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REVIEW

Lower Gastrointestinal Bleeding in the Teaching Hospital Campus Of Lome (Togo)

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ABSTRACT

BACKGROUND: Lower gastrointestinal bleeding are common, and the underlying diseases varies widely. Colonoscopy is the gold standard investigation for lower gastrointestinal bleeding. It helps in the proper diagnosis and the appropriate management of the underlying lesions.

AIM: To determine the epidemiologic characteristics and to investigate the etiology of lower gastrointestinal in a large tertiary endoscopic center.

METHODS: A colonoscopy database in a tertiary endoscopic center was searched to determine all patients with the indication of LGIB. The data, including patients' sex, age, endoscopic and pathological findings, were collected and analyzed. The data obtained was analyzed using the Statistical Package for the Social Sciences (SPSS) version 21.0. Descriptive statistics used included frequency tables,

means and standard deviations.

RESULTS: A total of 180 patients were included in the study, consisting of 114(63.3%) males and 66 (36.7%) females (Table 1). The male to female ration was 1.7 with a mean age of 54 years (SD 15 years). Most of our patients (55.6%) were inpatients, The majority of them (95%) presented hematochezia or melena (5%). The most common colonoscopy fundings of LGIB in our study were hemorrhoids (31.1%), diverticulosis (18.9%) and colorectal cancer (8.3%). The hemorrhoids were internal (59%), and external (41%), The internal hemorrhoids were grade 1 (9,1%) grade 2 (9,1%) and grade 3 (81,8%). For diverticular disease, the right-side-only pattern and the left-side-only pattern were most commonly reported (respectively; 41.2% and 35.3%). Colitis was represented in 30.7% of cases by ulcerative colitis, mainly in patients with a mean age of 47 ± 14 years.

CONCLUSION: Based on the etiological profile, hemorrhoids, diverticulosis and colorectal cancer were the leading causes with a male preponderance.

Key words: Colonoscopy; Etiology; Lower gastrointestinal bleeding

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INTRODUCTION

Lower gastrointestinal bleeding (LGIB) is defined as the blood loss of recent onset originating from the distalsite of ligament of Treitz at the duodenojejunal junction^[1]. Its clinical manifestations can range from subtle hemorrhage to massive bleeding with shock^[2]. LGIB may be acute or chronic. The etiology of LGIB in Western populations has been well reported^[3], and have been reported in many regions over the world^[4,5,6]. But, as far as we are aware, there are no available data on the etiology and epidemiology of LGIB in Togolese patients. Hence, our study aimed to identify the epidemiologic characteristics and to investigate the etiology of LGIB in a large tertiary endoscopic center in order to guide better the clinical management of patients

with LGIB and to compare these findings with patients in other parts of the world.

METHODS

The study took place at teaching hospital Campus of Lome (Togo). A longitudinal retrospective analysis of patient records was carried out covering the period from January to December 2018. The patients who attended the emergency room (ER) were in-patients or had attended an outpatient clinic or they were referred from other health centres. The study included all patients aged 18 years or over who presented with LGIB. Exclusion criteria were patients who had repeated procedures for any reason, whether inpatients or those discharged from hospital and then readmitted, who had a known etiology for LGIB. Poorly prepared patients or with incomplete examination or who had a known etiology for bleeding were also excluded.

The patients were examined for LGIB using forward-viewing curved linear array (Olympus EUS Solutions, USA). Endoscopy - intended colonoscopy - was performed within 24 h of admission, based on the nature of the urgency of the patient's condition. Prep was administered to the patients, which consisted of magnesium sulfate, sodium sulfate, and potassium sulfate. Subjects were advised to take prep on the night before colonoscopy; next day early morning, colonoscopy was done.

Data was collected and analyzed using SPSS (Statistical Package for the Social Science, version 20, IBM, and Armonk, New York). Continuous data were expressed in form of mean \pm SD or median (range) while nominal data were expressed in form of frequency (percentage).

The study was approved by the Faculty's ethics committee and permission was obtained from the ethics committee who was assured that confidentiality would be maintained and ethical principles would be followed.

RESULTS

Approximately 395 colonoscopies are carried out annually in our centre, with about 45.6% because of LGIB. A total of 180 patients were included in the study, consisting of 114(63.3%) males and 66 (36.7%) females (Table 1). The male to female ration was 1.7 with a mean age of 54 years (SD 15 years).

Most of our patients (55.6%) were inpatients, The majority of them (95%) presented hematochezia or melena (5%).

The most common colonoscopy fundings of LGIB in our study were hemorrhoids (31.1%), diverticulosis (18.9%) and mass or tumor (8.3%) confirmed by histological to be malignant (Table 2).

Patients with hemorrhoidal disease (had a mean age of 50 \pm 11 years with extremes of 27 and 75 years; there were 38 males (21.1%) and 18 women (10%) with male to female ration of 2.1.

The maximum age range was above 50 years of age. The hemorrhoids were internal (59%), and external (41%), The internal hemorrhoids were grade 1 (9.1%) grade 2 (9.1%) and grade 3 (81.8%).

Patients with diverticular disease had a mean age of 65 \pm 15 years with extremes of 18 and 89 years. For descriptive purposes the colon was divided anatomically into three segments: right side (caecum to hepatic flexure); transverse (hepatic flexure to splenic flexure); and left side (splenic flexure to rectum). When all three segments were involved, it was referred to as pancolonic. Table 3 summarises the pattern of involvement as reported at colonoscopy. The right-side-only pattern and the left-side-only pattern were most commonly

reported (respectively; 41.2% and 35.3%).

