

Operations

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Indications The indications for haemorrhoidectomy include: third- and fourth-degree haemorrhoids; second-degree haemorrhoids that have not been cured by non-operative treatments; 'mixed' haemorrhoids when the external haemorrhoid is well defined; bleeding causing anaemia. If there is any doubt about the diagnosis of haemorrhoids, examination under anaesthesia and/or endoscopic visualisation are necessary. The indications are more relative than absolute, as surgery aims simply to improve symptoms and is not without risk of complication.

Technique It is usual for the patient to have been taking stool softeners in the days before surgery and a preoperative enema to empty the rectum. The procedure is usually performed under general or regional anaesthesia with the patient in the lithotomy or prone jack-knife position. Haemorrhoidectomy can be performed using an open or a closed technique. The open technique is

- most commonly used in the UK and is known as the Milligan–Morgan operation – named after the surgeons who described it. The closed technique (Ferguson) is the popular technique in the USA. Both involve ligation and excision of the haemorrhoid, but in the open technique the anal mucosa and skin are left open to heal by secondary intention, and in the closed technique the wound is sutured. Edward Thomas Campbell Milligan, 1886–1972, surgeon, St Mark's Hospital, London, UK. Sir Clifford Naughton Morgan, 1901–1986, surgeon, St Mark's and St Bartholomew's Hospitals, London, UK. James A Ferguson, 1915–2005, surgeon, Ferguson Clinic, Grand Rapids, MI, USA. Antonio Longo, contemporary, surgeon, Sicily, Italy.

tissues between the haemorrhoids may be injected with dilute adrenaline (1:300 000 dilution) to reduce bleeding and aid preservation of the skin bridges left following excision. Artery forceps are applied to the skin-covered external components of the haemorrhoids and traction exerted to reveal the internal components, which are also grasped by artery forceps. With scissors or cutting diathermy, a V-shaped cut is made through the skin (Figure 80.23a). Traction by both operator and assistant, combined with careful dissection, will expose the lower border of the internal sphincter. The dissection proceeds up the anal canal, with the sides of the mucosal dissection converging towards the pile apex and with the internal sphincter visible and separate from the dissected pile (Figure 80.23b). A transfixion ligature of strong Vicryl is applied to the pedicle at this level (Figure 80.23c), the pile is excised well distal to the ligature and, after ensuring haemostasis, the ligature is cut long. Each haemorrhoid is dealt with in this manner, taking care to leave mucocutaneous bridges. If there are significant secondary haemorrhoids under these bridges they can be excised out by submucosal dissection (Parks). Careful haemostasis is important. A soft absorbable anal dressing is inserted.

Closed technique . The haemorrhoid is excised, together with the overlying mucosa, as illustrated in Figure 80.24. The pedicle is transfixed with a 3/0 polyglactin suture and the mucosal defect is closed with a continuous suture, using the same stitch. The remaining haemorrhoids are excised and ligated in a

similar fashion, ensuring that there are adequate mucosal and skin bridges between each area of excision to avoid a subsequent stenosis. /uni25CF Stapled technique . Stapled haemorrhoidopexy , also known as PPH (procedure for prolapse and haemorrhoids) (Longo), utilises a bespoke circular stapling device to excise - a cylinder of mucosa and submucosa (together with the ves - sels within) above the dentate line while simultaneously sta - pling the mucosal ends together (Figure 80.25). Great care

(b) Figure 80.22 (a) Barron's banding apparatus. (Reproduced with permission from O'Connell PR, Madoff RD, Solomon MJ (eds). Operative surgery of the colon, rectum and anus , 6th edn. Boca Raton, FL: CRC Press, 2015.) (b) The appearance of a typical 'banded' haemorrhoid. (a) (b) Figure 80.23 Ligation and excision of haemorrhoids. Open technique: pedicle; (c) trans /f_i xion of the pedicle. (Adapted with permission

from O'Connell PR, Madoff RD, Solomon MJ (eds). colon, rectum and anus , 6th edn. Boca Raton, FL: CRC Press, 2015.)

(c) (a) artery forceps have been applied; (b) dissection of the left lateral Operative surgery of the

must be taken to ensure the staple line is above the dentate line and that the posterior vaginal wall is not accidentally included. The procedure is less painful than conventional haemorrhoidectomy and is associated with quicker recovery. However, recurrence rates are higher than following conventional haemorrhoidectomy and external haemorrhoids may persist. Moreover, stapled haemorrhoidopexy has the potential for serious morbidity (staple line dehiscence, infection, rectovaginal fistula) and distressing new symptoms such as tenesmus (related to mucosal stimulation by the staples) may require reoperation and staple removal. Counselling and shared decision making is important such that the patient can weigh the short-term benefits against higher recurrence rates. Transanal haemorrhoidal ligation (HAL). Trans- anal Doppler-guided ligation of those vessels feeding the haemorrhoidal masses with or without suture 'mucopexy' Christian Johann Doppler, 1803–1853, Professor of Experimental Physics, Vienna, Austria, enunciated the 'Doppler principle' in 1842. rhoids. The HUBLe trial, which compared HAL with rubber band ligation, found that the recurrence rate following HAL was significantly lower, but HAL was less effective. The complication rate and postoperative cost-effective pain scores are better after HAL than with conventional surgery. Summary box 80.8 Treatment of haemorrhoids

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Figure 80.24 Closed technique: the haemorrhoidectomy wound has been closed with a continuous suture. (a) (b) Figure 80.25 Stapled haemorrhoidectomy: (a) the purse-string suture is placed several centimetres above the dentate line; fully opened stapling gun is inserted endoanally so that it is above the purse-string suture, which is then tied around the shaft of the gun. The gun is closed and fired; (c) after firing, a 3- to 4-cm strip of mucosa and submucosa containing the haemorrhoids is excised and the mucosal edges are simultaneously stapled together. Symptomatic – advice about defecatory habits, stool softeners and bulking agents Injection of sclerosant Rubber banding HAL/stapled haemorrhoidopexy Haemorrhoidectomy

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