



ROLE OF COLONOSCOPY IN DIAGNOSING THE ETIOLOGY OF LOWER GASTROINTESTINAL TRACT BLEEDING

General Surgery

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ABSTRACT

Background- LGIB refers to bleeding in the GI tract distal to ligament of treitz. LGIB occurs in 20.5 – 27 cases per 1 lakh population per year. Due to the vast range of LGIB etiologies and clinical presentations, it is often difficult to diagnose and treat the source of LGIB. In stable patients, colonoscopy should always be considered first, as it is not only sensitive investigation but also can be used for therapeutic intervention in the same setting. **Objective:** To estimate the diagnostic yield of colonoscopy in patients presenting with lower gastrointestinal tract bleeding. **Methods:** The study was conducted in AJ institute of medical science and research centre, mangalore between 2021 and 2022. All patients who presented with symptoms of LGIB and who fulfilled the selection criteria, were included in the study. After obtaining detailed history, comprehensive clinical examination was done in all patients. Colonoscopic findings were documented and biopsy reports were followed. Disease specific treatment was initiated and response was observed. **Results:** 120 patients were included in the study. Out of 120 patients in the study, 40 patients were found to have hemorrhoids (33%), adenocarcinoma in 24 patients (20%), polyp in 11 patients (9%), IBD in 10 patients (8%), diverticulae in 7 patients (6%), non specific proctitis in 6 patients (5%), SRUS in 3 patients (2.5%), non specific colitis in 3 patients (2.5%), Fissure in ano in 3 patients (2.5%), radiation proctitis in 2 patients (2%), angiodysplasia in 2 patients (2%), non specific ileitis in 1 patient (1%), rectal varix in 1 patient (1%), rectal prolapse in 1 patient (1%) and 6 patients (5%) were left undiagnosed with normal colonoscopy findings. Diagnostic yield of colonoscopy in LGIB was 93%. **Conclusion:** Colonoscopy is the single most important diagnostic modality for LGIB, which can also serve as a therapeutic modality in some cases. colonoscopy must be advised for all patients with lower GI bleed.

KEYWORDS

Lower gastrointestinal bleed, hematochezia, colonoscopy,

INTRODUCTION

Lower Gastrointestinal (GI) bleeding distal to the ligament of treitz is called LGIB¹. In clinical practice, LGIB can be further classified as small bowel bleeding and colonic bleeding and anorectal bleeding⁷. At present there is slightly increased incidences and hospital admissions for LGIB, which can be partly attributed to increased awareness among patients. LGIB can be due to multiple causes including neoplasms, pathologies leading to inflammation and many more. Severity can range from iron deficiency anemia with occult blood in stools to severe hematochezia requiring intensive care admissions². Due to this vast range of LGIB etiologies and clinical presentations, it is often difficult to diagnose and treat the source of LGIB. Adding to the difficulty, intermittently bleeding sources in small bowel can only be diagnosed with advanced modalities and hence leading to increased cost. LGIB occurs in 20.5 – 27 cases per 1 lakh population per year⁴. LGIB is found to be more common in men than women and also incidence increases with increase in age⁶. Diverticular bleeding is the most common cause of LGIB according to western literature, followed by anorectal lesions of which hemorrhoids top the list^{3,7}. But according to our Indian literature anorectal lesions, and particularly the hemorrhoids is the leading cause of LGIB followed by colorectal neoplasia. Rebleeding after an episode of acute LGIB, which had stopped spontaneously, is seen in 10-40% of patients⁵. Mortality due to LGIB is less than 5% in most of the recent literature⁷.

Whenever a patient presents with symptoms of GI bleeding, first step is to look if he is clinically stable or not. In patients with acute GI bleeding, initial resuscitation and hemodynamic stabilization is the top priority⁷. If active ongoing bleeding is suspected, then attempt to localize the bleeding should go side by side. In hemodynamically stable patients, detailed history and clinical examination has to be done. Proctoscopy (few authors recommend to use word anoscope) must be done in all cases of LGIB (except in fissure in ano). Details regarding clinical assessment in mentioned in methodology section. In stable patients, colonoscopy should always be considered first, as it is not only sensitive investigation but also can be used for therapeutic intervention in the same setting^{9,10}. Since adequate bowel preparation is must for proper visualization, it has limited role in unstable patients and in patients whom visualization of mucosa is hindered by massive bleeding. In this study, patients with lower GI bleed, if stable, were taken up for colonoscopy for diagnosis and treatment.

AIMS AND OBJECTIVES:

1.To estimate the diagnostic yield of colonoscopy in patients with LGIB.

