

Colonoscopic Evaluation for Lower G.I Bleeding in a Tertiary Care Teaching Hospital

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Abstract

Background: The most frequent cause of endoscopic examination is hematochezia (Lower Gastrointestinal Bleeding (LGIB)). Hemorrhoids and diverticular illness are the most common causes, however, other anorectal disorders can also cause LGIB. Secondary iron deficiency anemia could be brought on by persistent bleeding. The primary diagnostic method for determining whether colonic bleeding is present is a colonoscopy.

Methods: A total of n=50 cases were included in the study based on the inclusion and exclusion criteria. All the colonoscopy procedures were done on an in-patient basis. All patients presenting with bleeding per rectum were enquired regarding their history followed by which detailed clinical examination was done. A colonoscopy is carried out while the patient is in the left lateral position with monitoring in the presence of an Anesthesiologist, with normal blood pressure, heart rate, oxygen saturation, and short-term intravenous general anesthesia.

Results: Out of the total n= 50 cases n=14 patients were diagnosed to have Haemorrhoids of different Grades n=8 patients had Polyps. Out of this n=8, n=4 polyps were found in the transverse colon, n=1 in ascending colon, n=2 in the rectum, and n=1 in descending colon. Out of the n=8 polyps, n=4 cases were adenomatous, n=2 cases were inflammatory and n=2 cases were diagnosed as malignant. N=8 cases had inflammatory bowel disease (IBD) out of which n=4 cases were ulcerative colitis, n=2 was Crohn's disease and n=2 were proctitis.

Conclusion: Hemorrhoids, Carcinoma colon, polyps, and Inflammatory bowel disease were the common cause of lower GI bleeding. More commonly affecting males as compared to females. The majority of cases with age < 40 years were cases of hemorrhoids and other colonic pathologies. All the cases of carcinoma were above 40 years of age.

Keywords: Lower Gastrointestinal tract bleeding (LGIB), Colonoscopy, Hemorrhoids, carcinoma colon, Inflammatory bowel disease (IBD)

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Introduction

Lower gastrointestinal bleeding (LGIB) is the term used to describe bleeding that has just started and originates from a location

far from the ligament of Treitz. [1] About 20% of all instances of acute gastrointestinal bleeding are caused by

bleeding from the lower gastrointestinal (GI) tract. Acute LGIB is characterized as bleeding that has occurred recently (about 3 days) and can lead to anemia, instability of vital signs, and the requirement for blood transfusions. [2] Chronic LGIB, which occurs when blood leaks from the rectum over a period of days or longer, typically denotes intermittent or sluggish blood loss. The etiology and epidemiology of LGIB vary based on environmental factors, including living style, food habits, smoking prevalence, history of drug use, age, and environmental conditions, the longevity of the population. [3, 4] Colonic diverticula, angiodysplasias, colitis (ischemic, infectious, chronic inflammatory bowel disease [IBD]), neoplasms, small intestinal bleeding, and post-polypectomy bleeding are all potential sources of LGIB, according to the majority of evidence from the west. The etiology is very different in the Indian experience, though. The remaining instances are made up of enteric ulcers (15%), tubercular ulcers (6%) neoplasms (6%) amoebic ulcers (6%) angiodysplasia (6%), and others (7%) respectively. [5] The most practical and efficient initial investigation is a colonoscopy. Because of the inadequate perspective, actual visualization during the acute episode is rare. The most practical and efficient initial investigation is a colonoscopy. Because of the inadequate perspective, actual visualization during the acute episode is rare. A study on colonoscopies performed without prior intestinal preparation concluded that the operation was accurate, and safe, and permitted the execution of therapeutic procedures with a low risk of problems. [6] In 97% of patients, lesions could be located precisely. Surgical procedures as well as therapeutic colonoscopies and angiography are available as treatment options. Injection, laser coagulation, electrocautery, and "heater probe" are some of the colonoscopic treatment techniques now in use. [7] Only individuals who continue to

bleed or rebleed after the initial halt are eligible for surgical intervention. Individuals who continue to bleed or rebleed after the initial halt are eligible for surgical intervention. Patients with advanced age (>60 y) and patients with concomitant illnesses have a mortality rate for LGIB that ranges from 10% to 20%. Due to greater rates of vascular disease and diverticulosis in this population, LGIB is more likely in the elderly. Men are more likely than women to have LGIB. The current study aimed to determine the conditions leading to lower GI bleeding and treatment of the lower GI bleeding cases.

