

# Colonoscopic Sclerotherapy in the Management of Active Internal Haemorrhoidal Bleeding: A Retrospective Study of 100 Cases during 3 Years

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## Abstract

**Background and Aim:** Outcome of Colonoscopic Sclerotherapy in the management of active internal haemorrhoidal Bleeding. Aim of the present study was to investigate the outcome of Colonoscopic Sclerotherapy in the management of active internal haemorrhoidal bleeding. **Methods:** A prospective study (2014-2017) was conducted in the Department of Surgery, at P.D.U medical college & Vedant hospital Rajkot on 100 adult patients with internal haemorrhoids, irrespective of their gender were selected by non-probability convenient sampling from general surgical OPD, casualty and wards. To grade internal haemorrhoids, Goligher's classification system was used. After adequate bowel preparation sclerosant (1.5% polidocanol) 0.5-1 ml was injected into the each haemorrhoid with endoscopic injection catheter with 23-gauge under direct vision. **Results:** Out of 100 adult patients 76 were males and 24 were females. In the present study the mean age was 50± 12.32 years. Majority of the patient's age fell in the range of 35-55 years. The duration of symptoms was ranging 3 months to 2-3 years. Majority of patients of both grades I (91.8%) and II (84.6%) responded well to single session of Colonoscopic Sclerotherapy. Out of 100 patients only 24 patients required more than one session of Sclerotherapy. Out of 100 patients 36 (36%) patient complained for bloating sensation due to insufflation of air into rectum. 17 (17%) patients had mild rectal pain. Rebleeding was seen in 14 (14%) patients. None of the patient presented with rectal or perianal abscess, urinary retention, portal pyaemia or septicaemia.

**Conclusion:** Compare conventional to anoscope or rigid proctoscope, flexible video endoscope provides precise endoscopic vision and better manoeuvrability. Hence, minimal complications and excellent results. Can be performed outdoor patient basis. Any physician with reasonable of endoscopy knowledge can perform. Colonoscopic Sclerotherapy is safe, well tolerated and effective modality for management of bleeding internal hemorrhoids with minimal complications.

**Keywords:** Colonoscopic; Sclerotherapy; Internal Haemorrhoidal Bleeding.

## Introduction

Hemorrhoids are the most prevalent anorectal disorder among adults, and it has been stated that up to half of people may experience problems with hemorrhoids at some point in their lives. Symptomatic internal hemorrhoids lead to nearly 3.5 million physician visits per year at an estimated cost of \$500 million [1].

Bleeding is the common and severe internal haemorrhoid complain and represent the second most-common colorectal cause of severe hematochezia, however, these patients should undergo colonoscopy or screening flexible sigmoidoscopy to exclude other causes of colorectal bleeding [2,3].

Hemorrhoids are a very common anal disease and, when formed on the upper and lower sides of the dentate line, are classified as internal and external hemorrhoids, respectively. Internal hemorrhoids are the most common anal disease, the symptoms of which include haemorrhage and prolapse [2,4].

Several treatment options are available for patients who do not respond to conservative medical management [5]. Rubber band ligation and injection

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Sclerotherapy has been the mainstay of nonsurgical treatments for more than a century and are considered to sufficiently treat hemorrhoids. A meta-analysis of 18 randomized trials that compared various treatment methods for hemorrhoids concluded that rubber band ligation was more effective than Sclerotherapy and also that patients who underwent ligation were less likely to need subsequent therapy [6]. However, injection Sclerotherapy represents a simple and safe palliative treatment for hemorrhoids. The most common sclerosing agent used is 5% phenol almond oil, which is mainly effective for haemorrhage; however, its effects on prolapsed are considered to be insufficient.

Haemorrhoids are frequently encountered clinical entity in clinical scenario. The prevalence of haemorrhoids in adults is 38.93% [7]. Appropriate assessment and treatment of symptomatic haemorrhoids can substantially reduce morbidity and improve patient well-being [8]. Injection Sclerotherapy is one of the nonsurgical therapies for symptomatic internal haemorrhoids and is indicated for the treatment of grade I and II symptomatic internal haemorrhoids. The sclerosant obliterates the haemorrhoidal vascularity, inducing inflammation and finally sub mucosal fibrosis of haemorrhoid tissue [9,10]. Hence the aim of the present study was to investigate the outcome of Colonoscopic Sclerotherapy in the management of active internal haemorrhoidal bleeding.

