Internal Medicine: Open Access

Joji and Buchanan, Intern Med 2018, 8:1
DOI: 10.4172/2165-8048.1000266

Mini Review Open Access

Haemorrhoids-Current Management Overview

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Received date: January 26, 2018; **Accepted date:** January 30, 2018; **Published date:** February 05, 2018

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Abstract

Symptomatic haemorrhoidal disease is a common ailment in the western world. Common symptoms are bright red bleeding, pruritus, hygiene issues and prolapse. Visual inspection and digital rectal examination usually confirm the diagnosis, assisted by procto-sigmoidoscopy to evaluate the internal extent. Management options range from conservative measures to a variety of outpatient and surgical procedures. Outpatient treatments include injection sclerotherapy, rubber band ligation (RBL). Surgical options include hemorrhoid excision, Doppler guided ligation of the feeding haemorrhoidal vessels by haemorrhoidal artery ligation operation (HALO), transanal haemorrhoidal dearterialisation (THD) or stapled haemorrhoidopexy. Excision is usually the treatment of choice where haemorrhoids are irreducible and largely external, or particularly where there is a large skin tag element. There is an increasing trend towards minimally invasive treatment methods which aim to not only preserve function but enable an enhanced recovery.

Keywords: Haemorrhoids; Rectal bleeding; Thrombosis; Management; Rubber band; Hemorrhoidal artery ligation; Stapled hemorrhoidopexy

Background and Clinical Evaluation

Haemorrhoids are pathologically dilated anal cushions-they are common, particularly in the western world, and thought to be exacerbated by low fiber diet and straining [1]. They can in addition either appear or progress during pregnancy [2]. They are associated with increased blood flow to the anal canal which has been demonstrated on Doppler flow studies, and may also have a relationship with altered collagen in this region [3].

The most frequent presenting symptoms are rectal bleeding, which is typically bright red in nature, often dripping into the bowl at the end of defecation or present on wiping, prolapse which either reduces spontaneously or requires manual reduction, discomfort, pruritus, mucous or fixed lumps at the anal verge. In some, bleeding is severe enough to cause anemia; emergency presentation with gangrenous or prolapsed strangulated haemorrhoids is thankfully rare.

Other symptoms including difficulty with anal hygiene or with defaecation which need to be evaluated in terms of continence/functional disorders and structural or neoplastic colorectal pathology both by history and further clinical assessment and investigations.

Visual inspection and digital rectal examination usually confirm the diagnosis, assisted by procto-sigmoidoscopy to evaluate the internal extent. Several classifications exist including by Grade (I-IV) or degree (1st to $3^{rd}/4^{th}$) [4]-typically haemorrhoids can be present at the 3,7 and 11 o'clock position as described with the patient in lithotomy position, however some patients can present with as little as a single pole hemorrhoid; a few will present with circumferential haemorrhoids. As well as the radial position and the grade, the relationship to the dentate line is important as this can help direct therapeutic options.

Treatment Strategies

Many patients present unaware that haemorrhoids are the cause of their symptoms, and seek re-assurance that they are not harboring more serious pathology. Often given these reassurances both clinically and where necessary by colonoscopic assessment, symptoms will often improve by increasing dietary fiber intake and over the counter (OTC) preparations-whilst many of these OTC medications exist rigorous scientific evaluation is scarce such that it is difficult for specialists to specifically recommend a particular product.

However, a significant proportion of patients will have tried and failed these conservative measures and seek specialist treatment for persisting symptoms. The decision of which treatment is most appropriate can really only be made after a patient is fully appraised of the range of different modalities available, their benefits and potential side effects, efficacy and the natural history of the condition. Ultimately, as haemorrhoids are a benign anorectal condition, treatment aims to improve a patient's quality of life (QOL) which must be borne in mind during decision making.

Outpatient Therapy

Outpatient treatments include injection sclerotherapy with oily phenol, rubber band ligation (RBL), typically with Barron's bands applied using a suction device. These techniques are simple and as they are meant to be applied in the insensate part of the anal canal above the dentate line then should be relatively pain free.

Side effects are few for injection, though can include infection and prostatic inflammation if the injectate diffuses too deeply [5]. Bleeding is rare. Injection aims to cause a sclerosing reaction which in turn is thought to diminish symptoms of bleeding and pruritus, though may have less benefit for prolapse. Several courses can be applied to obtain the maximum benefit and as this is straightforward patients usually tolerate this well.

