



## ETIOLOGY OF LOWER GASTROINTESTINAL BLEED IN A TERTIARY CARE CENTRE.

### Gastroenterology

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### ABSTRACT

**INTRODUCTION:** Lower gastrointestinal bleed is defined as bleeding that occurs from lower GI tract, distal to the ligament of Treitz. The annual incidence of LGI bleeding is approximately 20.5 to 27 cases/100,000 population. It is associated with significant rebleeding and mortality.

**METHODS:** This is a 1 year cross sectional study, data is collected from colonoscopy registry of MGE department from 01 August 2017 to 31 July 2018. Patients presented with lower GI bleed to Department of Digestive health and diseases, Chennai were studied. Descriptive statistics were used to calculate Mean  $\pm$ SD of numerical data, e.g., age. Nominal data like gender and colonoscopic findings were analysed by their frequencies and percentages.

**RESULTS:** A total of 241 patients (134 males and 107 females) with mean age 38.6  $\pm$  9.2 years were part of the study. Colonoscopy showed abnormal findings in 232 (96.2%). The commonest diagnosis was hemorrhoids, which was found in 71 (29.4%) patients. It was followed by colorectal cancer in 64 (26.5%) patients (Rectosigmoid 57 (89%). 27 (11.2%) patients had non-specific colitis, 25 (10.3%) patients had IBD, and fissure, polyps were noted in 15 (6.2%) patients each. Other less frequent findings were SRUS in 9(3.7%) patients, radiation proctitis in 8 (3.3%), and diverticula in 7 (2.9%).

**CONCLUSION:** Hemorrhoids and colorectal cancer were the most common causes of lower gastrointestinal bleed in our patients.

### KEYWORDS

#### INTRODUCTION:

Lower gastrointestinal bleeding (LGIB) is bleeding arising below the ligament of Treitz [1] [2]. It accounts for about 20% of all cases of acute GI bleeding [3]. The incidence of LGIB ranges from 20.5 to 27 cases/100,000 adults [4], and increases with age and is more common in men than women [5] [6]. LGIB represents a significant cause of morbidity and mortality, It has an annual incidence of hospitalization of approximately 36/100,000 population and the rate of hospitalization is even higher in the elderly with an overall mortality rate ranging from 2% to 4% [7] [8]. LGIB usually causes hematochezia, melena, or blood streaking of the stool [7] [8] [9]. Patients usually present with painless hematochezia and a decrease in hematocrit value, but without orthostasis [3] [8]. The etiology and the epidemiology of LGIB vary according to the environmental conditions depending upon the lifestyle, dietary habits, the prevalence of smoking, history of drug intake, age, the longevity of the population, etc. [10]. Diverticulosis coli is one of the most common causes of LGIB in the countries of Western Europe and the United States unlike in Asia, diverticulosis coli is uncommon and is much less responsible as a cause of LGIB where hemorrhoids is the commonest colonoscopic findings [6] [9] [11] [12]. Colonoscopy is the most convenient and effective preliminary investigation [1] [13] [14]. Actual visualization during the acute episode is uncommon because the view is poor. While some authors advocate early colonoscopy in an unprepared bowel, others advise a more expectant approach [15] [16].

However, the data regarding etiology of LGIB remains unexplored as is scarce in the Indian subcontinent as most of the studies of LGIB have been reported in Western populations and there has been limited number of reports of etiological profile of LGIB from Indian population till date. Hence this study was undertaken to evaluate the etiological profile of patients presenting with lower gastrointestinal bleeding.

#### AIM:

The aim of this study is to determine the etiology of LGIB in our center and to compare it with the results of the others elsewhere.

#### MATERIALS & METHODS:

It was a cross-sectional descriptive study carried out at Department of Digestive health and diseases, Chennai from 01 August 2017 to 31 July 2018 including 241 patients selected according to following inclusion and exclusion criteria;

#### Inclusion Criteria:

- Male and female patients with age above 18 yrs.
- Patients presenting with visible bleeding per rectum as their main complaint.

#### Exclusion Criteria:

- Patients below the age of 18 yrs.
- Patients with possible upper gastrointestinal bleeding site, i.e., history of aspirates containing coffee-ground material or fresh blood.
- Patients with bleeding per rectum as a result of acute infectious bloody diarrhoea.
- Patients with suspected peritonitis.
- Patients with any history of coagulopathy.
- Those patients who did not consent or refused colonoscopy.

Pentax video colonoscope was used for colonoscopy. Colonoscopic results were compiled and analysed using the statistical tests. Lesions with some degree of suspicion were biopsied and sent to laboratory for histopathological studies. Descriptive statistics were used to calculate Mean  $\pm$ SD of numerical data, e.g., age. Nominal data like gender and colonoscopic findings were analysed by their frequencies and percentages. Data was analysed using SPSS version 10.

