Surgical treatment

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<u>Laparoscopy and treatment</u>

This is a technique in which a thin telescope is inserted into the abdomen to inspect the pelvic organs. A 1cm incision is made within or under the umbilicus and the abdomen is filled with gas. This distension allows the surgeon to inspect the pelvic organs to confirm the diagnosis of endometriosis. Another small incision is made close to the pubic hairline.

If any endometriosis is seen, then usually up to a further three incisions may be made to allow treatment to the affected areas. The surgeon would then either cauterise (burn) or remove the affected areas. Where appropriate the endometriosis is excised rather than ablated. Occasionally there are further incisions required during the surgery.

You may be required to have drugs prior to surgery or if the tissue is very vascular your surgery may entail partial treatment and then drugs and a second planned procedure. In other words, your surgery may be undertaken in two stages to optimise complete removal of disease.

<u>Bowel preparation</u>

You will be given medicine the day before surgery to clean out your bowels. This will help with the surgery and may reduce the risk of complications if the bowel is involved. As your bowels have been cleared out before the operation, you may not necessarily open your bowels prior to being discharged home following surgery.

Minor surgery

- Minor surgery will involve inspection and cutting out the endometriosis tissue or spots. Where not appropriate to cut out the area, the tissue would be burnt instead.
- Adhesions (scar tissue) would be divided.
- An endometrioma or chocolate cyst (cyst filled with endometriotic fluid) will be opened and drained. The cyst will then be treated. Either the cyst wall be excised, or the base of the cyst burnt. Care will be taken to preserve as much normal ovarian tissue as possible and reconstruct the ovary where required.
- You will have a catheter (tube in the bladder) overnight.
- You may also have a PCA (patient controlled analgesia) overnight where you have the control pain relief medication which you may administer yourself by pressing a button.
- Usually you would be discharged the following day. The duration of stay depends on the extent of endometriosis and your recovery.

Major surgery

Extensive surgery is achieved through the telescope, though a slightly longer duration of stay will be needed. Occasionally an open incision is required to complete the surgery.

This would involve:

- Cutting away the endometriosis affected tissue
- Releasing ovaries
- Releasing adhesions and removing the tissue affected by endometriosis around the back and the side of the uterus, around the bladder and ureter and the space between the rectum and the vagina
- Dissecting the ureters (tubes that carry urine from the kidneys to the bladder) to be able to remove endometriosis tissue

Bladder disease

If severe endometriosis affects the bladder (anterior disease) or is found close to the bladder then:

- A cystoscopy (inspecting the bladder with a scope) may be done
- The bladder may need to be opened to remove the endometriosis
- A catheter may be retained inside the bladder and the bladder will be rested for about 14 days.
- You will be advised by the consultants how long the catheter is required.

Bowel disease

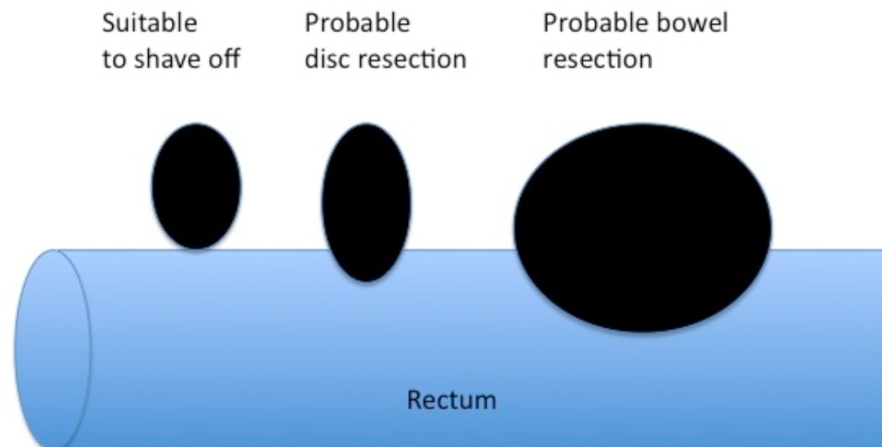
The bowel may sometimes be involved with endometriosis. The surgical treatment involves dissecting the bowel free and assessing the degree of involvement. At times nothing more needs to be done, however, at other times the endometriosis may need to be cut away.

