



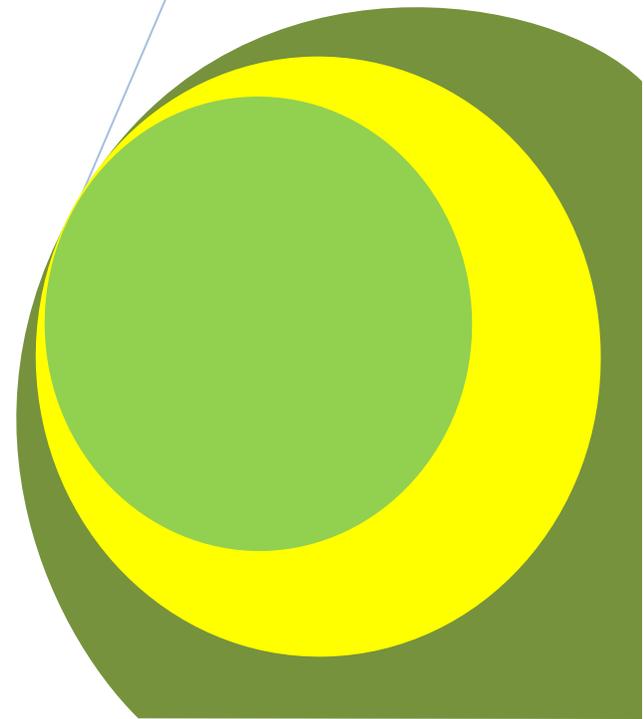
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Aetiology and Management Outcome of Upper Gastrointestinal Bleeding in Adult Patients Presenting at Ekiti State University Teaching Hospital, Ado- Ekiti, Nigeria

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Research Article

Aetiology and Management Outcome of Upper Gastrointestinal Bleeding in Adult Patients Presenting at Ekiti State University Teaching Hospital, Ado-Ekiti, Nigeria

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ABSTRACT

BACKGROUND AND AIM: Upper gastrointestinal bleeding (UGIB) is one of the commonest gastrointestinal emergencies. Endoscopy done within the first 24 hours of bleeding has been shown to be the most reliable means of establishing the source of upper gastrointestinal haemorrhage. This study was carried out to determine the aetiology and management outcome of patients with UGIB presenting at our facility located in Southwest Nigeria.

MATERIALS AND METHOD: 67 patients who presented with UGIB and underwent upper gastrointestinal endoscopy between April 2010 and March 2011 at the Ekiti State University Teaching Hospital (EKSUTH), Ado-Ekiti, Southwest Nigeria were retrospectively studied, relevant data extracted and analysed.

RESULTS: The demographic data of the patients showed a mean age of 41.84± 12.81 years, (ages ranged from 17 to 75 years), 40 (59.7%) were males while 27 (40.3%) were females giving a male to female ratio of 1.5:1. Clinical presentations included haematemesis and melena in 26 (38.8%), followed by haematemesis in 22 (32.8%) and melena in 19 (28.4%) of the patients. Antral mucosal erosions were the commonest cause of UGIB (49%), followed by peptic ulcer disease (25.4%), varices (11.9%) and gastric mass (1.5%). No cause for UGIB was found in 8 cases (11.9%). Endoscopy diagnostic accuracy was greater within the first 24 hours of the bleeding onset compared to those who had it done later ($p < 0.003$). Three patients died giving a mortality rate of 4.5%. These deaths were recorded from among the variceal bleeding group giving a mortality rate of 42.9% in this group of patients.

CONCLUSION: Antral mucosal erosions were the commonest cause of UGIB in our environment. NSAIDS intake was very high among the populace, especially in mucosal erosion group leading to high morbidity, absent from work and huge financial cost. It is recommended that serious awareness campaigns be mounted to educate the populace of the dangers inherent in indiscriminate use of NSAIDS in our society. As endoscopy diagnostic accuracy was greater within the first 24 hours of the bleeding onset, it is equally recommended that early endoscopy should be performed within 24 h of the onset of bleeding.

Keywords: Upper gastrointestinal bleeding, Endoscopy, NSAIDS, Southwest Nigeria.