Material and Methods

This cross-sectional study was conducted in the Department of General Surgery, Prathima Institute of Medical Sciences, Naganoor, Karimnagar. Institutional Ethical approval was obtained for the study. Written consent was obtained from all the participants of the study after explaining the nature of the study in the local language.

Inclusion criteria

1. Patients with lower gastrointestinal bleeding (bleeding PR)
2. Age 18 and above
3. Males and Females
4. Acute Massive bleeding
5. Willing to participate in the study voluntarily

Exclusion criteria

1. Patients unfit for anesthesia
2. Patients with comorbidities
3. End-stage rectal malignancy
4. Patients with bleeding disorders
5. Patients on the antiplatelet drug
6. Not willing to participate in the study

A total of n=50 cases were included in the study based on the inclusion and exclusion criteria. All the colonoscopy procedures were done on an in-patient basis. All patients presenting with bleeding per rectum were enquired regarding their

history followed by which detailed clinical examination was done.

We recorded demographic information based on a predesigned proforma. Clinical indications for a colonoscopy include patient characteristics (gender, age), Lower Gastrointestinal Bleeding (haematochezia, stomach discomfort, anemia, and other conditions that are colon thickness, diarrhea discomfort, alterations in stool emptying, CT imaging, and primary tumor research was done. Proctoscopy was done subsequently to examine the rectum and anal canal. A colonoscopy is carried out while the patient is in the left lateral position with monitoring in the presence of an anesthesiologist, with normal blood pressure, heart rate, oxygen saturation, and short-term intravenous general anesthesia. Hemorrhoids, diverticulosis, polyps, colitis (inflammatory bowel illness), and colon cancer were all important results. Anal fissure, angiodyplasia, cancer (CRC), and normal finding. Moreover, we noted the severity of hemorrhoids and the period between the onset of symptoms and the colonoscopy.

Statistical analysis: For the baseline demographic and clinical characteristics, as well as the results of the treatment, descriptive statistics were computed. There

were continuous variables presented as mean and standard deviation. Categorical variables were presented as numbers and percentages. The difference between the two groups was analyzed with a chi-square test with p-values of <0.05 as significant.

Results

During this study period based on the inclusion and exclusion criteria, n=50 cases of lower GI bleeding were subjected to colonoscopy to determine colonic pathologies. Of these n=50 cases n=34(68%) were males and n=16(32%) were females. The male-to-female ratio was 2:1. The age range of the patients was from 20 years to 75 years and the mean age was 50.5 ± 5.5 years. Almost all the patients had positive colonoscopy findings. Out of the total n= 50 cases n=14 patients were diagnosed to have Haemorrhoids of different Grades n=8 patients had Polyps. Out of this n=8, n=4 polyps were found in the transverse colon, n=1 in ascending colon, n=2 in the rectum, and n=1 in descending colon. Out of the n=8 polyps, n=4 cases were adenomatous, n=2 cases were inflammatory and n=2 cases were diagnosed as malignant. N=8 cases had inflammatory bowel disease (IBD) out of which n=4 cases were ulcerative colitis, n=2 was Crohn's disease and n=2 were proctitis

Table 1: Distribution of colonoscopic findings

Colonoscopic Findings	Frequency	Percentage
Hemorrhoids	14	28
Ca Colon	10	20
I B D	08	16
Polyps	08	16
Ca Rectum	06	12
Diverticulum	02	04
Others	01	02
Normal	01	02
Total	50	100

N=10 cases were diagnosed with carcinoma of the colon out of which n=6 cases were with carcinoma of ascending colon, n=2 cases were diagnosed with

carcinoma of descending colon, n=1 cases of carcinoma of hepatic flexure, and n=1 case of carcinoma of caecum. 7/10 (70%) of the case were with moderately

differentiated adenocarcinomas, n=2 cases were with poorly differentiated adenocarcinomas and n=1 was well-differentiated adenocarcinoma. Out of n=6 cases of carcinoma rectum, n=3 underwent abdominal perineal resection and n=3 underwent neoadjuvant therapy. Diverticulosis was found in n=2 cases out

of which n=1 was diagnosed to have diverticulosis in the sigmoid colon and one patient was diagnosed to have solitary caecal diverticulum. N=1 patient had Ileo-Caecal Stricture which was diagnosed as Abdominal Tuberculosis. N=1 patients' colonoscopic findings were Normal with an idiopathic lower GI bleed.

