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Colonoscopic Profile of Lower Gastrointestinal Bleed in Adults: A Tertiary Care Centre Based Study

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ABSTRACT

Lower Gastro intestinal (LGIB) bleeding is one of the most important clinical symptoms which have significant morbidity and mortality. It has an annual admission rate of 0.15% with mortality rate of 5-10%. LGIB can be caused by a number of causes, including both neoplastic and non-neoplastic lesions. Colonoscopy is the gold standard diagnostic measure which is a simple, convenient and cost-effective procedure. The present study aimed to assess the Colonoscopic profile of LGIB presented to our tertiary care centre. This is a cross-sectional observational study conducted in a tertiary health care centre. A total number of 58 adult subjects with LGIB aged above 18 years were recruited over a period of six months after obtaining written informed consent. All included patients underwent detailed history, clinical examination, blood tests and colonoscopic evaluation. Results were analysed. In our study among the 58 subjects (n=33) were males, which were equal to 57%. The majority of our patients were between the mean age of 31-40 years. Most colonoscopic findings were suggestive of ulcerative colitis, which equalled to 31%. Other different aetiologies of LGIB were as following: carcinoma of the colon (15%), haemorrhoids (15%), colonic polyps (14%) carcinoma of anal canal (5%) and so on. The majority of our patients had moderate anaemia, which was equal to 45% and this was due to persistent LGIB. The incidence of lower GI bleeding increased with increasing age among our patients. The leading cause of lower GI bleeding was found to be ulcerative colitis. The prevalence of colon cancer increases with increase in age. It was followed by CA colon, haemorrhoids, and colonic polyps; hence colonoscopy is recommended in all patients with chronic LGIB.

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INTRODUCTION

Gastrointestinal bleeding is a frequent cause of hospital admission, and it is an important factor for morbidity and mortality. In developed countries, the admission rate is around 0.15% and the mortality rate is around 5-10% [1]. LGIB is defined as the bleeding from the gastrointestinal tract (GIT) beyond the ligament of Treitz [2]. Bleeding from the lower gastrointestinal tract may account for 4 up to 20-25% of all acute GI bleeding [3]. It is usually presented with hematochezia (bright red blood or clots stools) or melena, especially for slow gas-

trointestinal (GI) bleeding [4]. Most cases don't are self-limiting, and they have uncomplicated hospital admission. The annual incidence of LGIB is about 0.03%, and it increases 200-fold times from 20 to 80 years [5]. Mortality due to LGIB increases with age and the presence of comorbidities [6]. Colonoscopy remains the gold standard diagnostic measure for evaluating the source of LGIB and it has the advantage of being both diagnostic and a therapeutic tool [7]. Past studies have shown that the most common cause of LGIB is due to diverticulosis or haemorrhoids [8, 9]. There have been no consistent reports regarding the aetiology of LGIB till date. So we intended to do this study on etiological profiles, gender differences and the age group patterns of patients presenting with LGIB in South India.

MATERIALS AND METHODS

This is a cross-sectional observational study conducted in a tertiary health care centre. The patients who presented with LGIB were included in this study. A total number of 58 adult subjects with LGIB aged above 18 years were recruited over a period of six months in this study after obtaining informed written consent. Patients with the suspected upper source of GI bleeding, acute infectious diarrhoea, aged less than 18 years and unfit for colonoscopy or hemodynamically unstable were excluded from this study. All the colonoscopies were performed under conscious sedation with prior bowel preparation. The colonoscopy procedure was properly explained and informed written consent from the parents was obtained before the procedure. The data were recorded and analysed using SPSS software version 2.0 and statistical analysis was done.

RESULTS

Of the total 58 patients recruited, 25 (43%) of them were female and 33 (57%) of them were male, with a male-to-female ratio of 1.32:1.0 (Figure 1). As described in Figure 2, the majority of our subjects were in the age group between 31 - 40 years and they account for around 25%. 24% were above 60 years of age and the minimum number of subjects was from the age group between 18-30 years who accounted for only 7%.

Figure 3 depicts the aetiology behind the lower gastro intestinal bleeding. The first and foremost cause of LGIB in our study was ulcerative colitis (31%). 15% of them had carcinoma of the colon, which was the second most important cause in our findings. Haemorrhoids also occupy the second position, which was around 15%. 14% of the subjects had a colonic polyp.