#### RESULTS:

Study population included 241 patients, 107 females (45%) and 134 males (55%), with history of visible blood per rectum. Mean age of the patients was 38.6  $\pm$  9.2 years (range: 18 –80 years). The range of duration of symptoms was from 1 week to 7 years. The mean duration of rectal bleeding at presentation was 54  $\pm$  48.5 months. The longest duration of symptoms at presentation was noticed in patients with inflammatory bowel disease (IBD) and haemorrhoids. Colonoscopy showed abnormalities in 232 patients (96.2%). The common finding was haemorrhoids which was noted in 71 patients (29.4%), colorectal cancer in 64 (26.5%), Rectosigmoid 57 (89%) patients and descending colon 7(11%). Non-specific colitis was noted in 27(11.2%) and IBD in 25 patients (10.3%). 15 (6.2%) patients each had fissures and polyps. Less frequent findings included SRUS 9(3.7%), radiation proctitis 8(3.3%) and diverticula 7(2.9%). In 9 (3.8%) patients, no abnormality was seen on colonoscopy. These findings on colonoscopy along with final diagnosis have been shown in table below.

**Table 1: Distribution of subjects according to their colonoscopic findings (n=241).**

| Colonoscopic Findings | Male | Female | Total | Percentage |
|-----------------------|------|--------|-------|------------|
| Normal                | 5    | 4      | 9     | 3.8        |
| Hemorrhoids           | 40   | 31     | 71    | 29.4       |
| Colorectal cancer     | 36   | 28     | 64    | 26.5       |
| Non-specific colitis  | 15   | 12     | 27    | 11.2       |
| IBD                   | 15   | 10     | 25    | 10.3       |
| Fissures              | 10   | 5      | 15    | 6.2        |
| Polyps                | 8    | 7      | 15    | 6.2        |

|                     |     |     |     |     |
|---------------------|-----|-----|-----|-----|
| SRUS                | 4   | 5   | 9   | 3.7 |
| Radiation proctitis | 0   | 8   | 8   | 3.3 |
| Diverticula         | 6   | 1   | 7   | 2.9 |
| Total               | 134 | 107 | 241 | 100 |

### DISCUSSION:

LGIB is a significant cause of morbidity and mortality particularly in the elderly worldwide [6] [10]. It is also one of the most common gastrointestinal indications for hospital admission [6]. The incidence increases with age and is more common in men than women (Potter and Sellin, 1988) [5].

In developed countries, the most common causes of LGI bleeding are colon diverticulosis, followed by colonic tumors including polyps or cancer, colitis and anorectal disorders [3]. The picture in the developing countries is different as hemorrhoids being the most of the cases in many published studies from different parts of the world [6] [9] [11] [12]. Meanwhile, diverticulosis and colonic tumors are less commonly encountered owing to high dietary fibers, low animal fats, and protein in developing countries. In our country data regarding the colonoscopic findings in lower GI bleeding are scarce.

We had 241 cases with LGI bleeding collected in one year period, 134 cases were males and 107 cases were females with male: female ratio was 1.2:1. This slight male predominance is in concordance with what is known in the global literature and most of the studies from different parts of the world [5] [6] [17].

Findings at colonoscopy in our study were; hemorrhoids in 71 cases (29.4%), colorectal cancer in 64 cases (26.5%) 89% of these tumors were located in the rectosigmoid, nonspecific colitis in 27 cases (11.2%), inflammatory bowel disease in 25 cases (10.3%), anal fissure and polyp in 15 cases each (6.2%), rectal ulcers in 9 cases (3.7%), radiation proctitis in 8 cases (3.3%) and diverticula in 7 cases (2.9%) each and normal colonoscopic findings in 9 cases (3.8%) (Table 1).

Hemorrhoids were the commonest cause of LGIB in this study similar to data from other neighboring countries, and some regions in Asia and Africa [6] [17] [18] [19] [20] [21]. Expectantly our results are different from the pattern of LGIB in the Western world where diverticular disease, ischemic colitis, colorectal cancer and angiodysplasias are the common findings at colonoscopy [3] [22] [23]. The only exception is colorectal cancer which ranked as the second commonest finding and this is in Contrary to the general belief that colorectal cancer is not common in our environment, but with the availability of colonoscopy, this had been debunked as shown in this study.

Finally, one of the limitations of our study is that it was a single clinic based study and it was limited to one year period so extension of this study over several years will give us a larger and more representative sample, and more accurate conclusions to be drawn.

### CONCLUSION:

Hemorrhoids followed by colorectal cancer are the commonest colonoscopic findings in our study. Further larger, longitudinal and/or multicenter studies are needed to draw a definitive conclusion in our community.

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