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UPPER GASTROINTESTINAL TRACT BLEEDING IN ILORIN, NIGERIA - A REPORT OF 30 CASES

*** AB Olokoba, ** LB Olokoba, *** AAG Jimoh**
**Gastroenterology Unit, Department of Medicine, ** General Out-Patient Department, University of Ilorin Teaching Hospital, Ilorin, Nigeria. ***Eyitayo Hospital and Maternity Centre, Ilorin.Nigeria.*

ABSTRACT

Background: Upper gastrointestinal tract bleeding refers to blood loss within the intraluminal gastrointestinal tract from any location between the upper oesophagus to the duodenum at the ligament of Treitz. The onset and severity of blood loss varies widely. Acute gastrointestinal bleeding is a potentially life-threatening abdominal emergency that remains a common cause of hospitalization.
There is no local data on the clinical presentation, endoscopic findings and the risk factors for upper gastrointestinal tract bleeding in Ilorin. This study was therefore to review the cases of upper gastrointestinal tract bleed in Ilorin.

Aim: To review the cases of upper gastrointestinal tract bleeding seen in Ilorin.

Methodology: A retrospective review of the cases of upper gastrointestinal tract bleeding who had upper gastrointestinal tract endoscopy as part of their workup was undertaken to cover a eighteen month period from June 2006 to November 2007. Their clinical presentation, endoscopic findings, and the risk factors which predisposed them to bleeding were evaluated. The endoscopy register and the request forms were reviewed.

Results: A total of thirty patients had upper gastrointestinal tract bleeding for which upper gastrointestinal tract endoscopy was performed during the period under review. Twenty-three of the patients were males (76.7%) while seven were females (23.3%). Sixteen patients (53.3%) presented with malaena only; eleven patients (36.7%) with malaena and haematemesis only; while three patients (10.0%) presented with malaena, haematemesis and haematochexia. However all the patients presented with malaena, haematemesis or haematochexia. The commonest clinical presentation of patients with upper gastrointestinal tract bleeding passage of malaena (53.3%). The commonest endoscopic finding was multiple sources of bleeding (66.7%) while the commonest risk factor for upper gastrointestinal tract bleeding was NSAID use (36.7%).

Conclusion: The passage of malaena, multiple source of bleeding, and NSAID use are the commonest clinical presentation, endoscopic findings and risk factors respectively in patients with upper gastrointestinal tract bleeding in Ilorin. The spectrum of clinical presentation, endoscopic findings and risk factors for upper gastrointestinal tract bleed found in this study is similar to that found by other workers
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Key Words: Upper, gastrointestinal tract, bleeding, Ilorin *(Accepted 25 April 2008)*

INTRODUCTION

Upper gastrointestinal (UGI) tract bleeding refers to blood loss within the intraluminal gastrointestinal tract from any location between the upper oesophagus to the duodenum at the ligament of Treitz[1]. The onset and severity of blood loss can range from intermittent and low-grade occult bleeding presenting as occult blood positive stools and iron deficiency anaemia to very abrupt and massive blood loss presenting as haematemesis and hypovolaemic shock[1]. Acute gastrointestinal (GI) bleeding is a potentially life-threatening abdominal emergency that remains a common cause of hospitalization. The incidence of UGI bleed is approximately 100 cases per 100,000 population per year[2]. Bleeding from the UGI tract is approximately 4 times as common as bleeding from the lower GI tract and is a major cause of morbidity and mortality. Mortality rates from UGI bleed are 6-10% overall[2].
By convention, UGI bleeding has been categorized as either variceal or nonvariceal in origin. Gastro-oesophageal varices are enlarged venous collateral channels that dilate as a consequence of portal hypertension[1]. Varices gradually enlarge and eventually rupture, resulting in massive UGI haemorrhage. In contrast, nonvariceal bleeding results from disruption of oesophageal or gastroduodenal mucosa with ulceration or erosion into an underlying vessel. Some examples of nonvariceal lesions responsible for UGI bleeding are Mallory-Weiss, gastroduodenal ulcers or tumours, and Dieulafoy's lesion[1]. The major causes of UGI bleed are duodenal