INTRODUCTION

Acute upper gastrointestinal bleeding (UGIB) is a gastroenterological emergency with a mortality of 6%-13% despite advances in critical care monitoring and support (Holster et al., 2012). While spontaneous cessation of bleeding occurs in as many as 85% of cases (Fleischer 1983; Larson et al., 1983), early intervention is required in those in whom bleeding does not stop spontaneously. Bleeding from the upper gastrointestinal tract (GIT) is about four times as common as bleeding from the lower GIT (Palmer, 2004). Endoscopy done within the first 24 hours has been shown to be the most reliable means of establishing the source of UGIB. The incidence of UGIB in the UK ranges between 84-172 per 100,000 per year, causing 50-70,000 hospital admissions per year (NICE Clinical Guideline

June 2012). The aetiology of UGIB differs throughout the world, reflecting geographical differences in common disease states (El Mouzan et al., 2004; Houben et al., 2008). Few studies have been done in Nigeria to determine the aetiology and management outcome of UGIB (Malu et al., 1990). These few studies were done in the Northern part of the country. The purpose of this study was to determine the aetiology and management outcome of UGIB in adult patients present at the Ekiti State University Teaching Hospital (EKSUTH), Ado-Ekiti, Southwest Nigeria and compare them to the few studies done in the Northern part of the country and other parts of the world.

MATERIAL AND METHODS

67 patients were who presented with UGIB and underwent upper gastrointestinal endoscopy between April 2010 and March 2011 at the Ekiti State University Teaching Hospital, Ado- Ekiti, Southwest Nigeria were retrospectively studied. UGIB was defined as coffee-ground emesis, haematemesis or melena. Gastric lavage was performed with normal saline at room temperature in all cases to identify the site of bleeding. Fluid and electrolyte replacement was given when required. Endoscopy was performed within 48 hours after the bleeding episode with Olympus EVIS GIF-140 under xylocaine anaesthetic spray of the oropharynx and where necessary with midazolam after vital signs were stabilized.

Data collected from records included age, gender, clinical presentations, history of smoking, alcohol use, ingestion of NSAIDs, endoscopic findings and management outcome. An ethical clearance for this study was obtained from the EKSUTH Ethical and Research committee. Data obtained were analyzed using the statistical package for social sciences (SPSS, version 15) statistical software.

RESULTS

The demographic data of the patients showed a mean age of 41.84 ± 12.81 years, (ages ranged from 17 to 75 years), 40 (59.7%) were males while 27 (40.3%) were females giving a male to female ratio of 1.5:1. Majority of the patients were in the 30-59 years age range (table 1). Clinical presentations included haematemesis and melena in 26 (38.8%), followed by haematemesis in 22 (32.8%) and melena in 19 (28.4%) of the patients (table 2).

Antral mucosal erosions were the commonest cause of UGIB (49%), followed by peptic ulcer disease (25.4%), varices (11.9%) and gastric mass (1.5%). No cause for UGIB was found in 8 cases (11.9%). Endoscopy diagnostic accuracy was greater within the first 24 hours of the bleeding onset compared to those who had it done later ($p < 0.003$). NSAIDs and aspirin ingestion within the last 48 hours of UGIB was present in 37 (55.2%) of the patients, alcohol intake within the last 48 hours in 32 (47.8%), smoking in 11 (16.4%) and steroids intake in 4 (6%). Of the 33 patients that had antral mucosal erosions, 28 (84.8%) had taken NSAIDs and aspirin within 48 hours of UGIB.

Associated co-morbid diseases in these patients included hypertension in 35%, diabetes in 21%, chronic liver disease in 13.8%, and obesity in 13.5%. Of the 33 that had antral mucosal erosions, 20 (60.6%) were males while 13 (39.4%) were females. Among those with peptic ulcer disease, 10 (58.8%) were males while 7 (41.2%) were females. Of those that had variceal bleeding, 7 (87.5%) were males while 1 (12.5%) was a female. Among those with normal endoscopy findings, 2 (25%) were males while 6 (75%) were females (table 3).

DISCUSSION

UGIB is a common reason for emergency hospital admissions and a major cause of morbidity and mortality worldwide (Sarin et al., 2009; Mustapha et al., 2009). The mean age of the study population was 41.84 ± 12.81 years, with a male preponderance in all age groups (ratio of 1.5:1). This male preponderance was similar to what was reported in other studies (Mustapha et al., 2009; Meaden et al., 2004; Rockall et al., 1995; Kashyap et al., 2005). No reason could be adduced for this male preponderance.

Antral mucosal erosions were the commonest cause of UGIB (49%) in this study, this finding was contrary to the earlier reports from the studies in the Northern part of Nigeria, Egypt and Tanzania where variceal bleeding was the commonest cause of UGIB (Malu et al., 1990; Mustapha et al., 2009; Elwakil et al., 2011; Jaka et al., 2012). This difference might be explained by the high prevalence of chronic liver disease which in turn is as result of the high endemicity of hepatitis B virus in the Northern part of Nigeria and these other countries. This finding was also contrary to those reported from Europe, India and South America where erosive mucosal disease was identified as the second commonest cause of UGIB (Rockall et al., Pruthi et al., 2000; 1995; Zaltman et al., 2002). Peptic ulcer

disease was the second commonest cause of UGIB in this study (25.4%), contrary to the findings from the west where peptic ulcer disease which has been identified as the commonest cause of UGIB (Malu et al., 1990; Rockall et al., Gilbert et al., 1981). Variceal bleeding was the third commonest cause of UGIB (11.9%) while gastric mass (1.5%) was the least common in this study.