METHODOLOGY

The study was conducted in AJ institute of medical science and research center, mangalore from July 2020 to December 2022. All patients who presented with symptoms of LGIB to General Surgery, Surgical and Medical Gastroenterology OPDs and who fulfilled the selection criteria, were included in the study, after obtaining informed consent. Detailed history including demographic details (age, sex, occupation) were obtained. In patients who complained of bleeding PR, further enquiry regarding character of the bleeding, duration, frequency, amount and relation to stool was recorded. Also, details of other associated symptoms (pain, tenesmus, altered bowel habits, discharge or mass per rectum) were obtained. Comprehensive clinical examination was done in all stable patients with chronic LGIB. Patients with chronic symptoms were specifically looked for pallor. In patients with acute and severe hematochezia, vitals and signs of dehydration (dryness of tongue and sclera, loss of skin turgor, decreased level of consciousness) were assessed first. Comprehensive clinical examination and anoscopy was done, only in stable patients. In patients who were hemodynamically unstable, initial resuscitation with fluids and blood products was done. Patients who presented with melena were first advised for UGI endoscopy and were included in our study and colonoscopy done only if, UGI endoscopy was negative. Patients with iron deficiency anemia and positive stool occult blood were included in our study and colonoscopy was done. If colonoscopy was negative, then patients were advised for UGI endoscopy. If, both were negative then bleeding from small bowel or was suspected. These patients were referred to other higher centres for capsule endoscopy/ double balloon push enteroscopy. All patients who presented with chronic and scant intermittent hematochezia were advised for colonoscopy to rule out other proximal sources of LGIB. In patients who were hemodynamically stable, urgent colonoscopy (within 8-24 hours) was done first and later UGI endoscopy was carried out only if colonoscopy was negative.

Patients were advised to have liquid diet from the previous day morning. Commercially available purgative preparation containing Sodium sulphate (17.5g) + Potassium Sulphate (3.13g) + Magnesium

Sulphate (1.6g) in each 177 ml was advised for all patients. Colonoscopy was performed under mild sedation with Inj Midazolam 2 mg Iv⁸.

Inclusion Criteria:

Patients with intermittent bleeding PR, Patients with acute massive bleeding. Anemic patients, positive for stool occult blood. Malena without any identifiable UGIB cause.

Exclusion Criteria:

Patients with obvious cause of UGIB, Patients with bleeding disorders., Patients on antiplatelets or anticoagulants.

RESULTS:

Out of 120 patients in the study, 6 patients(5%) were left undiagnosed with normal colonoscopy findings^{table 1}. Since these patients presented with intermittent bleeding and were hemodynamically stable CT angiogram was not advised, rather referred to undergo capsule endoscopy for visualizing small bowel lesions and further management. Although colonoscopy was advised to all patients, only 89 patients (74%) underwent colonoscopy and in 7 patients (6%) though colonoscopy was planned, the procedure was limited to sigmoidoscopy because of the growth obstructing the lumen and preventing further insertion of scope^{figure 1}. In 24 patients (20%), source of LGIB (Hemorrhoids, fissure, prolapsed rectum) was apparent on clinical examination and anoscopy itself and since these patients did not consent for colonoscopy, they were directly provided definitive treatment. Diagnostic yield of colonoscopy in our study was 93%.

Table 1 Etiological Distribution Of Patients With LGIB

Final Diagnosis	Frequency	Percentage
Hemorrhoids	40	33%
Adenocarcinoma	24	20%
Polyp	11	09%
IBD	10	08%
Diverticulae	07	06%
Non Specific proctitis	06	05%
SRUS	03	2.5%
Non specific colitis	03	2.5%
Fissure in ano	03	2.5%
Radiation proctitis	02	02%
Angiodysplasia	02	02%
Non specific ileitis	01	01%
Rectal Varix	01	01%
Rectal Prolapse	01	01%
Undiagnosed	06	05%
Total	120	100%

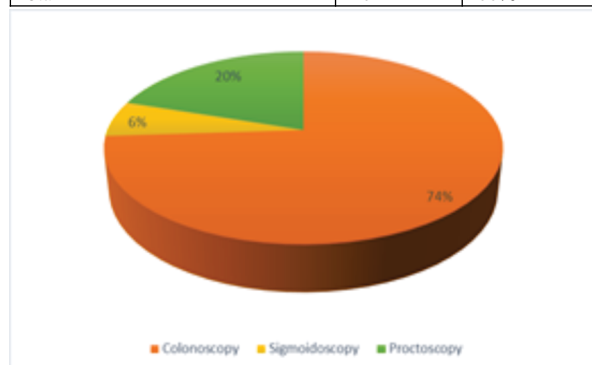


Figure 1 Diagnostic tools used in patient with LGIB.

DISCUSSION

Since diagnostic yield of proctoscopy, sigmoidoscopy and colonoscopy together is 96% we can state that endoscopy is the gold standard modality in management of patients with LGIB. In this study we also observed that patients who came with LGIB had more than one possible cause for bleeding. In these cases, etiology was attributed to one lesion which the treating doctor considered as significant. Colonoscopy not only aids in diagnosis, but can also be used for obtaining tissue for biopsies and also treatment of few conditions like polypectomy, Argon plasma coagulation of angiodysplasia.

CONCLUSIONS

Although proctoscopy is superior in detecting hemorrhoids and other

anorectal causes of LGIB, colonoscopy (with use of retroflexion) must be advised for all patients, to rule out other proximal sources of LGIB. Colonoscopy is the single most important diagnostic modality for LGIB, which can also serve as a therapeutic modality in some cases and should be offered to all patients presenting with LGIB.

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