### Materials and Methods

A prospective study (2014-2017) was conducted in the Department of Surgery, P.D.U medical college & Vedant hospital Rajkot on 100 adult patients with internal haemorrhoids, irrespective of their gender were selected by non-probability convenient sampling from general surgical OPD, casualty and wards. To grade internal haemorrhoids, Goligher's classification system was used [11]. After adequate bowel preparation sclerosant (1.5% polidocanol) 0.5-1 ml was injected into the each haemorrhoid with endoscopic injection catheter with 23-gauge under direct vision.

#### *Inclusion Criteria*

All adult patients irrespective to gender presenting with bleeding grade I and grade II internal haemorrhoids.

#### *Exclusion Criteria*

Grade III circumferential prolapsed haemorrhoids with large skin tag. Grade IV haemorrhoids, rectal prolapse, patients with significant co-morbidity e.g. coagulopathy or haemodynamically unstable.

#### *Technique*

Adequate bowel preparation done. Haemodynamic stability checked. Prophylactic antibiotic (Inj. cefotaxim

1gm IV stat) Sedation given in selected cases. Olympus (CF) video colonoscope type 140 with xenon light source was used. Thorough sigmoidoscopy performed.

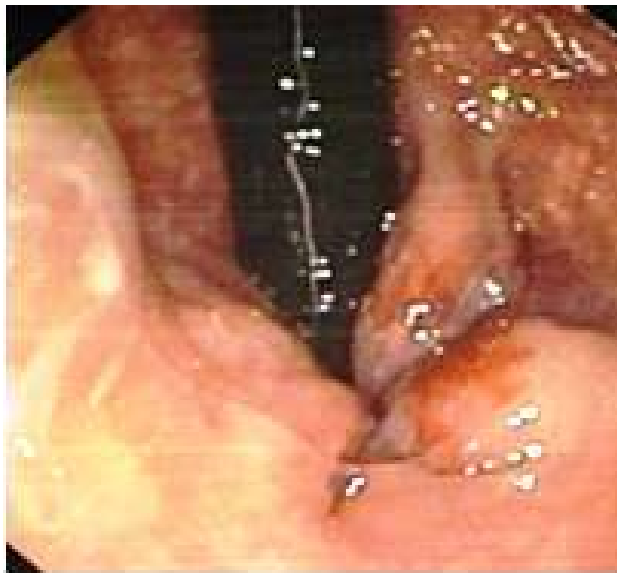


Fig. 1: Retroversion view of hemorrhoids

Endoscopic injection catheter with 23-gauge, 5 mm retractable needle used. Sclerosant (1.5% polidocanol) 0.5-1 ml was injected into the each haemorrhoid, at least 1 cm proximal to the dentate line by rotating the scope. The end point of each injection was to achieve complete blanching of the column.



Fig. 2: Sclerotherapy in progress with Blanching of the columns

Each patient was observed for 30 minutes and subsequent given discharge. Patients were asked to follow up at 1 week, 4 week and 2 months to assess for recurrence or complications. Success of the treatment was considered as cessation of bleeding at 2 weeks.

**Results**

Out of 100 patients 76 were males and 24 were females. In the present study the mean age was 50±12.32 years. Majority of the patient’s age fell in the range of 25-55 years. The duration of symptoms was ranging 3 months to 2-3 years.

Grade I internal haemorrhoids with active oozing were present in 48 male and 14 female patients.