Correspondence: Dr A B Olokoba
E-Mail:drabolokoba@ yahoo.com

ulcer haemorrhage (25%), gastric ulcer haemorrhage (20%), mucosal tears of the oesophagus or fundus (Mallory-Weiss tear), oesophageal varices, erosive gastritis, erosive oesophagitis, Dieulafoy's lesion, gastric varices, gastric cancer, and ulcerated gastric leimyoma[3]. Rare causes of UGI bleed include aortoenteric fistula, gastric antral vascular ectasia, angiectasias, and Osler-Weber-Rendu syndrome[3]. The history and physical examination provide crucial information for the initial evaluation of a patient presenting with a GI tract haemorrhage. The history findings can be extremely helpful in determining the location of the GI haemorrhage. Alcohol abuse or a history of liver cirrhosis should elicit consideration of portal gastropathy or oesophageal varices as a source of bleeding. A history of recent nonsteroidal anti-inflammatory drug (NSAID) abuse should elicit concern about bleeding from a gastric ulcer[4]. Haematemesis is observed in 40-55% of patients, including patients with coffee-ground emesis. Malaena is documented in approximately 70-80% of patients, and haematochezia in approximately 15-20%. These clinical features may also be indicators of the potential source of the GI bleeding[5]. The source of bleeding can be demonstrated via oesophagogastroduodenoscopy. There is no local data on the clinical presentation, endoscopic findings and the risk factors for upper gastrointestinal tract bleeding in Ilorin. This study was therefore to review the cases of upper gastrointestinal tract bleed in Ilorin.

MATERIALS AND METHODS

The study was a hospital-based retrospective one. A review of all patients seen with clinical features of UGI bleed, and who underwent UGI endoscopy as part of their work-up. The study covered a period of eighteen-months between June 2006 and November 2007.The upper GI endoscope in use at the endoscopy unit of the hospital is Olympus GIF XQ10 model with an Olympus CLK 3-4 light source. The patients were made to fast for 6-8 hours and had 10% plain xylocaine spray applied to the pharynx before undergoing UGI endoscopy. All the patients also had 20mg of intravenous hyoscine bromide applied. Some of the patients who were found to be anxious were given additional 10mg of intravenous Diazepam. However none of the patients with suspected or confirmed diagnosis of underlying liver disease was given Diazepam. The presenting clinical features as well as the risk factors predisposing to the development of UGI bleed were noted. The data obtained from these were analysed using a computer, and SPSS version 10 statistical software.

Setting of the Study

Eyitayo hospital and maternity centre (EHMC), Ilorin is a private hospital established in 1989 that runs a specialist Gastroenterology clinic.It receives referrals for Gastroenterology consultations and oesophagogastroduodenoscopy(OGD) mainly from the University of Ilorin Teaching Hospital (UITH) Ilorin, other private hospitals, and other government-owned primary and secondary health facilities in Ilorin and its environs. This is because this procedure ie OGD is not readily available elsewhere in Ilorin. Ilorin is located in the North -central zone of Nigeria. It serves patients from sub-urban and rural areas of Kwara state as well as neighbouring states of Ekiti, Kogi, Niger, Osun and Oyo. Ilorin also serves as the capital of Kwara state, and it is multi-ethnic in composition[6].

Analysis

The data obtained was entered into a computer using SPSS version 10 statistical software for analysis.

RESULTS

At the conclusion of the study, a total of thirty patients were found to have had upper GI bleed for which upper GI endoscopy was carried out to evaluate them.

Demographic data of the patients

Age: The ages of the patient ranged from 27-84years with a mean of 53.3+/-15.2 years. Majority of the patients were in the age group 50-59years ie sixth decade of life. The peak age of the patients was the sixth decade with a decline towards the ninth decade (Table 1).

Sex: Twenty-three of the patients were males (76.7%) while seven were females (23.3%) giving a male to female ratio of 3.3:1 (Table 2).

