

ORIGINAL RESEARCH

Study of role of preoperative colonoscopy in patients with haemorrhoids at a tertiary hospital

Samir Deshpande¹, Rohan Patil², Sandesh Gawade³

¹Senior Resident, Department of General Surgery, MIMER Medical College, Pune, India.

²Assistant Professor, Department of General Surgery, Government Medical College, Jalgaon, India.

³Professor, Department of General Surgery, MIMER Medical College, Pune, India.

Received Date: 14/12/2022

Acceptance Date: 03/02/2023

ABSTRACT

Background: Rectal bleeding in patients with hemorrhoids requires exact diagnosis because it may be not simply a hemorrhoidal bleeding and can be an early sign of severe bowel diseases, such as colon carcinoma, or inflammatory bowel diseases that could be discovered by colonoscopy. The present study was thus conducted to assess the role of preoperative colonoscopy in patients with haemorrhoids. **Material and Methods:** Present study was prospective, observational study, conducted in patients of age > 18 years, either gender, clinically diagnosed with haemorrhoids, underwent colonoscopic evaluation. **Results:** In present study, out of 50 cases of hemorrhoids, most common age group affected was between 41-60 years of age (64 %) with mean age of 48.32 ± 10.16 years. Male predominance was seen in present study with 64% males to 34% females. Male to female ratio being 1.78:1. Most common presenting complaint was bleeding (86%) followed by constipation (72%) and pain (18%). On colonoscopy examination, grade I and II haemorrhoids were seen in 28% cases while grade III and IV were observed in 48% and 24% cases respectively. Associated pathologies were reported in 30% cases with benign conditions in 22% and malignant condition in remaining 8% cases. Benign pathologies include: ulcerative colitis (10%), polyp (10%) and rectal ulcer (2%) while colorectal carcinoma was seen in 8% cases. Only 1 patient complained of pain after the procedure while bleeding was not reported in any case. **Conclusion:** Rectal bleeding warrants a complete colonic investigation, preferably by total colonoscopy. Avoiding colonoscopy in these patients can lead to missed-diagnosis or delay in diagnosis.

Keywords: Rectal bleeding, colonoscopy, hemorrhoids, Inflammatory bowel disease, colorectal cancer.

Corresponding Author: Dr. Rohan Patil, Assistant Professor, Department of General Surgery, Government Medical College, Jalgaon, India.

Email: patilrohanashok@gmail.com

INTRODUCTION

Hemorrhoids is a very common anorectal disease defined as the symptomatic enlargement and/or distal displacement of anal cushions, which are prominences of anal mucosa formed by loose connective tissue, smooth muscle, arterial and venous vessels.^{1,2} The

aetiopathogenesis of hemorrhoids remains unclear. Progressive degeneration of the fibromuscular structure of the internal hemorrhoidal plexus may be the reason.³

Rectal bleeding is one of the commonest symptoms of colorectal cancer, but more often, it is because of benign pathology. It is generally regarded as a symptom of early colorectal cancer. Rectal bleeding of any nature in primary care is considered a “mandatory referral symptom”, requiring investigation in secondary care.⁴

Rectal bleeding in patients with hemorrhoids requires exact diagnosis because it may be not simply a hemorrhoidal bleeding and can be an early sign of severe bowel diseases, such as colon carcinoma, or inflammatory bowel diseases that could be discovered by colonoscopy.⁵ Colonoscopy is currently the most accurate investigation for assessing the colon and rectum.⁶ It allows biopsy and histologic confirmation of the diagnosis. It also allows identification and endoscopic removal of synchronous polyps. The present study was thus conducted to assess the role of preoperative colonoscopy in patients with haemorrhoids.

MATERIAL AND METHODS

Present study was prospective, observational study, conducted in department of general surgery, at tertiary health care centre. Study duration was of 2 years. Study approval was obtained from institutional ethical committee.

Inclusion criteria

- Patients of age > 18 years, either gender, clinically diagnosed with haemorrhoids, underwent colonoscopic evaluation, willing to participate in present study

Exclusion criteria

- Patients below 18 years.
- Patients with bleeding disorders and altered coagulation profile.
- Hemorrhoids with other known colonic pathology.
- Any significant clinical findings on abdominal examination (Lump, Ascites).

