

The office management of haemorrhoids

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This paper reviews the pathophysiology, symptoms, and signs of haemorrhoidal disease. The indications that necessitate patients being sent for further investigation are highlighted. The various treatments available for haemorrhoids are explained and the optimal use of different ambulatory procedures is discussed.

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Introduction

Haemorrhoids are considered a minor problem; however, they may cause considerable discomfort and anxiety. Fortunately, they can often be treated in the office with simple medical treatment. It is very important that other sinister causes of similar complaints be excluded before any form of treatment is begun.

The pathogenesis of haemorrhoids

Anal cushions, the anatomical basis of haemorrhoids, are normal components of the anal canal.¹ The cushions are thought to protect the anal canal during defaecation and to aid in completely occluding the anal orifice from even the leakage of air. When the anchoring connective tissue deteriorates, the vascular anal cushions are displaced downwards and give rise to haemorrhoidal disease.

Haemorrhoids are classified according to location as either external, internal, or mixed haemorrhoids. External haemorrhoids arise from the inferior haemorrhoidal plexus. They are covered by modified squamous epithelium and are innervated by somatic nerves. Banding of the external haemorrhoids causes pain and is inappropriate. Internal haemorrhoids arise from the superior haemorrhoidal plexus and are covered by mucosa. Mixed haemorrhoids arise from the inferior and superior haemorrhoidal plexus and their anastomotic connections.

Symptoms

Apart from ano-rectal symptoms, there are important aspects that must not be overlooked as these may predispose to treatment-related complications. Patients with certain cardiac conditions (Table 1) require antibiotic prophylaxis (amoxycillin 3.0 g orally one hour before the procedure and 1.5 g six hours afterwards) before any invasive procedure is undertaken.² Patients with a tendency to bleed or who are taking anticoagulants are at risk of delayed haemorrhages after rubber band ligation.

Table 1. List of patients that should receive anti-bacterial prophylaxis prior to haemorrhoidal treatment

Recommended for patients with:

1. Prosthetic cardiac valves (including biosynthetic valves)
2. Most congenital cardiac malformations
3. Surgically constructed systemic-pulmonary shunts
4. Rheumatic and other acquired valvular dysfunctions
5. Idiopathic hypertrophic subaortic stenosis
6. A previous history of bacterial endocarditis
7. Mitral valve prolapse with insufficiency

Symptoms of haemorrhoids come and go with spontaneous exacerbation and remission. Bleeding in particular may occur in episodes. This may account for the apparent effectiveness of some forms of treatment. Painless bleeding per rectum is the commonest symptom. A typical complaint is of bright red bleeding

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separate from the stool, often dripping or splashing immediately after defaecation. Sometimes bleeding appears as bright red spots on toilet paper.

Dark blood, as it has been retained in the rectum for some time, especially if mixed with the motion³ or with mucous, is suggestive of a tumour. Any other deviations from the typical symptom such as the passage of blood without a bowel movement or with diarrhea should prompt the physician to look for another cause of the bleeding.

Pain is an unusual symptom, unless the haemorrhoids are thrombosed or strangulated. On the other hand, pain may suggest the presence of a co-existing lesion such as a fissure or abscess. Pruritus and mucous discharge are often associated with prolapsing haemorrhoids. Faecal soiling may be due to poor perianal hygiene secondary to the large external components of haemorrhoids. Rectal prolapse, either partial or complete, can also present as a perianal lump with faecal soiling. Whereas internal haemorrhoids are separated by sulci that radiate from the anus, mucosal prolapse shows a more concentric configuration.

According to symptomatology, internal haemorrhoids are classified into four categories of degree (Table 2).

