



## HAEMORRHOIDS: A REVIEW OF CURRENT TECHNIQUES AND MANAGEMENT

Neeraj

Department of Shalyatantra, Sri Jjayendra Saraswathi ayurveda college, Chennai, Department of ayurveda, Sri Chandrasekhrendra Vishwamahavidyalaya, Tamilnadu.

Vasudeva Reddy

Department of shalya tantra, Sri Jayendra Saraswathi Ayurveda College, Chennai, Department of Ayurveda, Sri Chandrasekhrendra Vishwamahavidyalaya, Tamilnadu.

Ashutosh Kumar  
Tripathi\*

Department of Shalya Tantra, Shri Dhanwantry Ayurvedic College and Hospital, Chandigarh Government Ayurvedic Hospital Nigohi, Sahjahanpur, UP. \*Corresponding Author

**ABSTRACT** Haemorrhoids are dilated veins occurring in relation to the anus it may be external or internal to the orifice. veins in internal haemorrhoids become engorged the anal lining descends and gripped by the anal sphincter. Most physician see the many patients with chief complaints bleeding, bowel movement and prolapse. Of course, if no any symptoms occur should entertain the patient with invasive treatment. If the symptoms due to hemorrhoids should do the establish surgical and Para surgical treatment which is necessary mild symptoms of hemorrhoids 1<sup>st</sup> degree may be treated with diet schedule modification and medicinal approach and 2<sup>nd</sup> degree with severe symptoms may be treated with trans- fixation process, rubber band ligation and infra-red photocoagulation, sclero therapy, liquid nitrogen method and 3<sup>rd</sup> degree & 4<sup>th</sup> may be treated with surgical intervention like hemorrhoidectomy.

**KEYWORDS :** Haemorrhoids, infra-red coagulation, barron band ligation, cryotherapy, sclero therapy, haemorrhoidectomy.

### INTRODUCTION

[1]Haemorrhoidal tissue is a normal component of the anal canal and is composed predominantly of vascular tissue supported by smooth muscles and connective tissue. its function is providing the complete closure of the anus at rest and as well as protect anus muscles from any injury during defecation. haemorrhoidal disease is the most of the common anorectal condition and difficult to determine because many people seek & taking medicine from various personal and socioeconomic reason. Estimate the proportion of the india population affected range more than 15million annually. [2]Internal haemorrhoids dilatation of the internal venous plexus with an enlarged displaced anal cushion. [3] internal haemorrhoids are frequently arranged in three groups at 3, 7, 11 o'clock this distribution has been described to the venous drainage of the anus there are two subdivision of the right branch of the superior rectal vein, left branch remain single in between these three primary haemorrhoids there may be smaller secondary haemorrhoids. [4] principal of haemorrhoids can be divided into three parts . pedicle is situated at the anorectal ring, seen through proctoscope covered with pale pink mucosa, at this area occasionally pulsating artery can be felt. internal haemorrhoids just below anorectal ring it is bright red or purple covered by mucous membrane. External haemorrhoids lies between the dentate line and the anal margin covered by skin through which blue vein can be seen. [5] The degree of the resultant prolapse is used to grade internal haemorrhoids using Goligher,s classification system Grade I : haemorrhoids not prolapsing ; Grade II :haemorrhoids prolapse on straining but reduce spontaneously ;Grade III : haemorrhoids require manual reduction ; Grade IV: haemorrhoids are non reducible. [6] symptoms resulting from internal haemorrhoids are commonly bright red bleeding per rectum , mucosal prolapse or protrusion, puritus ani. [7]