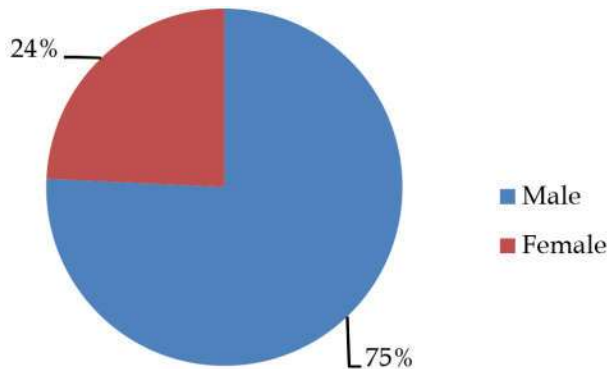


Fig. 3: Gender distribution

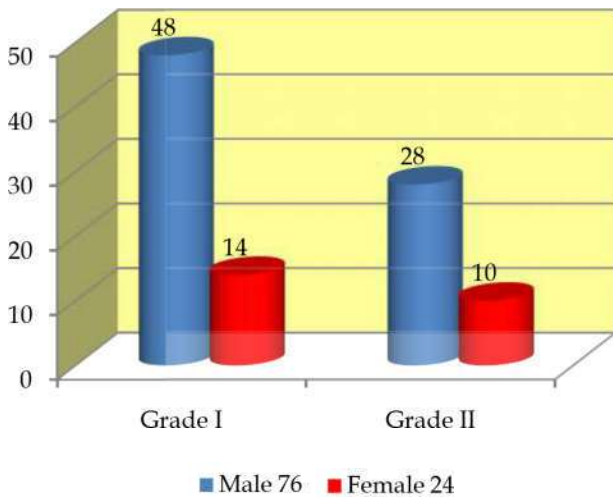


Fig. 4: Grade of hemorrhoids and gender distribution

Grade II internal haemorrhoids were present in 28 male and 10 female patients. Majority of patients of both grades I (91.8%) and II (84.6%) responded well to single session of Colonoscopic Sclerotherapy. Rebleeding was seen in 7 (14%) patients.

Table 1: Numbers of Sclerotherapy session required in grade I and grade II

No. of session	Grade I (n-62)	Grade II (n-38)
One	54 (87.8%)	29 (82.3%)
Two	8 (12.1%)	7 (17.6%)
Three	0	0

Out of 62 patients with grade I hemorrhoids only 8 (12.1%) patients required more than one session of Sclerotherapy. Out of 38 patients with grade II hemorrhoids only 7 (17.6%) patients required more than one session of Sclerotherapy. Unsatisfactory bowel preparation was present in 16 patients but 10 patients had satisfactory colonic mucosal visualization. Hence, they were not taken for repeat procedure. In 6 patients procedure was repeated after adequate bowel preparation.

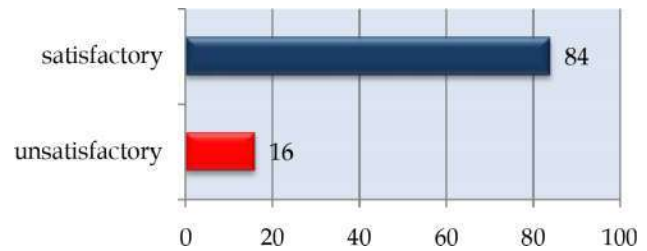


Fig. 4: Bowel preparation

Sedation (Inj.Midazolam 0.5mg/kg stat) was given only in 6 patients due to procedure related anxiety. Out of 100 patients 22 patients complained for bloating sensation due to insufflation of air into rectum while 8 patients had mild rectal pain. None of the patient presented with rectal or perianal abscess, urinary retention, portal pyaemia or septicaemia.

**Discussion**

Hemorrhoids are the most common anal disease. Haemorrhoidectomy is often performed as a surgical treatment for internal hemorrhoids but is associated with postoperative pain, longer recovery times, and complications such as bleeding and anal stricture [12]. Therefore, less invasive treatments are desired for the treatment of this disease without resection. Pile suture by the Farag method has traditionally been employed as a nonexcisional method for hemorrhoids [13].

Haemorrhoidal disease is one of the most common anorectal diseases, dating back to antiquity. It has been stated that 50% of the population will experience symptomatic hemorrhoid disease at some point in their lives [1,14]. The procedure for prolapse and hemorrhoids (PPH), proposed by Longo in 1998, uses a circular stapling device to divide, resect, and repair the mucosa and submucosa. It is regarded as the most effective approach for curing the hemorrhoids by surgeons. However, this surgical treatment needs hospitalization, being accompanied with postoperative pain and huge cost [15].

Injection Sclerotherapy is a simple, safe and effective method for the treatment of bleeding hemorrhoids. The success rate of the procedure is close to 100% [16]. Problems associated with injection

sclerotherapy are due to the sclerosing agent used or incorrect placement. The most common sclerosing agents used include 5% phenol in almond oil, ethanolamine oleate and sodium tetradecyl phosphate [17].

The study has shown good results arresting grade I and grade II bleeding with polidocanol. The maximum numbers of session required to stop bleed was 2 session in grade II hemorrhoids.

