

Review Article

Hemorrhoids: which is the best therapeutic option?

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ABSTRACT

Hemorrhoids are one of the commonest of rectal diseases seen all across the globe. Constipation and bleeding are the main symptoms associated with this condition. The condition maybe associated with an underlying carcinoma as well. Understanding the pathophysiology will enable the surgeon to determine the best therapeutic option for this condition. A brief review of clinical evaluation and treatment options is presented in this paper.

Keywords: Haemorrhoids, Non-operative Piles, Pathology, Surgical, Treatment

INTRODUCTION

Hemorrhoids, best described as piles in common language, is one of the most common conditions seen in colorectal clinics. Bleeding associated with chronic constipation are the presenting features of this condition. Hemorrhoids are best defined as “enlargement and distal displacement of the anal cushions.” The abnormal dilatation and irregular distortion of the vessels together with damage to the supporting connective tissue is seen within the hemorrhoids.¹ A wide variety of therapeutic options have evolved over a period of time. However, no single option can be considered as the gold standard of treatment. Understanding the mechanisms of hemorrhoid development significantly helps in deciding the best therapeutic option.

PATHOPHYSIOLOGY

The exact pathogenesis of hemorrhoid development continues to be a topic of debate. Various theories have been postulated but none of them can really explain the natural history of the disease. The most commonly accepted hypothesis is sliding of the anal canal lining when the supporting tissues of the anal cushions become non-functional and the anal cushions bulge downwards.^{1,2}

The sites of the three major anal cushions are: right anterior, right posterior and left lateral. Histological evaluation of these anal cushions reveals a variety of changes. These include vascular dilatation, vascular thrombosis, degeneration of supportive tissues of the mucosa and rupture of the anal submucosal muscle. These changes are superimposed with inflammation.²

CLASSIFICATION

These are divided into 4 grades as per Goligher's classification.³

- First Degree/Grade 1: Anal cushions bleed but do not prolapse.
- Second degree/Grade 2: Anal cushions prolapse through the anus on straining but reduce spontaneously.
- Third degree/Grade 3: Anal cushions prolapse through the anus on straining/exertion but require manual replacement within the anal canal.
- Fourth degree/Grade 4: The prolapse stays out at all times and is irreducible

If left untreated, fourth degree hemorrhoids can get thrombosed and incarcerated, thus involving the entire

circumference of the anal opening. Classifying hemorrhoids not only serves to determine the best option for each grade of hemorrhoids but also provides a measurable parameter for comparison of treatment options.^{3,4}

CLINICAL EVALUATION

The commonest presenting feature is rectal bleeding.⁵ The bleeding is bright red in color in the form of spurts. It usually follows the passage of stools. As a result, the stools are covered with fresh blood. The bleeding at times, may be so severe that the patient may develop anemia which may, at times, be the presenting feature of hemorrhoidal disease in a select few patients. Alterations in bowel habits associated with rectal bleeding is a dangerous sign and could be due to a malignancy higher up. Constipation is a common accompaniment of this condition.⁶ Long term straining while passing stools is the commonest symptom. Patients spend a significant amount of time in an attempt to have a satisfying bowel evacuation. Pruritis ani may also be a symptom in cases of prolapsed piles and intervening fissures due to unscientific treatments taken from quacks.

Therefore, a patient presenting with bleeding per rectum needs a thorough evaluation of history keeping in mind the chances of an underlying malignancy. Per digital and proctoscopic examination is the first step in the diagnostic workup. A per digital examination will help assessing a rectal growth as well as confirming the presence of fresh blood in the rectum. Associated abscesses and fissures can also be diagnosed. A proper proctoscopic examination will help in confirming the diagnosis.⁶ The grade of piles can be determined by a good proctoscopic examination. It is also a safe procedure to subject all patients suffering with hemorrhoids to undergo colonoscopic evaluation in order to rule out colorectal malignancy.⁶

MANAGEMENT

Management of hemorrhoidal disease varies from dietary and lifestyle modifications to curative surgery. Management approach is based on the grade of the hemorrhoids.