Clinical profile

From this study, 16 patients (53.3%) presented with malaena only; 11 patients (36.7%) presented with malaena and haematemesis only; while 3 patients (10.0%) presented with malaena, haematemesis and haematochexia. All the patients presented with malaena alone or in combination with haematochexia and or haematemesis. (Table 3) Bleeding duodenal ulcer was seen in 40.0% of patients at endoscopy; 10.0% had gastric ulcer. Multiple source of bleeding was found in 66.7% of patients; 26.7% had oesophageal varices, 20.0% had erosive oesophagitis while 6.7% had malignancy. NSAIDS use was seen in 36.7% of the patients; 6.7% of the patients on NSAIDS also had background chronic liver disease; 13.3% had chronic liver disease only; 20.0% were using alcoholic; 3.3% were on oral contraceptive use while 20.0% had no risk factors for bleeding identified in them.From this study, six patients (20.0%) had no risk factors for UGI bleed identified in them. All the six patients

presented with passage of malaena. Of the nine patients(30.0%) with only NSAID use as risk factor for UGI bleed, five of them presented with passage of malaena, two of them presented with malaena and haematemesis while the remaining two presented with malaena, haematemesis and haematochezia. Of all the six patients(20.0%) with alcohol use as risk factors for UGI bleed; three of them presented malaena; two of them with malaena and haematochezia while one of them presented with malaena, haematemesis and haematochezia. All the four patients(13.3%) who had only CLD as the risk factor for UGI bleed, presented with malaena and haematemesis. The two patients(6.7%) who had background CLD and NAID use as risk factors for UGI bleed presented malaena and haematemesis. The only patient (3.3%) with OCP use as a risk factor for UGI bleed presented with malaena. Of the two patients(6.7%) with oesophago-gastric malignancy as risk factor for UGI bleed, one presented with passage of malaena while the other presented with malaena and haematemesis. See table 4.

Table 1: **Age Groups.**

Age groups (Years)	Frequency	Percent
20-29	2	6.7
30-39	3	10.0
40-49	6	20.0
50-59	9	30.0
60-69	3	10.0
70-79	6	20.0
80-89	1	3.3
Total	**30**	**100**

Table 2: **Sex Distribution of Patients.**

Sex	Frequency	Percent
Male	23	76.7
Female	7	23.3
Total	**30**	**100**

Table 3: **Presentation of Bleeding.**

Presentation	Frequency	Percent
Malaena only	16	53.3
Malaena & Haematemesis only	11	36.7
Malaena & Haematemesis & Haematochexia	3	10.0
Malaena or Haematemesis or Haematochexia	30	100

Table 4: **Clinical Presentation versus Risk Factors.**

Presentation	Risk Factors							
	None	Nsaids	Alc	Cld	Cld&Nsaid	Ocp	Malig	Total
Malaena	6	5	3	-	-	1	1	16
Malaena& Haematemesis	-	2	2	4	2	-	1	11
Malaena, Haematemesis& Haematochezia	-	2	1	-	-	-	-	3
Total	**6**	**9**	**6**	**4**	**2**	**1**	**2**	**30**

Key
NSAIDS= Nonsteroidal anti-inflammatory drugs
ALC= Alcohol
CLD= Chronic liver disease
CLD&NSAID= Chronic liver disease and Nonsteroidal anti-inflammatory drugs
OCP=Oral contraceptive pill
MALIG=Malignancy

DISCUSSION

Fiberoptic UGI endoscopy is now a well established procedure for the investigation and management of UGI disorders. It has become the procedure of choice for its acceptability to the majority of patients, and for its diagnostic superiority over barium studies[7]. In addition to being used as a diagnostic tool, the endoscope has a role in therapeutic procedures[8]. From this study, 40.0% of the patients with UGI bleed had duodenal ulcer at endoscopy while 10.0% had gastric ulcer. This figure is comparable to the 37.5% for duodenal ulcer found by Abdulazeez et al[9] amongst their patients with UGI bleed at endoscopy in the Eastern province of Saudi Arabia. However the figure is higher than the 17.3% for peptic ulcer found by Malu et al[10] amongst their patients with UGI bleed at endoscopy in Zaria. It is lower than the 57.1% for gastric and duodenal ulcerations found by Voigtsberger et al[11] amongst their German patients. Arigbabu and Adekunle al[12] found bleeding duodenal ulcer as the commonest source of bleeding at endoscopy in their patients in Ife. Multiple sources of bleeding was found in 66.7% of patients at endoscopy in this study. This is higher than the 15.4% found by Voigtsberger et al[11]. Abdulazeez[9] did not find multiple sources of bleeding. Lesions were found in all the patients at endoscopy. This is similar to the findings of Abdulazeez et al[9] who found one lesion or the other in all their bleeding patients. However Voigtsberger et al[11] could not find any lesion in 9.0% of their patients.From this study, eight patients (26.7%) had oesophageal varices. This figure is similar to the 26.5% found by Abulazeez et al[9]. It is however lower than the 34.6% for