Pain is not characteristic unless there has been thrombosis or strangulation of haemorrhoids can lead to gangrene it should be noted that severity of the symptoms does not correlate with degree of haemorrhoidal prolapse. for assessment as well as anorectal abdominal examination also mandatory during inspection get the specific characteristics features of hemorrhoids prolapse according to degree. DR Erelv abnormality in anal canal and thickened tissue inside anal canal. proctoscopy is key diagnostic of bulging of piles in lumen area. conservative treatment has been mainly for the hemorrhoid I & II Degree change in the diet, lifestyle and medicinal approaches like oral hydration increases and stool softener laxative. Dietary fibers are also helpful to reduce the all symptoms and bleeding. [8] non-surgical intervention includes rubber band ligation, injection sclerotherapy, cryotherapy laser therapy, diathermy coagulation and infrared coagulation. these can be performed in the case of Grade I & III Haemorrhoids. meta-analysis of outcomes from these interventions has demonstrated rubber band ligation to be the most effective in terms

of response to treatment and reduced requirements for further interventions. surgical intervention is choice for the degree III & IV haemorrhoids. [9] Complication of haemorrhoids is rare mostly it occurs early stage of second degree. in this bleeding occurs externally as well as internally after bleeding haemorrhoids retracted or has been returned. In this case rectum found with blood. suppuration, ulceration, thrombosis, fibrosis, gangrene and pyaemia main complication occurs. [10] secondary haemorrhoids causes are portal hypertension, pregnancy, and carcinoma of rectum.

### Treatment

Conservative	Medicinal Approach Local ointment Suppositories High residue diet Laxatives
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### Specific Management And Techniques

[11] Injection Therapy	Sclero therapy {5% phenol in almond oil}	Ideal for 1 <sup>st</sup> degree internal haemorrhoids Cure 2 <sup>nd</sup> degree also.	Complication ulceration necrosis injection Site, Submucosal abscess Oleogranuloma
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Procedure: Take patient in lithotomy position with empty rectum. painting the area with bitadin solution insert a [12] proctoscope and displayed the haemorrhoids again further proctoscopy done until haemorrhoids disappeared in lumen only upper end is visible. injection make as point above main mass of each haemorrhoids, into the submucosa and just above anorectal ring. using a Gabriel's syringe needle directed towards the rectal wall and 3-5ml of 5% phenol in almond oil is injected. injection produce elevation and pallor of mucosa. solution spread submucosa upward to the pedicle, and downward to internal haemorrhoids and 2<sup>nd</sup> degree haemorrhoids if present. injection is painless only dull ache for few hours. one haemorrhoid present cured by one injection if 3 equally enlarged each injected at same sessions. often three sessions at 6 weekly intervals required.



### Infra-red Coagulation:

simple techniques and may be considered in suitable cases.<sup>[13]</sup> both direct current and bipolar probes are effective for the control of chronic bleeding from grade I to III Degree internal haemorrhoids. but direct current produces complications than bipolar.



Infrared light is applied to the base of the internal hemorrhoid. It reduces the blood flow to hemorrhoid causing it to shrink.

### Cryosurgery –

freezing of haemorrhoidal tissue by liquid nitrogen.<sup>[14]</sup> the extreme cold ( $-196^{\circ}\text{C}$ ) application caused coagulation, necrosis of pile which subsequently separated and dropped off. Often sometime complication is mucous discharge.

### Barron Band Ligation:

for 2<sup>nd</sup> degree haemorrhoids which too large and not cure by sclero therapy.<sup>[15]</sup> on the base of the pedicle of each haemorrhoids tie slipping tight elastic band with special instrument. band causes ischemic necrosis of piles, which slough off with in few days.<sup>[16]</sup> Band should apply 1-2cm above dentate line. band should not for those taking anticoagulant and immunocompromised patient. should not be banding all three masses in same session. gap of 2 week taken as ideal. Often complications severe pain, fever and urinary retention after band examine under GA and remove band.