Study was explained to patients in local language & written consent was taken for participation & study. Consecutive type of non-probability sampling was used for selection of study subjects. A detailed history was taken, and all patients were subjected to thorough clinical examination including per rectal and proctoscopic examination. Routine lab investigations like blood and screening of chest were done.

With due pre-anaesthetic care and bowel preparation patient were then posted for colonoscopy. Under all aseptic conditions with appropriate anaesthesia colonoscopy was performed by Olympus Video Colonoscope. During colonoscopy, other incidental findings were recorded in a pre-designed study proforma. Any associated complication was also recorded. Patients were then managed by medical/ surgical intervention as per standard treatment protocol and were followed till 2 months.

The quantitative data was represented as their mean \pm SD. Categorical and nominal data was expressed in percentage. Data was collected and compiled using Microsoft Excel, analysed using SPSS 23.0 version. Statistical analysis was done using descriptive statistics.

RESULTS

In present study, out of 50 cases of hemorrhoids, most common age group affected was between 41-60 years of age (64 %) with mean age of 48.32 ± 10.16 years. Male predominance was seen in present study with 64% males to 34% females. Male to female ratio being 1.78:1.

Table 1: General characteristics

Characteristics	No. of patients	Percentage
Age groups (in years)		
18-30	3	6.0%
31-40	5	10.0%
41-50	20	40.0%
51-60	12	24.0%
> 60	10	20.0%
Mean age (years)	48.32 ± 10.16	
Gender		
Female	18	36.0%
Male	32	64.0%

Most common presenting complaint was bleeding (86%) followed by constipation (72%) and pain (18%).

Table 2: Presenting complaints

Complaints	No. of patients	Percentage
Bleeding	43	86.0%
Pain	9	18.0%
Constipation	36	72.0%

On colonoscopy examination, grade I and II haemorrhoids were seen in 28% cases while grade III and IV were observed in 48% and 24% cases respectively.

Table 3. Distribution of study cases as per Grade of Haemorrhoids

Grade of Haemorrhoids	No. of patients	Percentage
I	1	2.0%
II	13	26.0%
III	24	48.0%
IV	12	24.0 %

Associated pathologies were reported in 30% cases with benign conditions in 22% and malignant condition in remaining 8% cases. Benign pathologies include: ulcerative colitis (10%), polyp (10%) and rectal ulcer (2%) while colorectal carcinoma was seen in 8% cases.

Table 4. Distribution of study cases as per associated pathologies

Associated pathologies	No. of patients	Percentage
Ulcerative Colitis	5	10.0%
Solitary Rectal Ulcer	1	2.0%
Polyp	5	10.0%
Colorectal Ca	4	8.0%

Only 1 patient complained of pain after the procedure while bleeding was not reported in any case.

Table 5: Complications

Complications	No. of patients	Percentage
Pain	1	2.0%
None	49	98.0%

DISCUSSION

Rectal bleeding is a common symptom, with a prevalence of 14% to 19% in adults. Most patients bleed from benign sources such as hemorrhoids and diverticula, but others have serious colorectal disease including colon cancer, adenomatous polyps, and inflammatory bowel disease. The optimal evaluation strategy for rectal bleeding is unknown. Neither historical information nor the presence or absence of hemorrhoids has been shown to reliably differentiate benign from serious disease.⁷ Colonoscopy is currently the most accurate investigation for assessing the colon and rectum.⁶ It allows biopsy and histologic confirmation of the diagnosis. It also allows identification and endoscopic removal of synchronous polyps.

In present study most common age group affected by Haemorrhoids was between 41-60 years of age with mean age of 48.9 years. Males are more commonly affected than females (64% vs 36%). In study by Bikhchandani J et al.⁸ mean age of patients was 46.02 ± 12.33 years in the stapled group and 48.64 ± 14.57 years in the open group. Hemorrhoids were more common in men (80.9% and 85.7% in the stapled and open group, respectively). Shukla S et al.,⁹ most common age group for patients of haemorrhoids was 41-50 years. Males are more in number than females in both the study group. In the study by Thejeswi PL et al.,¹⁰ mean age was 45 years with majority of the patients were males.

