Aetiology of upper Gastrointestinal Bleeding in Tertiary Care Center : A Retrospective Study of Endoscopic Findings

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ABSTRACT:

INTRODUCTION: Upper gastrointestinal bleeding (UGIB) is one of the most common complications among hospital admitted patients. UGIB is defined as bleeding within the gastrointestinal tract lumen from any location between the upper oesophagus upto the ligament of Treitz of duodenum. Upper endoscopy has a crucial role in the diagnosis and treatment of upper gastrointestinal bleeding.

METHOD: This is a retrospective analytical study in patients with UGIB admitted in Gastroenterology Unit, Department of Medicine, NAMS Bir Hospital, Kathmandu. The records of 112 patients who underwent endoscopy for UGIB over a period of one year (2014-April-14th to 2015-April-13th) was analyzed for this study.

RESULT: In this study total patients were 112. Among them 74.1% were male while 25.9% were female. Their ages ranged from 16-90 years with a mean of 48.7 years. Esophageal varices was the most frequent cause of bleeding 36(32.14%) followed by Peptic ulcer disease 31(27.67%), Erosive mucosal disease 18(16.07%), Mallory weiss tear 7(6.25%), Gastric cancer 4(3.57%) and Fundal varices (1.78%). Dieulafoy's Lesion, Inflamed sessile polyp and Esophageal candidiasis with erosive gastritis were rare causes with each accounting for 0.9% of the cases. In 10(8.92%) patients no source of bleeding could be identified.

CONCLUSION: In this study, portal hypertension related esophageal varices was the commonest cause of UGIB , followed by peptic ulcer disease and erosive mucosal disease.

KEY WORDS: Upper Gastrointestinal bleeding, Endoscopy, Varices, Portal hypertension.

INTRODUCTION

The upper gastrointestinal bleeding (UGIB) is defined as bleeding within the gastrointestinal tract lumen from any location between the upper esophagus to the ligament of Treitz of duodenum. UGIB is a common gastrointestinal emergency presenting as hematemesis and/or melena and rarely as hematochezia and is associated with significant morbidity and mortality.[1,2,3].

More than 350,000 patients are hospitalized each year in the United States for UGIB[4]. In spite of developments in new techniques in endoscopic interventions, the overall mortality rate in UGIB remains around 10% in most studies reported in different literatures.[5, 6, 7].

Endoscopy diagnostic accuracy if done within the first 24 hours of bleeding has been shown to be the greatest in establishing the source of UGIB. Several studies done in Western countries reveal Peptic Ulcer Disease and Erosive Mucosal Disease as the commonest causes of UGIB. [8,9,10,11,12]

Main objective of this study was to determine the cause UGIB patients presenting at a tertiary care center in Kathmandu.

METHOD

The study was conducted at Gastroenterology Unit, Department of Medicine, NAMS Bir Hospital. The records of 112 patients who underwent endoscopy for upper GI bleeding over a period of one year 2014-April-14th to 2015-April-13th were retrospectively analyzed. Data was collected from endoscopy records

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and patients medical records including age, gender and clinical presentation, history of ingestion of NSAIDS. SPSS program was used for analysis and a p value less than 0.05 was considered as significant.

RESULT

In this study total number of patients were 112 and among them eighty-three (74.1%) were males while twenty-nine (25.9%) were females. Their ages ranged from 16-90 years with a mean of 48.7 years. Majority of the patients 72(64.28%) presented with haematemesis and malaena. Haematemesis alone was reported in 35(31.25%) patients while 4(3.57%) had malena and 1(0.9%) had only haematochozia.

In Table 1, the aetiologic spectrum of UGIB is shown. Portal hypertension was associated esophageal or gastric varices is the most common cause of UGIB (33.92%) followed by peptic ulcer disease (27.67%), erosive mucosal disease (16.07%) and Mallory Weiss tear (6.25%) and gastric cancer(3.57%). In 10(8.92%) patients no source of bleeding could be identified . The use of NSAIDs was recorded in 17(15.17%) patients. Among 12 patients with erosive mucosal disease, 9(75%) had a history of NSAID ingestion prior to the onset of bleeding.

Table 1:- Table showing the mean age/aetiological Pattern of Upper Gastrointestinal Bleeding

Aetiology	Frequency	Percentage	Mean Age	SD	P-Value
Varices	38	33.92			0.81
Esophageal Varices (36)		32.14	42.03	14.1	
Fundal Varices (2)		1.78	44.5	6.4	
Peptic Ulcer Disease	31	27.7			0.707
Duodenal Ulser (18)		16.0	53.44	17.6	
Gastric Ulser (13)		11.6	55.85	17.1	
Erosive Mucosal Disease	18	16.07			0.425
Erosive Gastroduodenitis (7)		6.25	47.57	9.2	
Erosive Gastritis (7)		6.2	45.71	10.8	
Esophagitis (4)		3.57	53.5	6.0	
Mallory Weiss Tear	7	6.25	51.0	8.2	
CA Stomach	4	3.57	67	16.5	
Others	4	3.57	52.25	9.5	
Esophageal Ulcer	1	0.89	-		
Oesophageal Candidiasis with erosive gastritis	1	0.89	-		
Dieulafoy's Lession			-		
Inflamed Sessile Polyp	1	0.89	-		
	1	0.89	-		
No Lession Detected	10	8.92	47.25	14.9	