Table 2. Degree classification system for internal haemorrhoids

Type	Symptom
First degree	Bleeding
Second degree	Prolapse outside anal canal with defaecation, haemorrhoids reduce spontaneously
Third degree	Prolapse outside anal canal with defaecation, haemorrhoids have to be reduced manually
Fourth degree	Continuously prolapsed haemorrhoids that cannot be reduced

Signs

On inspection, fourth-degree haemorrhoids or external components of haemorrhoids can be seen. Faecal soiling or changes secondary to mucous discharge may also be evident. In addition to these, the presence of a painful anal fissure should prohibit further instrumentation. Haemorrhoids are palpable only when they are thrombosed. A digital examination is important for the detection of a rectal tumour and to assess the anal tone. Laxity of the anal sphincter is a relative contraindication for haemorrhoidectomy. Digital examination is complementary to proctoscopy in detecting ano-rectal pathology. It should be performed before passing a proctoscope as the patient may not be able to tolerate the instrument. Proctoscopy reveals normal swelling of the anal cushions and enlargement can only be inferred if they bulge into the lumen of the proctoscope.

Management

A thrombosed perianal varix that presents as a painful tender lump after a bout of straining can be excised, not incised, under local anaesthesia. If the problem has been there for more than three days, the pain usually has begun to improve and this can be managed conservatively with oral analgesic, sitz bath, and stool softeners. The swelling subsequently withers over a few weeks into a small fibrous nodule.

With the recognition that anal cushions are normal structures, only symptomatic internal haemorrhoids require treatment. Treatment should be tailored to the degree of involvement. Many patients present to their general practitioners when the bleeding episodes have finished.^{3,4} They seek medical advice because they are afraid they may have cancer. In general, patients aged 45 years and older, who have rectal bleeding of recent onset, bleeding to the extent of anaemia, bleeding with atypical symptoms, or patients with a previous history of polyp, carcinoma, or a family history of colon cancer should be investigated further than a proctosigmoidoscopic examination.⁵

Patients with haemorrhoidal symptoms are advised to avoid constipation or straining by having a high-fibre diet,⁶ taking bulk laxative and drinking adequate water (at least five 8-ounce glasses of water per day). Watery stools, however, are not desirable either, because tenesmus and involuntary straining result. Bad habits such as prolonged sitting on a commode and the use of a ring cushion are to be condemned. These increase venous pressure in the ano-rectal area and increase the likelihood of bleeding and prolapse.

Topical proprietary preparations are frequently used, however, there is no data to prove their efficacy. The prolonged use of steroid-containing preparations may lead to mucosal and perianal skin atrophy, in addition to the other potential harmful effects of steroids. Moreover, suppositories always end up in the rectum and exert minimal effect on the anal canal. The most important harmful effect of local applications has to be the delay in proper treatment of the other sinister causes of ano-rectal complaints.

The ambulatory treatment of haemorrhoids

The ambulatory treatment of haemorrhoids includes non-excision procedures and tissue excision procedures. The most widely used non-excision procedure involves the injection of sclerosant (5% phenol in almond oil) into the submucosa of the pedicle of the haemorrhoids. This produces fibrosis of the submucosa, thereby obliterating the vessel and fixing the haemorrhoids, which prevents their prolapse. Tissue excision can be achieved by applying rubber bands to the base of the haemorrhoids. This reduces blood flow to the haemorrhoids and causes fibrosis, thus fixing the haemorrhoids. The subsequent sloughing off of the haemorrhoidal tissue decreases the bulk of the haemorrhoids.

A non-excision procedure is the treatment of choice for first-degree haemorrhoids. By definition, first-degree haemorrhoids do not prolapse, hence, it is inappropriate to grasp tissue for rubber band ligation. Second- and small third-degree haemorrhoids are amenable to banding but individuals with acute strangulated haemorrhoids, lesions with large external components, large third- or fourth-degree haemorrhoids should be admitted to hospital for haemorrhoidectomy (Table 3).

