



Endoscopic Findings in Upper Gastrointestinal Bleeding at Lacor Hospital in Gulu, Northern Uganda.

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Background: Upper gastrointestinal bleeding (UGIB) is a common emergency medical condition that may require hospitalization and resuscitation, and results in high patient morbidity. Upper gastrointestinal endoscopy is the preferred investigative procedure for UGIB because of its accuracy, low rate of complication, and its potential for therapeutic interventions. Therefore the aim of this study was to determine the endoscopic findings in patients presenting with UGIB and its frequency among these patients according to gender and age in Lacor Hospital, Northern Uganda.

Methods: The study was carried out at Lacor Hospital, located at Northern part of Uganda. The record of 224 patients who underwent endoscopy for upper gastrointestinal bleeding over a period of 5 years between January 2006 and December 2010 were retrospectively analyzed.

Results: A total of 224 patients had endoscopy for UGIB which consisted of 113 (50.4%) males and 111 (49.6%) females, and the mean age was 42 years \pm SD 15.88. The commonest cause of UGIB was Esophageal varices consisting of 40.6%, followed by Esophagitis (14.7%), Gastritis (12.6%) and Peptic ulcer disease (duodenal and gastric ulcers) was 6.2%. The malignant conditions (Gastric and Esophageal cancers) contributed to 2.6%. Other less frequent causes of UGIB were Hiatus hernia (1.8), Duodenitis (0.9%), others-gastric polyp (0.4%). Normal endoscopic finding was 16.1% in patients who had UGIB

Conclusions: Esophageal varices are the commonest cause of upper gastrointestinal bleeding in this environment due to the high endemic nature of Hepatitis B infection among the population in Northern Uganda with nearly equal proportion of males to females as compared to the west which is mainly peptic ulcer disease.

Introduction

Upper gastrointestinal bleeding (UGIB) is a common emergency medical condition that may require hospitalization and resuscitation, and results in high patient morbidity¹. In a reported study the annual incidence of UGIB is approximately 100 cases per 100,000 populations. Bleeding from the upper GI tract is approximately 4 times as common as bleeding from the lower GI tract with Mortality rates from UGIB been 6-10% overall². A variety of conditions can cause UGIB, and bleeding from Peptic Ulcer remains the commonest cause accounting for approximately 50%, of the cases, followed by esophageal varices (14%), Mallory-Weis Tears (5%). Other causes include tumors, erosions and arteriovenous malformations³. The initial evaluation of these patients with UGIB for hemodynamic stability is essential. Early aggressive resuscitation of a hemodynamically unstable patient can reduce mortality in acute UGIB⁴. The effective treatment depends on identification of the source of the bleeding and expeditious administration of therapy⁵. Upper gastrointestinal endoscopy is the preferred investigative procedure for UGIB because of its accuracy, low rate of complication, and its potential also for therapeutic interventions^{3,6}

This study was carried out to evaluate the endoscopic findings in patients presenting with UGIB and its frequency among these patients according to gender and age.

Patients and Methods

This retrospective analysis included all patients referred to Endoscopy unit from both the Hospital's own units and surrounding hospitals with history of upper gastrointestinal bleeding between January 2006 and December 2010. Excluded all patients who had repeat endoscopies within one month of the previous endoscopy. Hemodynamic stability and resuscitation was performed by the various units

before endoscopy. Biopsy was taken from suspicious lesions where necessary. Data obtained from these patients were then recorded according to age, gender and endoscopic findings.

Results

A total of 3357 patients underwent upper gastrointestinal endoscopy during the five-year period covered in the study between January 2006 to December 2010.

Table 1. Age and Sex Distribution of Patients with UGIB.

Age (years)	10-20	21-30	31-40	41-50	51-60	61-90	Total (%)
Female	6	19	26	21	17	22	111 (49.6)
Male	7	25	34	23	17	7	113 (50.4)
Total	13	44	60	44	34	29	224 (100)

Mean age = 42.9 years ± SD 15.88

Table 2. Distribution of endoscopic findings and its frequency with sex.