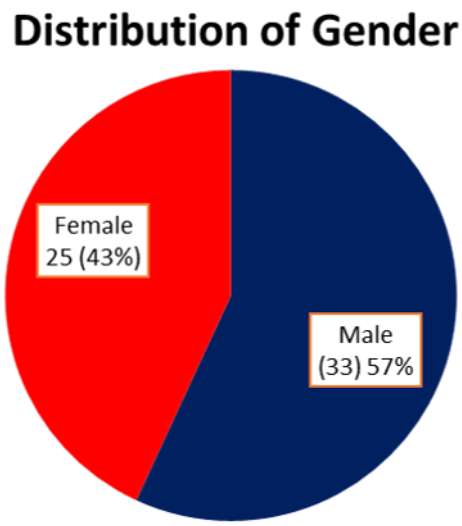

Figure 1: Frequency distribution of Gender in our study

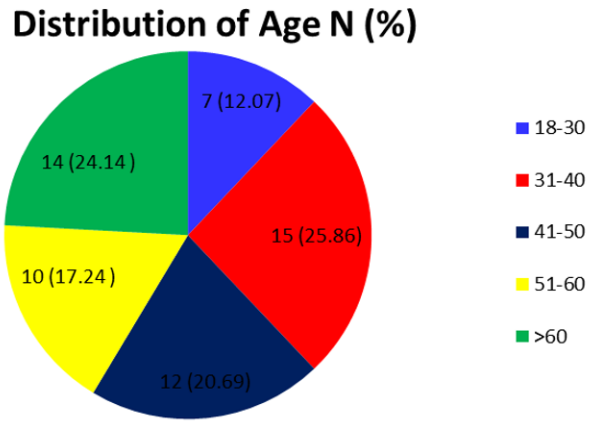

Figure 2: Frequency distribution of Age in our study

Table 1 represents the frequency distribution of aetiology of Gastro Intestinal bleeding among the different grades of anaemia. Around 45% of our subjects had moderate anaemia, 22% had severe anaemia and 26% of the subjects were normal.

Table 2 explains the frequency distribution of aetiology of Gastro Intestinal bleeding among the different age groups. In the age group above 60 years, around 8% of them had carcinoma, which includes CA of the rectum, anal canal and sigmoid colon. Young age adults, less than 30 years don't have any neoplastic lesions in our study. Group with more patients (i.e.) between 31-40 years had ulcerative colitis as the major cause, followed by rectal cancer.

Table 3 describes the frequency distribution of aetiology of Gastro Intestinal bleeding between genders. More or less, both genders have equal distribution in all aetiology except haemorrhoids. We reported that grade III haemorrhoids were absent in females

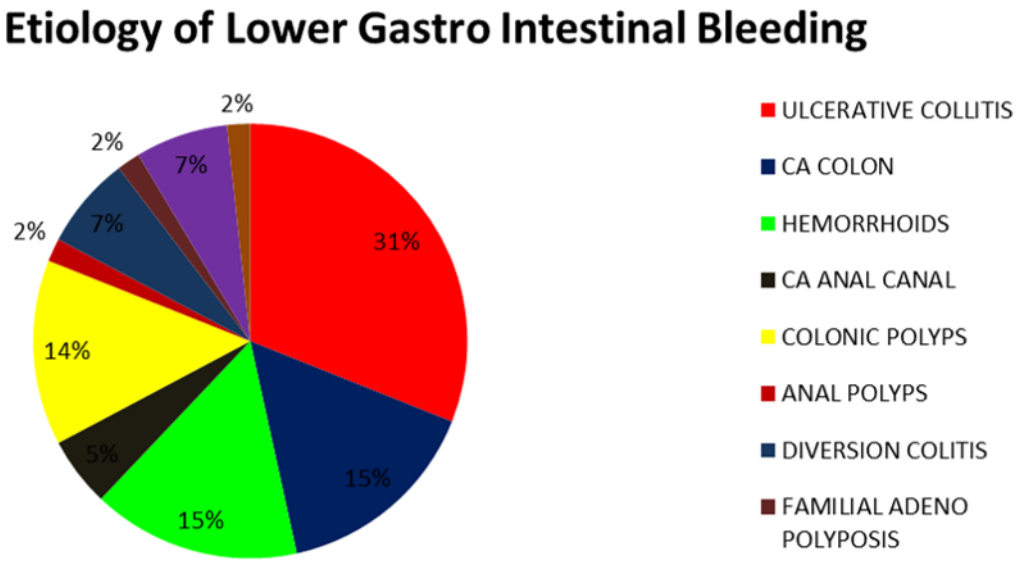

Figure 3: Frequency distribution of Etiology of Lower Gastro-Intestinal Bleeding

Table 1: Frequency distribution of etiology of Gastro Intestinal bleeding among the different grades of anemia based on Hemoglobin parameter

Etiology	Severe Anemia N (%)	Moderate Anemia N (%)	Mild Anemia N (%)	Normal N (%)	Total N (%)
Ulcerative Colitis	-	10 (55.6)	03 (16.7)	05 (27.8)	18 (100)
Cancer Anal Canal	01 (33.3)	02 (66.7)	-	-	03 (100)
Cancer Colon	02 (22.2)	06 (66.7)	-	01 (11.1)	09 (100)
Hemorrhoids	01 (11.1)	02 (22.2)	05 (55.6)	01 (11.1)	09 (100)
Colonic Polyps	-	02 (25)	01 (12.5)	05 (62.5)	08 (100)
Anal Polyp	-	-	01 (100)	-	01 (100)
Diversion Colitis	-	01 (25)	01 (25)	02 (50)	04 (100)
Familial Adeno Polyposis	-	01 (100)	-	-	01 (100)
Non Specific Colitis	-	01 (25)	03 (75)	-	04 (100)
Rectal Varices	-	01 (100)	-	-	01 (100)
Total	**04**	**26**	**14**	**14**	**58**

and grade II haemorrhoids are comparatively more in them.