### Surgical Management

Hemorrhoidectomy – excision of pile masses up to base indicated in Grade II & III hemorrhoids. it is a technique that has been demonstrated to have successful long-term result. it is only treatment for the large external haemorrhoids. there are two popular well-established method of surgical excision “open ” milligan morgan excision and the “closed ” Ferguson method. the milligan morgan techniques first described was 1937 and involve dissection of haemorrhoids off the underlying anal sphincter complex and ligation of the vascular pedicle.<sup>[17]</sup> the resulting mucosal defects are left open to granulate by secondary intention. The Ferguson operation described in 1959 is essentially modification of milligan morgan procedure in which the mucosal defect edges and skin are closed with a continuous suture.<sup>[18]</sup> In milligan morgan method stretch the sphincter identify pile mass with proctoscope dissection of pedicle and trans fixation ligature with non-absorbable silk after that treaming the wound and haemostasis achieved.<sup>[19]</sup> Milligan morgan procedure is the most widely practiced techniques and considered as current “ GOLD STANDARD” for surgical management. Although it should be noted the closed techniques most popular in united states. both operation have been demonstrated equally effective and safe, however the closed techniques has been demonstrated to result faster wound healing.<sup>[20]</sup> Short term complication like retention of urine {20%}, secondary haemorrhoids, anal stenosis {1%}, wound infection, subcutaneous abscess, fissure { 0.2%} , incontinence {0.4%} , fistula { 0.5%}. Modification of the original milligan morgan techniques has been described including diathermy haemorrhoidectomy as opposed to scissor dissection. And more recently the use of ultrasonic scalpel, laser and bipolar electrothermal device is attempt to reduce post operative pain and blood loss and permit faster wound healing and a quicker return to normal activity. Spasm of anal sphincter play a significant role in origin of pain following hemorrhoidectomy.<sup>[21]</sup> To relieve the spasm techniques have included surgical sphincterotomy.<sup>[22]</sup> Reversible chemical sphincterotomy using topical application 0.2% GTN ointment or 2% Diltiazem cream and injection of botulinum toxin. Others techniques to reduce post operative pain following hemorrhoidectomy have included the use laxatives pre and post operatively, perioperative use of local anesthetics and analgesics.

### Stapled Haemorrhoidopexy: Non-excisional Procedure

This technique is mostly used for prolapse and haemorrhoids specially III & IV Degree. (PPH) procedure for prolapse and haemorrhoids, stapled anopexy, stapled prolapsectomy and stapled mucosectomy was

first described in<sup>[23]</sup> 1997 by Dr Antonio longo. It is a technique in which less time consume, less bleeding, no long-term side effect and no more hospital stay come to normal activity earlier. In procedure after reduction prolapsed pile, a prolene purse string suture applied circumferentially, taking mucosal bite 3cm above dentate line by using CAD. Maintaining traction in tails of sutures the stapler is fully closed and fired slowly stapler opened and withdrawn. Look the doughnut if it is complete no worried. circular ring of mucosal tissue above dentate line is removed. no removal of external & internal haemorrhoids. Stapler haemorrhoidopexy recurrence chances is more than excisional hemorrhoidectomy.<sup>[24]</sup> stapled haemorrhoidopexy was however tempered by report of serious surgical complication including; pelvic sepsis, rectal obstruction, rectal perforation and staple line dehiscence .<sup>[25]</sup> new post operative symptoms including fecal urgency and anal pain. A study concluded that conventional studies offer a more effective cure for grade IV and remain the gold standard in the surgical treatment of haemorrhoids particularly if reoccurrence and prolapse are most important clinical outcome.

### Haemorrhoidal Artery Ligation

Haemorrhoidal artery ligation (HAL) is a novel non-invasive surgical treatment for haemorrhoids that was developed by the Japanese surgeon Morinaga in 1995.<sup>[26]</sup> It is a technique that is based upon an understanding of the pathogenesis and arterial inflow to haemorrhoids and can potentially be performed under sedation and/or local anaesthesia. The procedure entails precise identification of the superior rectal arteries supplying haemorrhoids using a Doppler transducer located in the side wall of a special proctoscope. Using an applied frequency of 8.2 Mhz and an introduction angle of approximately  $60^{\circ}$  a screening depth of approximately 7 mm is provided.<sup>[27]</sup> This enables identification of the haemorrhoidal arteries which are then selectively suture ligated 2-3 cm above the dentate line through a lateral ligation window within the proctoscope (situated proximally to the transducer). Ligation of these arteries prevents inflowing blood to the haemorrhoidal venous plexus. This causes a reduction in plexus internal pressures and subsequently results in both a cessation of haemorrhoidal bleeding and shrinkage of haemorrhoidal tissues. Many studies are demonstrated that the technique is welltolerated, is a relatively painless procedure and can be performed with reduced anaesthetic intervention using sedation and/or local anaesthesia. Morinaga documented concerns regarding potential injury to the urethra, vagina and prostate when performing the arterial ligation. Other complications they recorded included; bleeding, thrombosis, defaecation pain, anal fissures, urinary retention, urinary infections, and stool retention 3but at reduced rates when compared to studies for conventional haemorrhoidectomy. Similar complication rates were found in Dal Mante et al's study.<sup>[28]</sup> The majority of patients treated by the HAL technique in studies to date have suffered with grade II or III haemorrhoids with only small numbers of grade IV patients. Whilst the technique clearly appears effective in treating symptoms of bleeding (which makes physiological sense given that the haemorrhoidal arterial branches are ligated) it potentially is not so beneficial for prolapsing symptoms.