Table 3. Treatment strategy for each haemorrhoid type

Degree	Treatment
First degree	Injection sclerotherapy
Second or small third degree	Rubber band ligation
Third degree, fourth degree, large external component	Haemorrhoidectomy

Injection sclerotherapy

A proctoscope is passed and slowly withdrawn until the haemorrhoids bulge into the lumen. The most dependent haemorrhoid should be treated first. The proctoscope is then tilted towards the haemorrhoid to be injected. The needle is introduced into the submucosa of the pedicle of the haemorrhoids at the level of the ano-rectal junction. Approximately 3 ml of sclerosant is slowly injected into each site. Injection should be painless; pain indicates that either the site of injection is too distal into the somatic nerve-innervated anoderm or that the sclerosant is being injected too deeply. There should be no resistance unless the injection is too deep or on a previously injected site. Submucosal vessels on the bleb of mucosa raised by the sclerosant can be observed. If the mucosa turns white, the injection has been too superficial. The leakage of sclerosant on withdrawal of the needle signifies too rapid injection. Bleeding after injection can be controlled by the topical application of a 1:10 000 adrenaline solution.

Other non-excision procedures such as infrared coagulation⁷ or electronic probe coagulation⁸ have little proven advantage over injection therapy. These procedures are more time-consuming and additional expensive instruments are needed to perform them.

Patients are warned that a small amount of bleeding may occur for a few hours after injection sclerotherapy. A laxative should be taken for the first two days. Some patients have discomfort for a few days but pain is not common. Complications are avoidable; the sloughing of mucosa is due to either too superficial injection or to too much solution being injected into a single site. An abscess can be caused by the injection of sclerosant into the wrong plane.

Rubber band ligation

A proctoscope is passed and a ligator loaded with two rubber bands is introduced into the rectum. At the pedicle of the haemorrhoid, as much rectal mucosa as is feasible is grasped with a tenaculum into the ligator without causing any pain. The rubber bands are then released. Rubber bands should not be applied near the dentate line. Under no circumstance should the bands be placed with pain. Pain will not go away, it will only worsen with the subsequent oedema. Although banding at more than one site causes more discomfort, most patients tolerate multiple banding with acceptably few severe local symptoms. Multiple banding in a single session is safe and cost-effective.⁹⁻¹²

Perianal discomfort or a sense of rectal fullness was reported in 84% of 50 patients despite the rubber bands having been carefully placed. Fourteen patients (28%) were unable to perform their normal activities on the day of treatment.¹³ Post-banding pain has been reported in 1% to 29% of patients.¹⁰ Symptoms can usually be managed using stool softener, oral analgesic, sitz bath, and rest. Delayed haemorrhage and sepsis are the two most serious complications of rubber band ligation. Delayed haemorrhages one to two weeks after ligation are due to the sloughing off of the ligated tissue and local infection. This occurs in approximately 1% of patients.^{9,14} Although unusual, bleeding can be severe and require hospitalisation, suture ligation, and transfusion. Patients taking anticoagulants or aspirin are particularly at risk for this complication. Options such as injection sclerotherapy or haemorrhoidectomy should be considered in these patients.

Sepsis after ligation is a potentially devastating complication and mortality has been reported.¹⁵ One of the reasons for septic complication may be the misdiagnosis of haemorrhoids as the cause of ano-rectal symptoms secondary to perianal sepsis. Patients complaining of delayed perianal pain, fever, difficulty urinating, or scrotal swelling have to be examined immediately. Necrotising infection should be treated aggressively in hospital with massive intravenous antibiotics, vigorous debridement, and sometimes by performing a defunctioning colostomy.

Conclusion

Ambulatory treatments are effective, provided treating physicians are aware of the limitations. There are situations when further surgical evaluation and treatment are appropriate. Patients with fourth-degree haemorrhoids, large third-degree haemorrhoids, haemorrhoids with a large external component, acute thrombosed strangulated haemorrhoids, and those with haemorrhoidal symptoms that are not effectively treated by office procedures should undergo haemorrhoidectomy.

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