The surgical approach is determined by the degree of bowel involvement. This may require taking off the surface layer of the bowel or taking out a small disc of bowel and sewing up the resulting hole. Sometimes, if the involvement is extensive with evidence of obstruction, a small section of the bowel needs to be removed and the bowel re-joined.

These procedures are done together with the laparoscopic bowel surgeons depending on the extent of bowel surgery required. The surgery may require an additional 3 cm cut in the pubic hair line.

Occasionally if the bowel join is very low (near the anus) or the operation has been technically difficult, then a stoma bag is required (ileostomy). This effectively diverts the faeces into a bag on the abdomen thus protecting the join down-stream and allowing it to heal. The stoma bag is usually left for three months and then requires a smaller operation to return the bowel into the abdomen. This usually requires a hospital stay of two to three days.

DIAGRAM OF BOWEL INVOLVEMENT WITH ENDOMETRIOSIS



Very severe disease

In cases of more severe disease, the ureters (tubes that drain the kidneys into the bladder) need to be dissected and moved away from the operative field. In many cases temporary tubes (pollack catheters) are placed in the ureters during the operation. This helps protect them.

Where this surgery is very extensive or the ureters are more involved, then a JJ stent (tube) is passed via a telescope into each ureter. This is removed as a day case usually 6 weeks later.

Surgical risks

The risk of a major complication from a laparoscopy only is about 1 -2 per 1000. The risk from the most major type of laparoscopic surgery for endometriosis is up to 1 in 10. The members of the surgical team will discuss all the risks listed below in detail.

As with all surgery the associated risks may include:

- Damage to bladder and ureters:
    - If the ureters are involved, then a stent (tube) is passed via a telescope. This is removed as a day case usually 6 weeks later.
    - If the ureter is cut, then it is possible that a cut will be required in the abdomen to re-join it.
- Extensive surgery in the pelvis may result in delay in return of bladder function. Occasionally you may need to self-catheterise in the short term and very rarely in the long-term.
- Damage to bowel: This can be in the form of a leak from the join leading to an abscess. This may require draining with a small tube, occasionally it will require a larger cut in the abdomen to correct the problem.
- Damage to nerves and blood vessels
- Infection
- Loss of a tube or ovary due to bleeding.

Risk of delayed complications include:

- Bowel leak, infection and haematoma (collection of blood in the abdomen) that can occur up to 2 weeks after the procedure. In addition, if a piece of bowel has had to be removed then there may be changes to the way the bowels work in the future. These changes usually resolve over a period of weeks to months.
- Risk of a fistula: This is an abnormal connection between the bowel (or other organ including bladder and ureter) and the vagina.
- Risk of developing a ureteric stricture.
- Risk of adhesion formation.
- Loss of ovarian function due to endometriosis and treatment to the ovary

If any of these complications occur, a laparotomy (open surgery through a larger cut) may need to be undertaken to correct the damage or to stop bleeding.

Other risks include the risk of developing a hernia from the incision sites and the risk of developing clots in the legs (DVT) or lungs (pulmonary embolus) after long operations in the pelvis. You will be given daily injections in hospital to reduce the risk.

If you experience sudden or increasing pain at home or are vomiting or feel unwell, please seek medical advice immediately.

If you are unable to pass urine, please attend A&E urgently as you maybe in urinary retention.

Where surgery is carried out for pain it is important to appreciate that although we expect the operation to result in improvement, in some situations, pain will remain, and further investigations and treatment may be required. This can be the case even in patients having a hysterectomy for pain.