Table 2: Showing the age-wise distribution of colonic pathology in the cases of study

Age in years	Cases	Colonic Pathology							
		Hemorrhoids	Polyp	IBD	Ca colon	Ca Rectum	Diverticulosis	Others	Normal
< 40	17	7	4	4	0	0	1	0	1
40 - 60	18	4	3	2	5	2	1	1	0
> 60	15	3	1	2	5	4	0	0	0
Total	50	14	8	8	10	6	2	1	1

Out of n=50 cases with a lower GI, bleeding and duration of 6 months were reported by n=30 cases and n=11 cases with lower GI bleeding below 6 months to 1 year and n=9 cases had reported more than one year. Hemoglobin investigation in the cases revealed that n=23 cases had mean hemoglobin levels below 11gm/dl. Most of these cases were with hemorrhoids followed by polyps and one case had ulcerative colitis.

Discussion

One of the leading causes of illness and mortality worldwide continues to be colorectal cancer. It accounts for 9.4% of all cancers worldwide. [8] India has a lower incidence of colorectal neoplasms than the rest of the world. Numerous clinical and pathological research has shown a connection between rectal bleeding and colorectal neoplasms. Shinya H et al., [9] provided a study of 2200 cases of rectal bleeding and colonoscopic diagnosis and treatment. Inflammatory bowel disease (IBD) (6%), hemorrhoids (11%), polyps (32%), and carcinomas were the most common causes of bleeding per rectum. Internal hemorrhoids were seen in 1375 patients in addition to other gastrointestinal diseases. Only internal hemorrhoids in 7% of the patients were the cause of the per rectum hemorrhage.

Internal hemorrhoids are frequently linked to other gastrointestinal disorders. According to clinical investigations, the most common symptom in 40–60% of individuals with one or more colonic neoplasms is rectal bleeding. [10,11] Colonoscopy performed for bleeding per rectum has revealed a 6.6 to 19% incidence of colorectal cancer in several studies. [9,12,13] In our study 28% of cases were diagnosed with hemorrhoids. In their analysis of 340 colonic malignancies. McCulloch SM et al., [14] found that symptoms such as altered bowel habits, rectal bleeding, and anemia are less indicative of an advanced clinical stage than obstruction, perforation, and the appearance of a palpable abdominal mass. This study also demonstrated the prevalence of malignancies in people older than 40, with peak prevalence occurring in the seventh and eighth decades. Numerous additional research has produced comparable outcomes. [15,16] Several studies have emphasized the need of using colonoscopy to analyze both acute and chronic bleeding per rectum, noting that the prevalence of neoplastic lesions is higher in acute than in chronic bleeding per rectum. Neoplastic lesions are detected close to the splenic flexure in 30 to 56% of investigations. [17, 18] This encourages the use of a thorough colonoscopic

examination rather than a flexible sigmoidoscopy when looking into a case of rectus hemorrhage. In the current study out of n=10 cases were diagnosed with carcinoma of the colon out of which n=6 cases were with carcinoma of ascending colon, n=2 cases were diagnosed with carcinoma of descending colon, n=1 case of carcinoma of hepatic flexure, and n=1 cases of carcinoma of caecum. 7/10 (70%) of the case were with moderately differentiated adenocarcinomas, n=2 cases were with poorly differentiated adenocarcinomas and n=1 was well-differentiated adenocarcinoma. All the neoplastic lesions were seen in patients more than 40 years of age. The incidence of malignancies increases with age. On average, in this study, 25% of the neoplastic lesions were located proximal to the splenic flexure and this advocates the need for colonoscopy as a screening device for deducting colonic pathologies associated with bleeding per rectum. Duration of bleeding per rectum was another symptom found to be important during this study. Hemoglobin investigation in the cases revealed that n=23 cases had mean hemoglobin levels below 11gm/dl. Most of these cases were with hemorrhoids followed by polyps and one case had ulcerative colitis. Alterations in bowel habits were another sign of underlying colonic disease. Defecation problems were most frequently associated with colorectal cancer and hemorrhoids. Inflammatory bowel illness was associated with constipation and intermittent diarrhea. In cases of cancer rectum, tenesmus was found.

Conclusion

Within the limitations of the current study, it can be concluded that Hemorrhoids, Carcinoma colon, polyps, and Inflammatory bowel disease were the common cause of lower GI bleeding. More commonly affecting males as compared to females. The majority of cases with age < 40 years were cases of hemorrhoids and

other colonic pathologies. All the cases of carcinoma were above 40 years of age. It is important not to miss the cases of colorectal carcinoma in case of bleeding per rectum. Colonoscopic evaluation plays a crucial role in the diagnosis of colonic pathologies.

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