Endometriosis is a poorly understood disease defined as the presence of endometrium outside the uterus. The endometrium would normally be present only as a lining to the uterus. The disease appears to run in families and current estimates are that it affects some ten per cent of the female population (i.e. probably more prevalent than diabetes and asthma). The average time to diagnosis has been estimated at more than ten years.

Aetiology or causes of endometriosis

Several theories exist:

- retrograde menstruation – at the time of a period the endometrium is shed and flows out the vagina. However in endometriosis it is suggested that some flows back the other way and out the fallopian tubes and so deposits endometrium tissue in other parts of the abdomen.

- stromal metaplasia – some of the tissue of the abdominal area seemingly spontaneously starts to function like the endometrial tissue.

Diagnosis

There has been little progress in diagnosis. The cornerstone of diagnosis is a good clinical history. Premenstrual spotting and cyclical symptoms, particularly pain, are indicators. Fertility is often impaired. Examination is usually normal, although at times nodules can be felt on vaginal examination. Imaging modalities such as CT and MRI are of limited value. The only real role of ultrasound is to exclude ovarian endometriomas, which are tumours containing endometrium located on the ovary. They are sometimes called chocolate cysts. A laparoscopy, where the abdominal cavity is examined via a tiny camera, is the only way a definitive diagnosis can be made. This procedure almost always requires a general anaesthetic.

Fertility

Endometriosis impacts significantly on fertility with a direct correlation to the stage of disease. Early mild disease decreases the chance of spontaneous conception by up to 25 per cent and late stage (grade 4 disease) by up to 100 per cent.

Therapy/Management

Medical therapy has a role in maintenance but unfortunately does not result in longstanding regression or cure. All agents are contraceptive and there is no data to suggest an improvement in fertility rates (Cochrane). Unfortunately many have significant side effects.

The surgical philosophy in recent times has moved towards an excisional approach (i.e. surgically cutting out the areas of endometriosis) rather than simple diathermy (burning away) techniques. To a certain extent endometriosis may be likened to an iceberg and diathermy may result in residual disease. Diathermy is also unsuitable for many situations with disease adjacent to bowel or ureters (tubes between kidney and bladder). Excisional surgery results in a 70 to 80 per cent chance of substantial ongoing pain relief with an increase also in fertility rates. The best results paradoxically occur in those with the most severe disease (such as illustrated).
Most of these procedures can be done via laparoscopy. The results, however, are not ideal and the search for additional therapies to improve outcomes continues.

**Assisted Conception**

There is controversy as to whether patients should proceed direct to IVF or to surgery for endometriosis. It appears chocolate cysts (endometriomas) impact on egg quality and these should be dealt with surgically prior to embarking on IVF. In the absence of endometriomas a decision may be best left to the discretion of the patient. Surgery increases the chance of spontaneous conception, whilst IVF will offer increased rates over a limited time.

**Figure 1.**
Significant endometriosis with bowel involvement and cul de sac obliteration.

**Figure 2.**
Post excision of endometriosis and bowel resection. The cul de sac is now clear.

**Reference List**

1. Laparoscopic excision of endometriosis: the treatment of choice?
   Garry R. British Journal of Obstetrics & Gynaecology 1997;104:513-15

2. Conservative laparoscopic excision of endometriosis by sharp dissection: life table analysis of reoperation and persistent or recurrent disease.
   Redwine DB. Fertility & Sterility 1991;56:628-34

3. Laparoscopic surgery in infertile women with minimal or mild endometriosis.

Dr Michael JW Cooper