The tumors were colorectal cancer type and were predominant in patients with an mean age of 61 \pm 14 years. In twenty-six point seven percent of cases it was rectal cancer and in most cases (73.3%) colon cancer.

Patients with a polyp had a mean age of 56.5 \pm 12 years. Over half of patients (71.4%) had the polyps at the rectosigmoid region of the colon, while 14.3% had the polyps located proximal to sigmoid colon.

Colitis was represented in 30.7% of cases by ulcerative colitis, mainly in patients with a mean age of 47 \pm 14 years.

DISCUSSION

This single-centre population-based retrospective study examined demographic features of LGIB in patients who presented to the teaching hospital Campus of Lome from January to December 2018. This study has focused on acute LGIB necessitating hospitalisation, medical intervention and support, and those patients with minimal perrectal bleeding, who are managed as outpatients.

Approximately 395 colonoscopies are carried out annually in our centre, with about 45.6% because of LGIB.

In the present study, the mean age of the patient population and the distribution of sex (male: female ratio 1.7) was comparable with those reported in recent studies^[7-9], the LGIB was more common in men than in women. Our study showed in all colonoscopy findings, a median age of 54 years for both sexes.

Table 1 Demographic characteristics of patients with LGIB.

	n	%
Gender		
Male	114	63.3
Female	66	36.7
Symtoms		
Hematochezia	171	95
Melena	9	5
Colonoscopy findings		
hemorroids	56	31.1
Diverticulosis	34	18.9
Mass/ Tumor	15	8.3
Colitis	13	7.2
Polyps	7	3.8
Normal colonoscopy	65	36.1

Table 2 Lesions found at colonoscopy.

Colonoscopy findings	Mean age	M : F ratio	%
Hemorrhoids	49.62	2.1	31.1
Diverticulosis	62.7	2.1	18.9
Mass/tumor	61.46	1.1	8.3
Colitis	43.61	5.5	7.2
polyps	58.28	5.9	3.8

Table 3 Diverticular disease localizations.

Segment	n	%
Right side only	14	41.2
Left side only	12	35.3
Left side and transverse	4	11.8
Transverse	1	2.9
Right side and Left side	1	2.9

The main causes of LGIB in our systematic review were somewhat different from Western reports. It has been reported that colonic diverticula is the most frequent source of LGIB in Western populations^[10-12]. Colonic diverticula is not a main cause of LGIB in Lome; in our study, just 18.9% of the patients were diagnosed to have colonic diverticula as the presumed source of bleeding. It is not clear what accounts for this difference between our findings and Western reports, we suppose this might reflect the low prevalence of colonic diverticula in the black population^[13,14]. Diverticular disease has been considered a lifestyle disease of western countries. Age, urbanisation and low-fibre diets are thought to be risk factors for developing the disease. The majority of patients (> 80%) remain asymptomatic and are diagnosed incidentally. In those who are symptomatic, the most common presenting symptoms are rectal bleeding, abdominal pain and constipation^[15,16]. Whether our findings can be attributed solely to changes in dietarhabits and socioeconomic changes is unclear. An additional explanation for such an increased prevalence could be that our patients in Lome currently have better access to appropriate, modern diagnostic modalities than before 2012, the year of introduction of universal health insurance and improvement of the technical platform of hospitals in Togo.

Similarly in a study conducted by Alruzud *et al*^[17] hemorrhoidal disease is the most common etiology of LGIB in Lome. Hemorrhoids affect all age populations as seen in this study. The majority of patients affected was above the age of 50 years with male sex predominance. A literature search showed paucity of literature on epidemiology of hemorrhoids in Africa, but studies from Nigeria reported a peak incidence in the late and early third and fourth decades respectively with a male predominance^[18,19]. However, there was a predominance of internal hemorrhoids (59%) in our study and the majority (81.8%) were grade 3 compared to the results of Emeka *et al* in Nigeria^[20].

Colorectal cancer constituted 8.3% of findings in patients with LGIB. The 40% of these tumours were located in the left colon and confirmed by pathology to be malignant. In contrast to our funding Oguntoyee *et al*^[21] in Nigeria reported colorectal cancer as the most common cause of LGIB.

Among other findings, IBD confirmed by pathology, colitis 5% and ulcerative colitis 2.2% of LGIB patients, and the was no patient with crohn's disease. Our findings are similar to those of other African authors^[21,22]. ulcerative colitis is reportedly rare in black Africans compare to western populations^[23].

The limitation of the present study is that colonoscopy reports were the major source of data in this retrospective research and so other relevant clinical information beyond the endoscopy report was limited, such as drug history, associated comorbid diseases, severity of bleeding or outcome, and whether some of the reported endoscopic findings definitely establish the exact bleeding site.

In spite of these limitations, there are strengths in our research in that it identifies the demographic characteristics and relevant epidemiological information available in Togo in order to supervise more appropriat prescription and hospitalization of patients with LGIB and to analys these clinical features with patients in other region of the worldwide.

CONCLUSION

Hemorrhoids and diverticulosis were the major causes of LGIB. Our study findings could direct further research toward the analysis of correlation of the etiological factors with other clinical parameters to potentially improve the outcomes in the patients. In future, research

is required in our country on larger sample size of patients with LGIB to understand the etiology of the disease.

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