Table 2 :- Gender Difference in Various Aetiological Cause of UGIB

Diagnostic Group	**Male**	**Female**	**P-Value**
E.Varices/F. Varices due to Chronic Liver Disease	27	11	0.597
Peptic Ulcer Disease	23	8	0.99
Mallory Weiss Tear	7	-	0.106
Gastric Cancer	3	1	0.967
Erosive Mucosal Disease	12	6	0.432
Others			
Dieulafoy's Lesion	1	-	1
Esophageal Candidiasis with erosive gastritis	1	-	1
Esophageal Ulcer	1	-	1
Inflamed Sessile Polyp	-	1	0.089
No Lesion Detected	8	2	0.644
Total	83	29	

From table 2 , it can be seen that almost all types of UGIB was more in males than in females although statistically not significant (P=0.229).

Table 3:- Age Difference in Various Aetiological Cause of UGIB

Diagnostic Group	No. of Patients (Age < 40)	No. of Patients (Age ≥ 40)	P-Value
E.Varices/F. Varices due to Chronic Liver Disease	12	26	0.707
Peptic Ulcer Disease	10	21	0.817
Erosive Mucosal Disease	6	12	0.954
Mallory Weiss Tear	2	5	1
Gastric Cancer	-	4	0.357
Others			
Dieulafoy's Lesion	-	1	1
Esophageal Candidiasis with erosive gastritis	-	1	1
Esophageal Ulcer	1	-	0.733
Inflamed Sessile Polyp	-	1	1
No Lesion Detected	7	3	0.012
Total no. of patients	38	74	0.012

Lower incidence detected < 40 years patients age as compare to ≥ 40 years (P value 0.012) which may probably be due to the fact that smaller and minor lesion spontaneously heal quicker in young patients (Table 3).

Table No. 4 Showing the source of bleeding within 24 hours or later

UGI Endoscopy Done	No. of Patients	Lesion Detected	No Lesion Detected	P Value
UGI Endoscopy < 24 hours	64	62	2	0.013
UGI Endoscopy > 24 hours	48	40	8	
Total No.	112	102	10	

According to the presentation of the patients with UGIB at our center, majority of the patients 57.14% were endoscoped within 24 hours while 19.64% were endoscoped within 48 hours and 23.21% were endoscoped within 72 hours. In most cases of late endoscopies patients themselves came to hospital late. In patients who went endoscopy within 24 hours source of bleeding was identified more often. (P value 0.013).

DISCUSSION

UGIB is a common cause for emergency hospital admissions and a major cause of morbidity and mortality worldwide.[1,2,3]

Varices was the commonest cause of UGIB accounting for 33.92% of patients in our study; mostly because of chronic liver disease due to alcohol consumption. This in contrast to the findings of most western studies where peptic ulcer disease has been identified as the commonest cause of UGIB. [8,9,10,12] But studies in Nigeria and other sub-Saharan African countries where there is high prevalence of hepatitis B related CLD reveal varices as the major cause of UGIB like as[13 14].

In our study, peptic ulcer disease at 28.57% was the second commonest cause of UGIB and similar results were seen in Indian studies.[15,16] Similarly in our study erosive mucosal disease (oesophagitis, gastritis and duodenitis) is the third commonest cause of UGIB which comprised of 18 patients (16.7%) which was almost similar to the study by Bhutta et al.[17] Whereas Anand et al and Rao et al found erosive mucosal disease in only 9%.[15,16] European, Indian and South American studies reveal erosive mucosal disease as the second commonest cause of UGIB.[18,19] which seems to reveal a similar trend observed in our study.

In this study, Mallory-Weiss tear and gastric cancer was seen in 7 patients (6.25%) and 4 patients (3.57%) respectively. Kashyap et al reported Mallory Weiss tear as a cause of upper GI bleeding in 12 patients (10.8%) and Bhutta et al reported in 2 patients (1.4%).[15,19]

In 8.92% of our patients, source of bleeding couldn't be identified because patients presented late at hospital due to various reasons. Similar finding was reported from India[18] which is even higher than the figures reported from the West[20]. Mucosal lesions are well known to heal quickly[21]. Generally diagnostic accuracy of endoscopy was related to the time lapse between the onset of bleeding and endoscopy. According to our study, the source of bleeding was identified in those who underwent endoscopy within 24 hours than who underwent it later (p=0.013).

In this study, UGIB is more than two-fold in males than compared to females which is similar to what was reported in other studies [5,8] which may be due to higher prevalence of alcohol consumption among males. According to our study 15.17% of patients have H/O NSAIDS intake. 66.66% of the patients with erosive mucosal disease had ingested NSAIDS before the onset of bleeding which shows that NSAIDS induce bleeding primarily through mucosal disease.

CONCLUSION

In this study, portal hypertension related esophageal varices is the commonest cause of UGIB, followed by peptic ulcer disease and erosive mucosal disease. Portal hypertension related variceal bleeding leading other cause in our study may be because the hospital where we conducted the study is a tertiary care referral center. Since aetiology was discouraged more often in early endoscopy (in 24 hrs).

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