

Original Article

Demographic Profile and Endoscopic Findings among Patients with Upper Gastrointestinal Bleeding in Ahmadu Bello University Teaching Hospital, Zaria, North-Western Nigeria

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ABSTRACT

Background: Upper gastrointestinal bleeding (UGIB) is a common medical emergency that can result in significant morbidity and mortality. **Aim:** The aim of this study was to determine the demographic profile and etiology of UGIB in patients seen at Ahmadu Bello University Teaching Hospital (ABUTH), Zaria, North-Western Nigeria. **Subjects and Methods:** This descriptive retrospective study was carried out at the Gastroenterology Unit of ABUTH Zaria. Data of patients referred for upper gastrointestinal endoscopy with UGIB from June 2017 to December 2019 were extracted from the endoscopy register and analyzed. **Results:** One hundred and forty-four patients had upper gastrointestinal (UGI) endoscopy done for UGIB during the period under review. Of these, 105 (72.9%) were males while 39 (27.1%) were females with male-to-female ratio of 2.7:1. The mean age of the patients was 43.5 ± 17.3 and their age ranges from 11 to 89 years. The modal age group was 40–49 years. The most common cause of UGIB was esophageal varices (67 [46.5%]) followed by erosive mucosal diseases: gastritis/duodenitis 43 (29.9%), esophagitis 12 (8.3%). Less common causes were peptic ulcer disease (PUD) in five (3.5%) patients, gastric tumor in two (1.4%), hiatus hernia in one (0.7%), and portal hypertensive gastropathy in one (0.7%). Thirteen patients (9.0%) had normal findings. **Conclusion:** Esophageal varices are the most common cause of UGIB among our patients and middle-aged male patients were the most commonly affected group.

KEYWORDS: Esophageal varices, peptic ulcer disease, upper gastrointestinal bleeding

INTRODUCTION

Upper gastrointestinal bleeding (UGIB) is a cause of significant morbidity and mortality worldwide and acute UGIB is a common medical emergency seen by gastroenterologists.^[1,2] It has an incidence ranging from 50 to 150/100,000 population per annum and overall mortality rate of 6%–10% which can be up to 30% in sub-Saharan Africa.^[3–5] UGIB is four times more common than lower gastrointestinal (GI) bleed and is seen more commonly in males and the elderly.^[3,6,7] UGIB is often classified as variceal and nonvariceal because of the differences in their

management strategies and prognosis.^[8] Worldwide peptic ulcer disease (PUD) is the most common cause of UGIB accounting for approximately 50% of cases followed by esophageal varices.^[9,10] However, studies have shown that esophageal varices are the most common cause in parts of sub-Saharan Africa.^[4,11] Other major causes of UGIB include

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gastritis, esophagitis, duodenitis, Mallory-Weiss tear, and upper GI malignancies.^[12] Identification of the cause of UGIB is important in the management of the patients. Upper GI endoscopy is the preferred choice of investigation for evaluating patients with UGIB. It can be both diagnostic and therapeutic.^[13] There are few studies on UGIB in Nigeria and these studies showed a different pattern in the most common cause between the Northern and the Southern parts of the country.^[14,15] A previous study that reported causes of UGIB in Zaria took place approximately 3 decades ago.^[16] Hence, there is need, therefore, to reexamine the causes of UGIB to update the existing knowledge for effective management of UGIB in our setting.

SUBJECTS AND METHODS

This retrospective descriptive study included all patients who underwent UGI endoscopy done for UGIB between June 2017 and December 2019 at the endoscopy unit of Ahmadu Bello University Teaching Hospital (ABUTH), Zaria. ABUTH Zaria is a first-generation tertiary Hospital in Nigeria that serves as a referral center for most part of North-Western and parts of North-Central Nigeria. Endoscopy is routinely carried out once or twice a week and patients referred for UGIB are usually taken on the next endoscopy day. Data on age, gender, and findings at endoscopy were extracted from the endoscopy unit register. Informed consent was obtained from each patient and the procedure carried out after an overnight fast using Sonoscape video gastroscope. Ten percent pharyngeal xylocaine spray was used to anesthetize the pharynx before the introduction of the scope.

The data obtained were analyzed using SPSS statistical software version 20.0.

RESULTS

One hundred and forty-four patients had UGI endoscopy for UGIB during the period under review. Of those, 105 (72.9%) were males while 39 (27.1%) were females with male-to-female ratio of 2.7:1. The mean age of the patients was 43.5 ± 17.3 and their age ranges from 11 to 89 years. The modal age group was 40–49 years and more than half of the patients were below the age of 50 [Table 1]. The most common cause of UGIB was esophageal varices [67 (46.5%)] followed by erosive mucosal diseases: gastritis/duodenitis 43 (29.9%), esophagitis 12 (8.3%). Less common causes were PUD in five (3.5%), gastric tumor in two (1.4%), hiatus hernia in one (0.7%), and portal hypertensive gastropathy in one (0.7%). Thirteen patients (9.0%) had normal findings [Table 2].