DISCUSSION

Lower gastrointestinal bleeding is the most common problem in gastroenterology. In our study out of 58 patients, most of them were male with M : F ratio of 1.32:1.0, which is similar to other studies [10]. Most of our patient population was young in the age group between 31-40 years of age. We reported that as the age increases the incidence of LGIB increases. The majority of our subjects were in the age group between 31 - 40 years and they account for around 25%. 24% were above 60 years of age and the minimum number of subjects was from the age group between 18-30 years who accounts for only 7%. It is probably due to gastrointestinal diseases specific to the increasing age like haemorrhoids, ulcerative colitis and colorectal carcinoma [11]. Our results were also in accordance with previous findings. We have found that the prevalence of colon cancer increased with increasing age among our subjects.

Colonoscopy helps to find out the site, characteristics and nature of the lesion. We reported that most of the lesions were located in the anal canal and rectum, then in the sigmoid colon. Joukar F et al. reported similar findings where the site of involvement was anal canal (43.8 %) and rectosigmoid (26%) [12].

Table 2: Frequency distribution of etiology of Gastro Intestinal bleeding among the different age groups

Etiology	18 -30 N (%)	31-40 N (%)	41 -50 N (%)	51 -60 N (%)	>61 N (%)	Total N (%)
Ulcerative Colitis	04 (22.2)	05 (27.8)	04 (22.2)	03 (16.7)	02 (11.1)	18 (100)
Cancer Anal Canal	-	-	-	01 (33.5)	02 (66.5)	03 (100)
Cancer Colon	-	03 (33.3)	02 (22.2)	01 (11.1)	03 (33.3)	09 (100)
Hemorrhoids	-	03 (33.3)	03 (33.3)	-	03 (33.3)	09 (100)
Colonic Polyps	-	01 (12.5)	02 (25)	03(37.5)	02 (25)	08 (100)
Anal Polyp	-	-	-	01 (100)	-	01 (100)
Diversion Colitis	-	-	01 (25)	01 (25)	02 (50)	04 (100)
Familial Adeno Polyposis	-	01 (100)	-	-	-	01 (100)
Non Specific Colitis	03 (75)	01 (25)	-	-	-	04 (100)
Rectal Varices	-	01 (100)	-	-	-	01 (100)
Total	**07**	**15**	**12**	**10**	**14**	**58**

Table 3: Frequency distribution of etiology of Gastro Intestinal bleeding between the gender

Etiology	Male N (%)	Female N (%)	Total N (%)
Ulcerative Colitis	10 (55.6)	08 (44.4)	18 (100)
Cancer Anal Canal	02 (66.6)	01 (33.3)	03 (100)
Cancer Colon	03 (33.3)	06 (66.7)	09 (100)
Hemorrhoids	06 (66.7)	03 (33.3)	09 (100)
Colonic Polyps	05 (62.5)	03 (37.5)	08 (100)
Anal Polyp	01 (100)	-	01 (100)
Diversion Colitis	01 (25)	03 (75)	04 (100)
Familial Adeno Polyposis	01 (100)	-	01 (100)
Non Specific Colitis	03 (75)	01 (25)	04 (100)
Rectal Varices	01 (100)	-	01 (100)
Total	**33**	**25**	**58**

Most of the carcinoma occurred in the older age group above 60 years of age and predominantly located in the rectum and anal canal.

Bashir and Nadeem et al. observed nonspecific chronic colitis as a frequent histological finding of colorectal disease and LGIB. We also reported the same findings in our study, with ulcerative colitis as the most common etiology and non-neoplastic lesion (31%) [13].

We found that around 45% of our subjects had moderate anaemia, 22% had severe anaemia and 26% of the subjects were normal. Anaemia may be due to the chronic prolonged LGIB. Early diagnosis and treatment can prevent the subject from morbidity and mortality.

CONCLUSION

From our study, we came to know that the incidence of lower GI bleeding increased with increasing age among our patients. The leading cause of lower GI bleeding was found to be ulcerative colitis. It was followed by CA colon, haemorrhoids and colonic polyps. Hence colonoscopy is recommended in all patients with chronic LGIB. Colonoscopy is the gold standard diagnostic measure which is simple, convenient and cost-effective procedure. It is sensitive in detecting the aetiology of LGIB and also aids in the treatment of the lesions. So it can be done to

identify and treat the respective aetiology at the earliest.

Conflict of Interest

The authors declare that they have no conflict of interest.

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