Grade I piles many a times can be managed by simple dietary and lifestyle modifications. This includes plenty of water intake along with a good volume of dietary fiber.⁷ Stool softeners may be added to it in case if the patient does not respond to simple dietary modification measures. Majority of patients show spectacular improvement in their symptoms over a 6-week period. Medical treatment has also been advocated.^{8,9} Oral flavonoids and venotonic agents have been advocated. They increase the vascular tone, decrease venous capacity and capillary permeability and facilitate lymphatic drainage.¹⁰ They also have some amount of anti-inflammatory properties.^{8,10} Oral Calcium dobesilate is

another venotonic agent used in treatment of piles. Topical treatments like nitroglycerin ointment, topical nifedipine ointment have been used.¹¹ However the therapeutic effects of these agents are not significant so as to advocate them in routine clinical practice for treatment of piles.

Nonoperative treatment

Sclerotherapy: This is an effective method for management of grade 1 and 2 hemorrhoids.¹² A sclerosant is injected into the submucosal layer. It elicits an inflammatory reaction followed by fibrosis. This leads to fixation of mucosa to the underlying muscle, thereby preventing downward sliding of the mucosa.

Rubber Band Ligation (RBL): RBL has been a traditional method of treating hemorrhoids. It is best suited for first and second-degree hemorrhoids.¹³ This induces ischemic necrosis and scarring causing the fixation of the connective tissue to the rectal wall.

The rubber band has to be applied well above the dentate line in order to prevent pain. More than one session are needed to induce complete resolution. The complications include pain, bleeding from mucosal ulcerations, urinary retention and thrombosis of the external piles. Patients on anticoagulants should stop taking these medications one week prior to the procedure and through two weeks after the procedure.

Infrared Coagulation: This causes coagulation of the tissue and causes the vaporization of water from the cell, thereby causing shrinking of the hemorrhoidal mass. It is a safe technique. However, it is not useful for prolapsing piles.

Radiofrequency ablation (RFA): This is a new modality of treatment. The mechanism is that it induces coagulation and vaporization of water in the tissues. Vascular component of the hemorrhoidal mass is reduced as the hemorrhoidal mass becomes fixed to the underlying tissues causing fibrosis. The procedure can be done on an outpatient basis, but the recurrence rate appears to be quite high.

Cryotherapy: Cryotherapy ablates the pile mass with a freezing cryoprobe. It causes less pain because the sensory nerve endings are destroyed at a very low temperature.

As yet, there is no consensus as to which is the best non-operative modality of treatment for hemorrhoids.¹²

Surgical Treatment

Operative treatment is indicated when non-operative methods have failed, or complications have developed.¹² Various surgical techniques have been proposed based on various theories of pathogenesis:

Hemorrhoidectomy: The traditional ligation-excision continues to be the best method.¹² It can either be done using scissors or by cautery dissection. Availability of newer energy sources have greatly enhanced surgical outcomes in these patients.

The main complication of open method is pain. Other complications include acute urinary retention, bleeding and septic complications in rare cases. Anal strictures and anal incontinence have also been described in improperly dissected lesions.

Plication: Plication aims to replace the anal cushions at their original positions without the need for surgical excision. The techniques consist of oversewing the hemorrhoidal mass and tying the knot at the highest point of the pedicle. Bleeding is one of the commonest complications of this method.¹¹

Doppler-guided hemorrhoidal artery ligation: This procedure has become increasingly regular in Great Britain. It is based on the principle of increased vascularity of the vascular pedicle originating from the superior rectal artery.^{14,15} Identification of the artery under doppler guidance followed by suture ligation helps in reducing the symptoms. This method is best suited for management of second and third-degree hemorrhoids. Short term results are quite promising, although long term outcomes require evaluation.

Stapled hemorrhoidectomy: This procedure is best suited for prolapsed piles.¹⁶ It helps in removal of the pile mass as well as fixation of the prolapsing redundant mucosa. Surgical outcomes are quite satisfying, yielding excellent patient satisfaction. This method is reserved for patients with circumferential prolapsing piles or all three primary piles.^{16,17,18}

Various comparative studies have shown that short term results with newer techniques may be promising.^{19,20} However, long term results are not so. Open method still continues to be the best for piles. Though short-term complications like pain may arise, the long-term complications are more promising.

CONCLUSION

The best method for treating hemorrhoids continues to be a topic for debate. Newer methods have been proposed and are being practiced in various continents of the world. However, no consensus has been reached as to which method is the gold standard. A conservative approach to grade I and II piles is advisable. However, surgical intervention is indicated in grade III and IV piles. Open method still holds the long-term promise of curing the condition. An elaborate colonoscopic evaluation is strongly indicated in all cases of hemorrhoids in order to rule out the presence of any suspicious or malignant lesion of the colon.

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