No cause for UGIB was found in 8 cases (11.9%). This is similar to findings reported from India (Jaka et al., 2012) and the USA (Cleveland et al., 2012). It is however higher than the figures reported from the west (Rockall et al., 1995). This may be due to the fact that patients in the western countries tend to have endoscopy earlier following UGIB. Mucosal lesions are well known to heal quickly and generally the time interval between the bleeding episode and endoscopy is well known to influence endoscopic diagnosis. In the present study, we found that the source of bleeding was established more often in those who underwent endoscopy within 24 hours of the bleeding episode than those who had it later ($p < 0.003$).

The commonest clinical presentation was haematemesis and melena in 26 (38.8%), followed by haematemesis in 22 (32.8%) and melena in 19 (28.4%) of the patients. This was similar to the study of (Kashyap et al., 2005) and contrary to that of (Jaka et al., 2012) who found 80.4% of their patients presenting with haematemesis alone.

It has been estimated that more than 30 million people all over the world consume NSAIDS daily (Gibson, 1989) and numerous studies have documented the toxic effect of NSAIDS on the gastrointestinal mucosa. In our series, 84.8% of the patients with mucosal erosions had taken NSAIDS and aspirin within 48 hours of the bleeding episode, while 45.5% had taken alcohol in this group of patients thereby making NSAIDS and alcohol the possible predicting factors in the patients with mucosal erosions. Alcohol was found to be a possible predicting factor in the patients that had variceal bleeding as 87.5% gave history of significant alcohol ingestion leading to the development of cirrhosis and portal hypertension.

Blood transfusion was required in 63.8% of the patients. This was similar to the study of (Villanueva et al., 1996). The number of blood transfusions is the index of severity; 27.3% required more than 4 pints of blood transfusions. Most of them were in patients with variceal and peptic ulcer bleeding. This was similar to the findings of (Kashyap et al., 2005). Clinical presentation of haematemesis and melena, haemodynamical instability and requirement for more blood transfusions were the indicators for excessive bleeding.

For lack of interventional endoscopy facilities at our centre, all the patients were managed conservatively with fluid replacements, blood transfusions, and parenteral proton pump inhibitors as required. Those that required interventional therapy were duly referred after stabilization to other facilities. Four of the patients with duodenal ulcer continuous bleeding had successful surgery carried out. Three patients died giving a mortality rate of 4.5%. This was lower than the 17.9% found in the study of (Mustapha et al., 2009) in Northern Nigeria and also lower than some of the reports from the west (Rockall et al., 1995; Gilbert et al., 1981; Gostout et al., 1992; Silverstein et al., 1981). This low mortality rate might be due to the fact that most of our patient had mucosal erosions compared to those with variceal bleeding in other studies. These deaths were recorded from among the variceal bleeding group giving a mortality rate of 42.9% in this group of patients. The presence of hepatic decompensation correlated significantly with higher mortality rate ($p = 0.004$). Overall, the length of stay on admission ranged from 6-10 days, with those having surgery staying longer.

NSAIDS intake was very high among the populace, especially in mucosal erosion group leading to high morbidity, absent from work and huge financial cost. It is recommended that serious awareness campaigns be mounted to educate the populace of the dangers inherent in indiscriminate use of NSAIDS in our society. As endoscopy diagnostic accuracy was greater within the first 24 hours of the bleeding onset, it is equally recommended that early endoscopy should be performed within 24 h of the onset of bleeding.

Table 1: Showing the age group and the sex distribution

Age Group	Male	Female	Total
15-29	6	5	11
30-44	17	12	29
45-59	13	7	20
60-74	4	2	6
>74	0	1	1
TOTAL	40	27	67

Table 2: Table showing the clinical presentation and the endoscopy findings (aetiology)

Endoscopy findings	Clinical presentation			Total
	Haematemesis	Melena	Both	
Antral mucosal erosions	14	10	9	33
Duodenal/Gastric ulcers	5	4	8	17
Gastric mass	1	0	0	1
Fundal/Oesophageal varices	0	0	8	8
Normal findings	2	5	1	8
TOTAL	22	19	26	67

Table 3: Table showing endoscopy findings and the sex distribution

Endoscopy findings	Male	Female	Total
Antral mucosal erosions	20	13	33
Duodenal/Gastric ulcers	10	7	17
Gastric mass	1	0	0
Fundal/Oesophageal varices	7	1	8
Normal findings	2	6	8
TOTAL	40	27	67

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