TUBAL SURGERY OR IVF?

Some authors (1) unthinkingly state that reproductive surgery is now obsolete. A more thoughtful view is that the introduction of IVF has resulted in great improvements in surgical management by ensuring better selection of surgical cases and consequently improved results. Boer-Meisel et al. (2) were among the first to show that results following salpingostomy were related principally to the degree of tubal damage. Sadly, other reproductive surgeons have not followed their lead. Had a classification system for tubal damage been agreed upon sooner, many women could have had more logical planning of treatment. Not all tubal damage is suitable for surgery. The lead should have been taken from gynecological oncologists, who have long recognized that it is entirely inappropriate to offer Wertheim’s hysterectomy for Stage IV of the cervix.

The treatment of hydrosalpinges by salpingostomy illustrates the point particularly well. Although operations to open the fimbria carry the worst prognosis of all fertility surgery, in properly selected cases salpingostomy gives term pregnancy rates of 35–45% (3,4). This is over twice the live delivery rate achieved after a cycle of treatment in only a very few of the best IVF programs. Against this relatively good success rate must be set the fact that results are generally not immediate; most series report that the majority of pregnancies occur only after a year following salpingostomy, presumably because epithelial regeneration is slow. Treatment of cornual block, revolutionized by microsurgical cornual anastomosis, is more successful. It carries term pregnancy rates of 45–60% (5–7), and results are better than those after multiple IVF cycles. Moreover, most pregnancies after cornual surgery occur within 8 months. Adhesiolysis, whether by open surgery or by laser laparoscopy, also has results superior to IVF in a single cycle. Good results are obtained only in patients with limited pathology, who should be offered the most appropriate treat-
Tubal surgery has distinct advantages. It can restore natural fertility, allowing repeated conception without the need for further treatment; in our salpingostomy series most successful patients had another baby without treatment. These women are said to be at substantial risk of ectopic pregnancy, but this is far from true. There is no evidence that, in patients with damaged tubes, IVF carries less risk of ectysis. Moreover, tubal surgery carries no extra risk of multiple pregnancy, a condition associated with pregnancy loss in IVF patients (8). Tubal surgery is also more acceptable to a considerable number of women, being less emotionally demanding and avoiding some of the psychological and religious problems associated with assisted conception.

It has often been stated that IVF can be repeated and that the cumulative results of multiple cycles eventually give success rates better than those after surgery. This is an oversimplification. Tubal surgery can be offered at any reasonably equipped district hospital; IVF requires complex facilities, and acceptable results, with few exceptions, are obtained only where resources have been pooled. In Britain, there are long waiting lists for IVF except in the private sector and the treatment is markedly underprovided. In the last 5 years, only 3057 babies have been born following IVF (9); this number probably represents only 2.5% of the population for whom IVF would be the ideal treatment (10). The chances are that, in the United Kingdom, for example, only a handful of those who need a second treatment cycle will get one because of long waiting lists. Until better provision for IVF is made and less cost is involved, tubal surgery will remain an important option.

Tubal disease was the main indication for IVF in the past. IVF bypasses the fallopian tubes; logically tubal damage would seem to be the most suitable indication for it. This is not entirely true. For example, endometriosis has an even better prognosis after IVF. In our unit in 1991, 47% of women with endometriosis receiving two embryos at transfer conceived, while only 38% of those with pelvic inflammatory disease (PID) conceived. This difference is statistically significant and more studies are needed to evaluate cumulative conception rates in tubal patients compared with others.

When, then, should IVF be offered as a first treatment? There are three clear indications. First, IVF is certainly the treatment of choice when there is inoperable tubal damage. Second, and more controversial, is when the female partner is in the older age group. Although it is widely believed (11) that IVF is much less successful when the female is over 40 years old, we now need to reevaluate this. Several authors suggest a disappointing pregnancy rate in older women, with a high miscarriage rate. Undoubtedly, they often require bigger doses of gonadotropins and yield fewer follicles. Many fail to superovulate altogether and there is a higher chance of canceled egg collection. It has been supposed that tubal surgery might be better for older women, offering natural conception over a continuous period, without the aberrations caused by exogenous gonadotropins. This is dubious. Tubal surgery disappoints increasingly with age. We analyzed results following over 500 reversals of sterilization in women whose reconstructed tubes measured over 6 cm in length. These women were naturally very fertile (hence the original sterilization) and had fertile partners. The term pregnancy rate was only 15% after age 40; more than 75% of younger women conceived. IVF seems much better. Recent analysis of the progress of 230 women 40 to 46 years old in our unit shows that 19% of cycles involving egg collection resulted in continuing pregnancy. Providing that superovulation is successful and egg collection is undertaken, IVF is by no means a poor option. Older women, providing they respond well to exogenous gonadotropins, have a cumulative probability of pregnancy of over 35% after just two cycles of IVF; our miscarriage rate has been only 13%. This is substantially better than waiting for pregnancy after sterilization reversal, the operation widely agreed upon as having the best prognosis.

The third indication for IVF is when tubal damage is complicated by other factors causing infertility.