Table 1: Age distribution of patients with UGIB

Age group	Frequency	Percentage
10-19	11	7.6
20-29	22	15.3
30-39	28	19.4
40-49	29	20.1
50-59	28	19.4
60-69	13	9.0
70-79	9	6.3
80-89	4	2.8
Total	144	100.0

Table 2: Endoscopic findings among patients with UGIB

Endoscopic findings	Frequency	Percentage
Varices	67	46.5
Gastritis/duodenitis	43	29.9
Gastric/duodenal ulcer	5	3.5
Normal findings	13	9.0
Esophagitis	12	8.3
Gastric tumor	2	1.4
Hiatus hernia	1	0.7
PHG	1	0.7
Total	144	100.0

PHG=Portal hypertensive gastropathy

DISCUSSION

UGIB is a frequent cause of hospital visits and can result in significant morbidity and mortality.^[13] In our study, males were more commonly affected with male-to-female ratio of 2.7:1. This is similar to other studies in Nigeria and other countries.^[17-19] The mean age at presentation of our patients was 43.5 ± 17.3 similar to findings by Tijjani *et al.* in Kano, Mustapha *et al.* in North-Eastern Nigeria Akere *et al.* in Ibadan, South-Western Nigeria and Alema *et al.* in Uganda.^[14,15,20,21] The most common cause of UGIB among our patients is esophageal varices accounting for 46.5% of cases. Earlier report by Malu *et al.* in the same setting approximately 3 decades ago also showed esophageal varices as the most common finding among patients with UGIB.^[16] This indicates that the burden of background chronic liver disease (CLD) in most of these patients with varices in our locality has not improved over the past few decades. The major etiologies of CLD in our setting are hepatitis B and C viral infections and alcohol ingestion.^[22,23] However the most important etiology in most developing countries is hepatitis B viral (HBV) infection. This is because HBV infection is highly endemic in these regions. In Nigeria with a prevalence of 12.2%,^[24] the high endemicity of HBV infection may explain the burden of CLD with

its complications such as variceal bleeding in our setting. Other authors in Northern Nigeria, Tanzania, Malawi, and Pakistan also found varices as the most common cause of UGIB among their patients.^[4,11,14,25,26] However, studies from Southern Nigeria revealed that PUD and erosive mucosal disease were the most common findings among their patients.^[17,27,28] The reason for this difference between the North and South of Nigeria may be because CLD burden may be more in the North compared to the South. Majority of the Northern populace are farmers some of whom practice irrigation farming. This practice exposes them to schistosomal infection and subsequent hepatic schistosomiasis that contribute to the burden of CLD in this part of Nigeria. The second most common cause of UGIB among our patients is erosive mucosal diseases: gastritis/duodenitis (29.9%), esophagitis (8.3%). This result is consistent with findings in other studies in North-Eastern Nigeria, Pakistan, and Ghana.^[14,26,29] PUD is not a common cause of UGIB in our study accounting for only 3.5% of cases. This is in contrast to reports from Southern Nigeria, Iran, India, and Western countries where PUD is the most common cause of UGIB.^[17,27,30-33] However, incidence of bleeding PUD is decreasing generally even in places where it is the most common cause of UGIB. Similar trend is also being noticed in our center when one compare our finding to that of Malu *et al.* in the same setting approximately 3 decades ago in which PUD was second to esophageal varices with a frequency of 17.3%.^[16] Declining incidence of PUD may be related to the widespread use of *H. pylori* eradication therapy and proton pump inhibitors.^[6,7] Rare causes of UGIB among our patients were gastric tumor, hiatus hernia, and portal hypertensive gastropathy. Mustapha *et al.* and Akere *et al.* found gastric cancer and hiatus hernia respectively to be rare in their studies.^[14,15] Portal hypertensive gastropathy is a rare cause of UGIB and patients with this lesion tend to have more of chronic bleeding than acute UGIB.^[34-36] No cause for the UGIB was found in 9% of our patients. This is similar to findings in North-Eastern Nigeria and Uganda but higher than findings from Southern Nigeria.^[14,17,21,27] This finding also shows that endoscopy is diagnostic of UGIB in 91% of our patients which is consistent with reports from Western literature that endoscopy is diagnostic in over 80% of cases.^[9,10] Other rare causes of UGIB such as Dieulafoy's lesion was not seen among our patients. Dieulafoy's lesion which is an aberrant dilated artery commonly found in the proximal stomach can be missed during UGI endoscopy as it is diagnosed endoscopically in only approximately 70% of cases.^[37] Therefore, it is possible that the cause of

UGIB among our patients with normal findings may be such as Dieulafoy's lesion.

In conclusion, UGIB is seen more commonly among male patients in the age group 40–49 years and esophageal varices are the most common etiology among our patients. As most of these patients have background CLD, surveillance endoscopy in patients with CLD before the first episode of UGIB will go a long way in reducing the incidence of UGIB among our patients.

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Conflicts of interest

There are no conflicts of interest.

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