Most common presenting complaint was bleeding (86%) followed by constipation (72%) and pain (18%). In the study by Henry et al.,¹¹ PR bleeding was the most common symptom and constipation as second most common. Thejeswi PL et al.,¹⁰ observed bleeding per rectum as the presenting complaint in the majority of the patients with 45 of the 50 patients presenting with it; 10 patients complained of pain during defecation; 13 patients gave other associated symptoms such as constipation (9) and generalised weakness (3). The most common problem reported by the patients before the operation in the study by Gravie et al.,¹² was frequent bleeding (47%), itching (35%), constipation (31%), and pain (15%).

Out of the 50 study cases, grade I and II haemorrhoids were seen in 28% cases while grade III and IV were observed in 48% and 24% cases respectively. Similar findings were noted by Bhandari et al.,¹³ Shukla et al.,⁹ & Thejeswi et al.,¹⁰

Previous studies of colonoscopy in symptomatic and asymptomatic elderly patients have consistently shown a high prevalence of colorectal neoplasia.⁵ In patients with hemorrhoids other abnormalities can be present. In recent guidelines on rectal bleeding, age is an important discriminant in diagnostic tactics.⁶ Especially in older patients the clinician must be cautious to attribute complaints solely to hemorrhoids. Furthermore, endoscopic co-findings were found with increasing age.¹⁴

With regard to the patients with known hemorrhoids, the guideline are based on an expert's opinion because there are few data on when to suspect other pathology in a patient with hemorrhoids.⁶ However, opinions still differ on the subject whether or not to do colonoscopy in cases of complaints possibly due to hemorrhoids. It is stated that a full colonoscopy is necessary in all patients, regardless the age.¹⁵ In common practice, the age of 50 years holds the threshold for colonoscopy since the incidence of colorectal cancer, diverticulosis and polyps increases as people are getting older.¹⁰

In present study, positive colonoscopy was reported in 30% of our cases. Benign pathologies were reported in 22% cases while colorectal carcinoma was reported in 8% cases. Benign pathologies include: ulcerative colitis (10%), polyp (10%) and rectal ulcer (2%). Our study is a confirmation of previous results on coincidental abnormalities in colon and rectum in patients with hemorrhoids.

Bat L et al.,¹⁶ in one of the very first studies regarding colonoscopic examination of patients with haemorrhoids observed associated colon pathologies in 23.2% cases. Associated

pathologies included: cancers (6.2%), polyps (14.4%), inflammatory bowel diseases (2.1%) and 1 case of angiodysplasia (0.5). Bat L et al.,¹⁷ performed another similar study in octogenarians (> 80 years) of rectal bleeding and observed a high incidence of colorectal carcinoma (28.7%).

El Hennawy et al.,¹⁸ in their study on 200 haemorrhoids patients observed positive colonoscopy rate of 25.5%. Polyps were reported in 6.5% patients, 5% had malignant lesions while ulcerative colitis and diverticular disease was observed in 2.5% and 6% patients respectively.

In present study, colonoscopy was observed as quite safe procedure with only 1 patient complained of pain after the procedure while bleeding was not reported in any case. El Hennawy et al.,¹⁸ observed similar findings with no cases of bleeding or perforation and pain only in 2.5% cases. Bat L et al.,¹⁷ observed pain in 3% cases undergoing colonoscopy with no cases of bleeding.

Our data indicate that rectal bleeding warrants a complete colonic investigation, preferably by total colonoscopy. Omitting of colonoscopy in these patients can lead to major doctors' delay in diagnosis. However, more randomized prospective clinical trials in haemorrhoids patients with a large sample size are needed from this region before making any firm recommendations regarding the most appropriate modality for the evaluation of patients with hemorrhoids and low risk colorectal cancer.

