is inserted into the ovary and it is activated with 40 W of coagulating current for 2 seconds at each point. The anterior surface is exposed by "flipping" the ovary upward with a forceps (Fig. 13.2). Depending on the size of the ovary, 10–15 punctures per ovary are created (Fig. 13.3). Liberal irrigation of the pelvic cavity to remove necrotic debris and carbon materials should be done at the completion of ovarian drilling.

COMPLICATIONS AND THEIR PREVENTION

Excessive drilling may cause ovarian atrophy and premature menopause. Creating more than 20 craters per ovary and drilling the ovarian hilum should be avoided. This may jeopardize the blood supply to the ovary and may also cause bleeding. Damage to the ovarian surface can cause periovarian adhesion that may further decrease

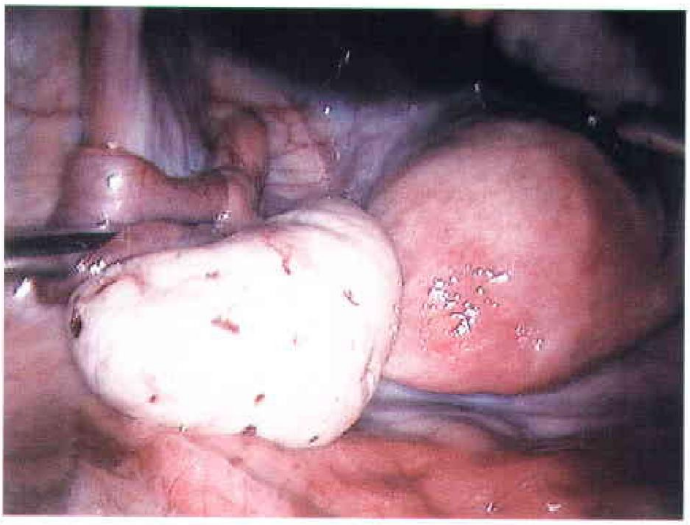

Figure 13.3 *Appearance of the ovary after ovarian drilling*

fertility. Accordingly, the needle electrode should be inserted perpendicular to the ovarian surface until its insulated part is inside the ovary. This procedure should be limited to women who are resistant to clomiphene who for some reason cannot be treated with gonadotropin or luteinizing hormone releasing hormone.

SUGGESTED READING

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