Endoscopy findings	Females		Males		Total	
	Number	(%)	Number	(%)	Number	(%)
Esophageal varices	34	(15.2)	57	(25.4)	91	(40.6)
Esophagitis	19	(8.5)	14	(6.3)	33	(14.7)
Gastritis	16	(7.1)	13	(5.8)	29	(12.9)
Duodenal ulcer	3	(1.3)	6	(2.7)	9	(4.0)
Gastroduodenitis	3	(1.3)	5	(2.2)	8	(3.6)
Gastric ulcer	4	(1.8)	1	(0.4)	5	(2.2)
Hiatus hernia	4	(1.8)	0	-	4	(1.8)
Cancer stomach	1	(0.4)	2	(0.9)	3	(1.3)
Cancer esophagus	1	(0.4)	2	(0.9)	3	(1.3)
Duodenitis	1	(0.4)	1	(0.4)	2	(0.9)
Others	1	(0.4)	0		1	(0.4)
Normal	24	(10.7)	12	(5.4)	36	(16.1)
Total	111	(49.6)	113	(50.4)	224	(100)

* *Peptic ulcer disease (duodenal ulcer and gastric ulcer) in total is 6.2%,*

* *Erosive mucosal disease (Esophagitis, gastritis and gastroduodenitis) contributed 31.2%*

Out of the total number, 224 (6.7%) patients had endoscopy because of upper gastrointestinal bleeding (UGIB) with 113 (50.4%) being males and 111 (49.6%) were females. The M: F sex ratio was 1: 1. The mean age was 42 years ± SD 15.88.

The commonest cause of UGIB according to endoscopic finding was oesophageal varices accounting for 40.6% with male to female ration of almost 2:1. Varices were followed by oesophagitis (14.7%) with almost equal frequency in either sex. Gastritis and Peptic ulcer disease (duodenal and gastric ulcers) contributed 12.9% and 6.2% respectively. The oesophageal and gastric malignancies contributed only 2.6% of cases with a male to female sex ratio of 2:1 ([Table2](#)).

Discussion

This study found that, the mean age of the patients who had UGIB was 42.9 years ± SD 15.88 and this is similar to other studies reported in Africa.^{7, 8} However this is lower than the age reported in the developed world and could just be a reflection of the generally older population of the west. Similarly the age of our patients was not significantly associated with increased incidence of UGIB. The overall

male to female proportion was nearly the same as compared to what was reported in other studies^{9, 10}. This might be explained by the endemic nature of Hepatitis B infection among the population in Northern Uganda with nearly equal proportion of males to females¹¹

Esophageal varices were the commonest cause of UGIB accounting for 40.6% of all patients with male to female ratio of approximately 2:1. This is similar to studies conducted in the developing world especially in the African countries which have reported esophageal varices as the major cause of UGIB^{7,8,12,13} but contrary to the findings of most western studies where peptic ulcer disease has been identified as the commonest cause of UGIB^{5,6,8,9}. This discrepancy may be because of the high prevalence of chronic liver disease as a result of the endemic nature of hepatitis B virus in Northern part of Uganda and other African countries.

Erosive mucosal disease (oesophagitis, gastritis and duodenitis) was the second cause of UGIB which accounted for 23.7% of cases with oesophagitis being the commonest representing 14.7%, followed by Gastritis 12.9% of all cases of UGIB. These findings are similar to those reported from both the western world and Africa^{10,13,14}.

The peptic ulcer disease which has been reported as the most common cause of UGIB mainly in the west^{3,10,12,15,16} but was the third commonest cause in this study, accounting for only 6.2%, though with duodenal ulcer (4%) being more common than gastric ulcer (2.2%). This is similar to many studies reported. Other less common causes were Esophageal carcinoma (1.3%), though was reported in one study from Afghanistan been the commonest cause of UGIB, probably because of the highest incidence of esophageal cancer from the Iran-China belt¹⁷, gastric cancer (1.3%), Hiatus hernia (1.8%). No source of bleeding was found in 16.1% of the patients. This is similar to studies reported from Africa and India^{7,8,18}, and higher than the figures reported from the western world¹⁰. This is probably explained by the fact that patients in the western world tend to have endoscopy earlier following UGIB than in most developing world. In this study it was noted that endoscopy was done on average after 72 hours and usually mucosal lesions are well known to heal quickly and so the time interval between the bleeding episode and endoscopy influences endoscopic diagnosis.

Conclusion

Oesophageal varices are the commonest cause of upper gastrointestinal bleeding in this environment due to the high endemic nature of Hepatitis B infection among the population in Northern Uganda with nearly equal proportion of males to females as compared to the west which is mainly peptic ulcer disease.

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