### Haemorrhoidal Artery Ligation And Recto Anal Repair (HAL-RAR)

In order to resolve the problem of symptomatic redundant haemorrhoidal tissue remaining following HAL; the technique was modified at the end of 2005 to additionally include a Recto Anal Repair (HAL-RAR). The HAL-RAR procedure involves haemorrhoidal artery ligation followed by plication of the redundant haemorrhoidal tissue, drawing it back up into the anus where the tissue scars over and integrates back into the anal tissue. Thus, there is both a disruption of arterial blood into the venous plexi and a reduction of the prolapsing tissue. The RAR portion of the procedure enables symptoms resulting from prolapse such as mucus, puritus and occasional seepage of stool to be resolved making it potentially more beneficial for those patients with Grade III or IV disease. The inclusion of the RAR does however appear to make the procedure more painful than a HAL alone but it is still able to be performed under conscious sedation and has been documented to provide significant symptomatic relief. Up to date there are no published studies to demonstrate long term outcomes and complication rates from HAL-RAR procedure.

### CONCLUSION

Although haemorrhoidectomy is currently the 'gold standard' surgical treatment for haemorrhoids, because of its' proven effectiveness. Post operative pain following haemorrhoidectomy appears to be the most important motivating factor in the drive to acquire better treatment

options. stapled haemorrhoidopexy has been found to significantly reduce post operative pain and appears to be well tolerated by patients. It has been demonstrated to be an effective haemorrhoidal treatment however there are still concerns if recurrence and prolapse are the most important clinical outcomes and there remains a small risk of serious post operative complications. Overall, HAL has so far proven to be a painless, safe and efficacious method to treat haemorrhoids particularly if bleeding is the main complaint. The techniques effectiveness in treating prolapse symptoms is not clear. Combining HAL with a recto anal repair (HAL-RAR) potentially resolves this issue and still enables the procedure to be relatively pain free although at present there is no supporting published data.