CONCLUSION

Rectal bleeding warrants a complete colonic investigation, preferably by total colonoscopy. Avoiding colonoscopy in these patients can lead to missed-diagnosis or delay in diagnosis. Coincidental abnormalities in colon and rectum in patients with hemorrhoids are common. Most frequent associated pathologies observed are benign polyps followed by Inflammatory bowel disease and colorectal cancer. Colonoscopies are relatively safe with minimal complication for evaluation in these patients.

REFERENCES

1. Lohsiriwat V. Approach to hemorrhoids. *Curr Gastroenterol Rep.* 2013;15:332.
2. Lohsiriwat V. Hemorrhoids: from basic pathophysiology to clinical management. *World J Gastroenterol.* 2012;18:2009–2017.
3. Tucker H, George E, Barnett D, Longson C. NICE Technology Appraisal on Stapled Haemorrhoidopexy for the Treatment of Haemorrhoids. *Ann R Coll Surg Engl.* 2008;90:82–84.
4. R. Lawrenson, J. Logie and C. Marks, "Risk of Colorectal Cancer in General Practice Patients Presenting with Rectal Bleeding, Change in Bowel Habit or Anaemia," *European Journal of Cancer Care*, Vol. 15, No. 3, 2006, pp. 267-271.
5. F. Pigot, "Haemorrhoidal Disease," *Revue du Praticien*, Vol. 58, No. 16, 2008, pp. 1763-1768.
6. Winawer SJ, Stewart ET, Zauber AG et al. A comparison of colonoscopy and double-contrast barium enema for surveillance after polypectomy. National Polyp Study Work Group. *N Engl J Med* 2000; 342: 1766-72.
7. Lee JH, Kim HE, Kang JH, Shin JY, Song YM. Factors associated with hemorrhoids in Korean adults: Korean national health and nutrition examination survey. *Korean J Fam Med.* 2014;35:227–236.
8. Bikchandani J, Aggarwal PN, Ravikant, Malik VK. Randomized controlled trial to compare the early and mid-term results of stapled versus open haemorrhoidectomy. *The American Journal of surgery* 2005;189:56-60.

9. Shukla S et al. Comparison between conventional haemorrhoidectomy and stapler haemorrhoidopexy. *Int Surg J.* 2016 May;3(2):614-620
10. Thejeswi P et al. Comparison Of Surgical Treatment Of Hemorrhoids - Stapled Versus Open And Closed Hemorrhoidectomy. *The Internet Journal of Surgery.* 2016; 28(2):1-8.
11. Henry MM. 1991-coloproctology and pelvic floor. 373-393.
12. Gravié JF, Lehur PA, Hutten N, Papillon M, Fantoli M, Descottes B, Pessaux P, Arnaud JP: Stapled hemorrhoidopexy versus milligan-morgan hemorrhoidectomy: a prospective, randomized, multicenter trial with 2-year postoperative follow up. *Ann Surg.* 2005 Jul;242(1):29-35. [122].
13. Bhandari et al. Stapled haemorrhoidectomy versus openhaemorrhoidectomy: a prospective comparative study. *Journal of Chitwan Medical College* 2014; 4(10):14-9.
14. Ellesmore S, Windsor AC. Surgical history of haemorrhoids. In *Surgical Treatment of Hemorrhoids 2009* (pp. 1-5). Springer London.
15. Morgagni JB. Seats and causes of diseases, Vol 2. Letter 32, Article 10 London A. Millar Quoted by Thomson 1975; Pg. 105.
16. Bat L, Pines A, Rabau M, Niv Y, Shemesh E. Colonoscopic findings in patients with hemorrhoids, rectal bleeding and normal rectoscopy. *Israel journal of medical sciences.* 1985 Feb;21(2):139-41.
17. Bat L, Pines A, Shemesh E, Levo Y, Zeeli D, Scapa E, Rosenblum Y. Colonoscopy in patients aged 80 years or older and its contribution to the evaluation of rectal bleeding. *Postgraduate medical journal.* 1992 May 1;68(799):355-8.
18. El Hennawy HM, Badi AM, Basheer AE. Colonoscopy in Elderly Patients with Hemorrhoidal Disease and Average-Risk for Colorectal Cancer, a Qatari Community Hospital Experience. *Surgical Science.* 2012 Dec 7;3(12):576.