

Reproductive surgery, where are we in 2024?

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Reproductive surgery is quite a wide specialty which includes uterine surgery, ovarian surgery, endometriosis and, of course, tubal surgery. Because of the amazing results of in vitro fertilisation (IVF), some people thought that this surgery was useless and even declared it dead in 2008.¹ In reality, tubal surgery has changed, but it is still alive today.

There are three chapters that need to be considered (figure 1).

PROXIMAL PATHOLOGY

Proximal pathology, which involves the interstitial and isthmic portion of the tube, accounts for around 10% of tubal injuries. These obstructive lesions are either infectious or endometriotic in origin (the classic salpingitis isthmica nodosa). Proximal microsurgery is no longer used today, as its results are less good than those obtained with IVF. On the other hand, selective tubal catheterisation using interventional radiology is well worth trying, as it enables approximately 50% of tubes to be unblocked using a minimally invasive approach.

However, when the obstruction is iatrogenic, such as after tubal sterilisation, the tube is healthy by definition, and microsurgical tubal anastomosis always gives better results than IVF if the process of sterilisation is conservative, which is the case after using tubal clips. The rate of patency in experienced hands reaches 90% by microsurgery or with the robot, and 70% by laparoscopy.²

The pregnancy rate is primarily contingent on age and exhibits a marked decline beyond the age of 40, a trend that is similarly observed in the context of IVF.

DISTAL PATHOLOGY

Distal pathology is the most common disease (90% of cases)² and there are two lesions: phimosis, where the tubal obstruction is incomplete, and hydrosalpinx, where the obstruction is complete. Additionally, these

lesions, which are commonly associated with postinflammatory conditions, frequently correlate with the development of adnexal adhesions.

In the context of phimosis, fimbrioplasty is deemed appropriate and generally yields favourable outcomes. When dealing with hydrosalpinx, it is imperative to meticulously select patients exhibiting a favourable prognosis, characterised by smooth tubal patency and intact tubal mucosa, for whom conservative management via neosalpingostomy is a viable option. Conversely, for patients with a poor prognosis, salpingectomy prior to IVF is a necessary surgical intervention.

Today, neosalpingoneostomy, in selected cases, has results similar to those of IVF.²

SUBTLE TUBAL LESIONS

These lesions originating from embryonic residuals, such as paraphoron and epiphoron, are exceedingly prevalent. Additionally, paratubal cysts, also referred to as Morgagni cysts,³ hydatids, agglutinates, diverticulae, sacculations and bridging adhesions, among others, are commonly encountered. All these anomalies are situated in the distal segment of the fallopian tube and are present in approximately 25% of patients suffering from unexplained infertility, frequently correlating with endometriosis in 61% of such cases.⁴ Consequently, since these anomalies do not result in tubal obstruction, they have hitherto been regarded as having no significant influence on fertility. We now know that this is not the case, and their treatment frequently results in pregnancy: 62% in the case of paratubal cysts, for example.⁵

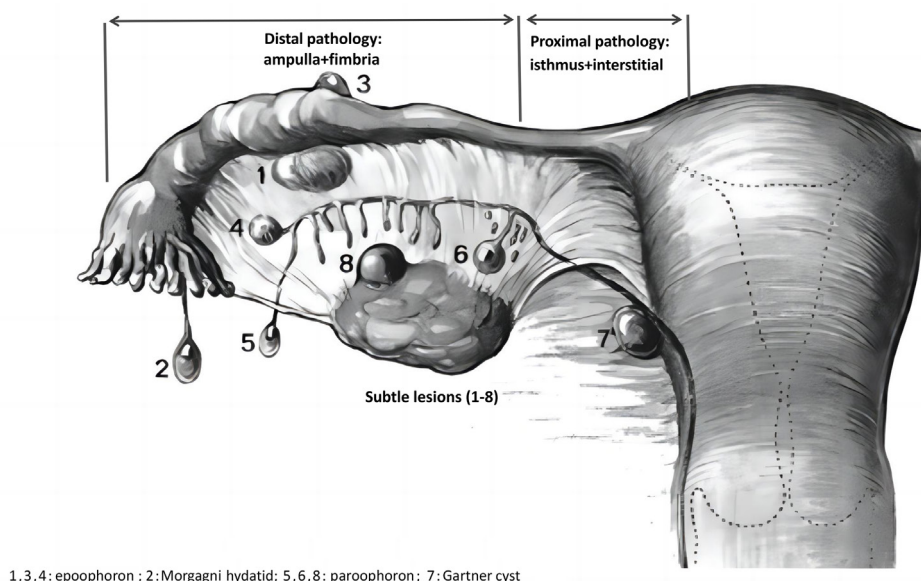
Whatever the pathology, every operation needs to be performed according to the principles of microsurgery. These principles described in the 1970s by Winston and Gomel^{6 7} comprise magnification, meticulous haemostasis, tissue irrigation and



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1, 3, 4: epoophoron ; 2: Morgagni hydatid; 5, 6, 8: paroophoron; 7: Gartner cyst

Figure 1 The three chapters of fallopian tube.

use of microsutures. All this is easily achieved today through laparoscopy thus resulting in a mini-invasive approach.

Nowadays, one major problem is the lack of tubal surgeons in many countries. In clinical practice, IVF doctors lack surgical proficiency, and therefore whenever a tube appears to be pathological, patients are directly referred to IVF occasionally accompanied by additional bilateral salpingectomy. Moreover, IVF is more incentive financially than tubal surgery. This is the rationale for advocating the promotion of these techniques, which offer numerous benefits provided the selection process is optimal: they represent a more cost-effective solution, and in the event of success, they enable the possibility of multiple pregnancies if desired, with no ethical or religious impediments associated with such surgical procedures. It is imperative to persist in the instruction of tubal surgery within the curricula of medical education institutions, and we fervently advocate that every infertility unit should be equipped with a minimum of one seasoned specialist in tubal procedures.

So tubal surgery is still very alive but with the contrasted situation, very present in Asia, more rarely practised in Europe and America. Therefore, Asia and especially China are leaders in this field and should be at the cutting edge of the promotion and teaching of tubal surgery in the future.

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