## REFERENCES

1. Kodner IR, fry RD, Fleshman JW, Binbaum EH. Colon, rectum, and anus. In: Schwartz SI, Shires GT, Spencer FC, editors. Principles of surgery. 1994. 1191-1318.
2. RCG Russell, Norman S. Williams & Christopher J.K. Bulstrode editor. Bailey & love's short practice of surgery 24<sup>th</sup> edition chapter 72 page no - 1255
3. RCG Russell, Norman S. Williams & Christopher J.K. Bulstrode editor, Bailey & love's short practice of surgery 24<sup>th</sup> edition chapter 72 page no - 1256
4. RCG Russell, Norman S. Williams & Christopher J.K. Bulstrode editor, Bailey & love's short practice of surgery 24<sup>th</sup> edition chapter 72 page no - 1256
5. Thomson WH. The nature of haemorrhoids. Br J Surg 1975; 62:542-552.
6. Sardinha TC, Corman ML. Hemorrhoids. Surg Clin North Am 2002; 82:1153-67, vi.
7. Milson JW. Haemorrhoidal disease In Beck DE, Wexner S.D, editors. Fundamentals of anorectal surgery. 1992. 192-214.
8. Onso-Coello P, Guyatt G, Heels Ansdell D, Johnson JF, Lopez -yarto M, Mills E et al. laxatives for the treatment of Haemorrhoids . Cochrane database syst Rev 2005; 4:CD004649.
9. RCG Russell, Norman S. Williams & Christopher J.K. Bulstrode editor, Bailey & love's short practice of surgery 24<sup>th</sup> edition chapter 72 page no - 1257.
10. K. Rajgopal Shenoy, anitha Nileshwar editor. Manipal manual of surgery 3<sup>rd</sup> edition chapter 31 page no -643.
11. A.P.M.Forrest, D.C.Carter, I.B.Macleod ,editor principles & practice of surgery chapter 32 page no 460 .
12. RCG Russell, Norman S. Williams & Christopher J.K. Bulstrode editor. Bailey & love's short practice of surgery 24<sup>th</sup> edition chapter 72 page no - 1258
13. Quah HM, Seow -Cheon F. Prospective randomized trial comparing diathermy excision and diathermy coagulation for symptomatic prolapsed haemorrhoids. Dis Colon Rectum 2004;47:367-70.
14. RCG Russell, Norman S. Williams & Christopher J.K. Bulstrode editor. Bailey & love's short practice of surgery 24<sup>th</sup> edition chapter 72 page no - 1259.
15. RCG Russell, Norman S. Williams & Christopher J.K. Bulstrode editor. Bailey & love's short practice of surgery 24<sup>th</sup> edition chapter 72 page no - 1259.
16. K. rajgopal Shenoy, anitha Nileshwar editor. Manipal manual of surgery 3<sup>rd</sup> edition chapter 31 page no -645.
17. Miligan E, Morgan C. Surgical anatomy of anal canal and operative treatment of haemorrhoids Lancet 1937;2:1119-1124.
18. K. rajgopal Shenoy, anitha Nileshwar editor. Manipal manual of surgery 3<sup>rd</sup> edition chapter 31 page no -645.
19. Ferguson JA Heaton JR. Closed hemorrhoidectomy. Dis Colon Rectum 1959;2: 176-179.
20. K. rajgopal Shenoy, anitha Nileshwar editor. Manipal manual of surgery 3<sup>rd</sup> edition chapter 31 page no -645.
21. Patti R, Almasio PL, Muggeo VM, Buscemi S, Arcara M, Matranga S et al. Improvement of wound healing after hemorrhoidectomy: a double-blind, randomized study of botulinum toxin injection. Dis Colon Rectum 2005; 48: 2173-2179.
22. Asfar SK, Juma TH, la-Edeen T. Hemorrhoidectomy and sphincterotomy. A prospective study comparing the effectiveness of anal stretch and sphincterotomy in reducing pain after hemorrhoidectomy. Dis Colon Rectum 1988; 31: 181-185.
23. K. rajgopal Shenoy, anitha Nileshwar editor. Manipal manual of surgery 3<sup>rd</sup> edition chapter 31 page no -647.
24. Cheetham MJ, Cohen CR, Kamm MA, Phillips RK. A randomized, controlled trial of diathermy hemorrhoidectomy vs. stapled hemorrhoidectomy in an intended day-care setting with longer-term follow-up. Dis Colon Rectum 2003; 46: 491-497.
25. Ripetti V, Caricato M, Arullani A. Rectal perforation, retroperitoneum, and pneumomediastinum after stapling procedure for prolapsed hemorrhoids: report of a case and subsequent considerations. Dis Colon Rectum 2002; 45: 268-27
26. Morinaga K, Hasuda K, Ikeda T. A novel therapy for internal hemorrhoids: ligation of the hemorrhoidal artery with a newly devised instrument (Moricorn) in conjunction with a Doppler flowmeter. Am J Gastroenterol 1995; 90: 610-613.
27. Scheyer M, Antonietti E, Rollinger G, Mall H, Arnold S. Doppler-guided hemorrhoidal artery ligation. Am J Surg 2006; 191: 89-93.
28. Dal Monte PP, Tagariello C, Sarago M, Giordano P, Shafi A, Cudazzo E et al. Transanal haemorrhoidal dearterialisation: nonexcisional surgery for the treatment of haemorrhoidal disease. Tech Coloproctol 2007; 11: 333-338.