The excellent and good results were more significant in grade I as compare to grade II. The reason for overall good results with Colonoscopic Sclerotherapy due to preciseness of injection into haemorrhoid, excellent vision through colonoscope and polidocanol as sclerosant.

Known complications of Sclerotherapy like rectal or perianal abscess, urinary retention, portal pyaemia septicemia occurred in none of the patients. However, fewer complications like bloating sensation and rectal pain noted after procedure.

### Conclusion

Compare conventional to anoscope or rigid proctoscope, flexible video endoscope provides precise endoscopic vision and better manoeuvrability. Hence we can achieve minimal complications and excellent results. It can be performed outdoor patient basis. Any physician with reasonable of endoscopy knowledge can perform.

### References

- Guo J, Lin M, Zhang D, Yang T, Hong C. Successful Colonoscopic Sclerotherapy for Bleeding Internal Hemorrhoids with Lauromacrogol. *Gastroenterol Hepatol Open Access* 2014;1:00023.
- Majumdar SR, Fletcher RH, Evans AT. How does colorectal cancer present? Symptoms, duration, and clues to location. *The American journal of gastroenterology* 1999;94:3039-45.
- Jutabha R. Endoscopy for Internal Hemorrhoids. *Clinical Update* 2009;17:1-5.
- Jutabha R, Miura-Jutabha C, Jensen DM. Current medical, anoscopic, endoscopic, and surgical treatments for bleeding internal hemorrhoids. *Techniques in Gastrointestinal Endoscopy* 2001;3:199-205.
- Alfredson H, Cook J. A treatment algorithm for managing Achilles tendinopathy: new treatment options. *British journal of sports medicine* 2007;41:211-6.
- Jacobs D. Hemorrhoids. *New England Journal of Medicine* 2014;371:944-51.
- Riss S, Weiser FA, Schwameis K, Riss T, Mittlböck M, Steiner G, Stift A. The prevalence of hemorrhoids in adults. *International journal of colorectal disease* 2012;27:215-20.
- Ohning GV, Machicado GA, Jensen DM. Definitive therapy for internal hemorrhoids—new opportunities and options. *Rev Gastroenterol Disord* 2009;9:16-26.
- Benin P, D'Amico C. Foam sclerotherapy with Fibrovein (STD) for the treatment of hemorrhoids, using a flexible endoscope. *Minerva chirurgica* 2007;62:235-40.
- Alatise OI, Arigbabu OA, Lawal OO, Adesunkanmi AK, Agbakwuru AE, Ndububa DA, Akinola DO: Endoscopic hemorrhoidal sclerotherapy using 50% dextrose water: a preliminary report. *Indian Journal of Gastroenterology* 2009;28:31-2.
- Hotouras A. A study into the prevention of parastomal herniation. Queen Mary University of London, 2015.
- Jayaraman S, Colquhoun PH, Malthaner RA. Stapled hemorrhoidopexy is associated with a higher long-term recurrence rate of internal hemorrhoids compared with conventional excisional hemorrhoid surgery. *Diseases of the colon & rectum* 2007;50:1297-305.
- Tomiki Y, Ono S, Aoki J, Takahashi R, Ishiyama S, Sugimoto K, Yaginuma Y, Kojima Y, Goto M, Okuzawa A. Treatment of internal hemorrhoids by endoscopic sclerotherapy with aluminum potassium sulfate and tannic acid. *Diagnostic and therapeutic endoscopy* 2015, 2015.
- Bodenhamer W. A Theoretical and Practical Treatise on the Hemorrhoidal Disease: Giving Its History, Nature, Causes, Pathology, Diagnosis and Treatment: W. Wood, 1884.
- Pescatori M, Gagliardi G. Postoperative complications after procedure for prolapsed hemorrhoids (PPH) and stapled transanal rectal resection (STARR) procedures. *Techniques in coloproctology* 2008;12:7-19.
- El Nakeeb AM, Fikry AA, Omar WH, Fouda EM, El Metwally TA, Ghazy HE, Badr SA, Elkhar MYA, Elawady SM, Elmoniam HHA. Rubber band ligation for 750 cases of symptomatic hemorrhoids out of 2200 cases. *World Journal of Gastroenterology: WJG* 2008;14:6525.
- Chauhan V, Patel K, Anchalina M. Prospective comparative study of sclerotherapy by hypertonic saline and absolute alcohol for the treatment of haemorrhoids. *Gujrat Medical Journal* 2014;69:82-6.