RBL can be safely administered in the outpatient setting though some prefer to undertake this at the same time as flexible endoscopy – the advantage of suction banding without anesthesia is that sensation can be assessed during suction but prior to application of the band, thus a band applied too low straddling the dentate line can usually be avoided-once these bands are placed they cause an ischemic necrosis reaction and can take up to 10 days to fall off. Several bands can be applied in up to 3 radial positions at once.

Again, side effects are uncommon, though include pain usually where an application is too caudal, fainting usually caused by vagal tone after banding, hemorrhage, which can occasionally be severe and require surgical suturing or infection.

Many patients will have improved QOL with these outpatient modalities thus never progressing to surgical therapies.

RBL has recently been compared to operative treatment [6] and shown to be as effective but cheaper. Alternative outpatient techniques have been attempted, though not met with widespread enthusiasm such as Ultroid which in effect applies a low heat to haemorrhoids, though its efficacy is unclear.

Surgery

Patients have traditionally tried everything to avoid hemorrhoid surgery as stories abound among friends and relatives of the long and painful recovery from traditional surgery. However, those patients who do undergo surgery usually notice an improvement in their QOL. Many will have already have had outpatient or OTC treatments prior to considering surgery.

In essence, surgical options include hemorrhoid excision, Doppler guided ligation of the feeding haemorrhoidal vessels by haemorrhoidal artery ligation operation (HALO) [7] or trans anal haemorrhoidal de-arterialization (THD) [8], and then plication and elevation of prolapsed elements of the anorectal haemorrhoidal prolapse using these techniques, or stapled haemorrhoidopexy; there has additionally been recent interest in radiofrequency ablation applied to the hemorrhoid tissue within the anal canal.

Excision

Excision, or Milligan-Morgan haemorrhoidectomy aims to excise the predominant haemorrhoidal tissue usually at 3, 7 and 11 o'clock and preserve adequate muco-cutaneous bridges in between to allow healing by secondary intention [9]. Some advocate Ferguson haemorrhoidectomy with closure of the mucosal gaps though frequently these break down and this is probably most useful where there is extensive residual tissue [10].

Most employ diathermy though there have been advocates of laser [11] and ligasure [12] though in general this increases the cost of the procedure without a clear benefit in terms of healing or decreased complication.

A meta-analysis [13] has shown that excisional hemorrhoid surgery has the lowest recurrence rate though at the expense of longer healing times and increased postoperative pain. Excision is usually the treatment of choice where haemorrhoids are irreducible and largely external, or particularly where there is a large skin tag element.

Metronidazole [14] was shown to diminish post-operative pain and is given by many surgeons to help in this regard. The chance of serious sequelae to surgery is rare, though patients need to be aware of the risk of hemorrhage (usually secondary), infection, recurrence, altered faecal continence, persisting pain, unhealed wounds and stenosis.

PPH or Stapled Haemorrhoidopexy

Issues with prolonged healing after traditional surgery led to the development of Procedure for Prolapse and Haemorrhoids (PPH). In essence, this method aims to excise a sleeve of rectal mucosa/submucosa using a circular stapling device and simultaneously elevate/reduce the prolapse-in so doing part of the blood supply to the haemorrhoidal tissue is thought to be interrupted. Initial advocates [15] felt this technique revolutionised the recovery for patients and that this might become the standard of care for many (if not all). As the anoderm was not interrupted the postoperative pain should be less.

However, concerns were raised after reports of intractable tenesmus in some cases [16] which slowed the progression of this technique; other complications including rectovaginal fistulation, rectal closure and rectal perforation led the FDA to issue a warning about this technique, and its popularity has subsequently waned.

HALO/THD

The simplicity of these techniques, which ligate under Doppler guidance the haemorrhoidal vasculature and subsequently on plication allow reduction of prolapsed anorectal mucosa and haemorrhoidal prolapse, has explained their popularity-the risks are few and as the sutures are dissolving the risk of tenesmus or functional symptoms due to a staple line seems non-existent-nevertheless, they are not pain free and have a higher relapse rate than both PPH and excision. However, because of the general lack of complications and acceptability [13] many surgeons now undertake this method for patients with prolapsing haemorrhoids.

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This method uses radiofrequency ablation administered under local anesthetic control into the hemorrhoid under sedation or under short anesthesia; the risks are few however overall efficacy is unclear.

Summary

Haemorrhoids are common, their aetiology is poorly understood-other more serious conditions need excluded however for those with persisting symptoms, simple in-patient or outpatient methods of treatment are available which are increasingly minimally invasive and aim to not only preserve function but enable an enhanced recovery.

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