Oesophageal varices found by Malu et al[10]. Out of the eight cases of oesophageal varices, six were found to be bleeding at endoscopy. All the patients with bleeding oesophageal varices were found to be Hepatitis B surface antigen (HBsAg) positive and all had decompensating liver cirrhosis. The two patients with nonbleeding oesophageal varices were cases of decompensating alcoholic liver disease. At the time of presentation, one was bleeding from a duodenal ulcer rather than the varices while the other had gastroduodenitis. Oesophageal varices are manifestation of portal hypertension, and the most common single aetiology of portal hypertension is liver cirrhosis[13]. Bleeding from oesophageal varices account for one-third of all deaths in patients with cirrhosis and portal hypertension[14]. Prospective studies have shown that up to 90% of patients with cirrhosis will develop oesophageal varices[15,16]. The risk of bleeding from oesophagogastric varices is 25-35% for both alcoholic and nonalcoholic cirrhosis with the majority of initial bleeding episodes occurring within the first year from the time of diagnosis[17,18]. Two of the patients (6.7%) with UGI bleed had malignancy of the UGI tract (oesophageal and gastric) at endoscopy. This is comparable to the 4.5% of Abdulazeez et al[9] patients who had either gastric or oesophageal cancer. Six patients (20.0%) had reflux oesophagitis (erosive). This is higher than the 2.0% found by Abdulazeez et al[9]. The variations in the relative frequencies of the various lesions found in the UGI tract at endoscopy between this study and that of Abdulazeez et al[9], Malu et al[10], Voigtsberger et al[11] and Arigbabu and Adekunle[12], might be due to the wide differences in sample size; variations in geographical locations; ethnic, socio-cultural, dietary and environmental factors. The differences in the periods the studies were carried out might also play a role. The commonest single lesion at endoscopy was duodenal ulcer (40.0%). This may be due to NSAID use because all the nine patients(30.0%) with only NSAID as the risk factor for UGI bleed had duodenal ulcer at endoscopy. This is in contrast to oesophageal varices found in Zaria.

From this study, 36.7% of the patients were on NSAIDS. NSAIDS are known to cause gastric lesions and predispose to UGI bleed.[1,19] In the study by Atoba and Olubuyide[19], they found that there is indiscriminate use of NSAIDS in Nigeria, and also demonstrated that NSAIDS cause gastrointestinal lesions which could lead to bleeding. From this study also, 53.3% of the patients with UGI bleed presented with malaena only; 36.7% with malaena and haematemesis only; 10.0% with malaena, haematemesis and haematochezia while all the patients with UGI bleed presented with malaena or haematemesis or haematochexia. This spectrum of presentation is similar to that found by Peter and Dougherty[5] in their patients with UGI bleed. They reported malaena in 70-80% of their patients; haematemesis in 40-50%; haematochexia in 15-20%; and haematochexia or malaena in 90-98% of them. A review of the literature shows that there is no local data from Ilorin with which to compare. Hence this study is a pioneer one from Ilorin, and will serve as a baseline for other researchers. Multi-centred studies involving larger numbers of patients still need to be done.

CONCLUSION

The passage of malaena, multiple source of bleeding, and NSAID use are the commonest clinical presentation, endoscopic findings and risk factors respectively in patients with upper gastrointestinal tract bleeding in Ilorin. The spectrum of clinical presentation, endoscopic findings and risk factors for upper gastrointestinal tract bleed found in this study is similar to that found by other workers. This study is a pioneer one from Ilorin, and it will serve as a baseline for other researchers.

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