Original Article

Frequency of Various Causes of Upper Gastrointestinal Bleed (UGIB) at a Tertiary Care Hospital

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ABSTRACT

Objective: To determine the frequency of various causes of upper gastrointestinal bleed (UGIB) at Tertiary Care Hospital.

Study Design: Descriptive cross-sectional study.

Place and Duration of Study: This study was conducted at the Department of Internal Medicine, Nishtar Hospital Multan from August 2009 to January 2010.

Materials and Methods: A total of 88 patients with upper GI bleed were registered. Prior permission was taken from Institutional Ethical Committee to conduct this study. Informed consent was taken from each patient. Upper GI Endoscopy was done to find out the source and cause of bleeding. For identification of each patient, personal data was collected. All the data collected were entered and analyzed using SPSS-11.

Results: Mean age was 41.64±13.56 years with 49 (55.70%) male and 39 (44.30%) female patients. Majority of the patients 38(43.18%) were between 36-50 years of age. In our series the commonest cause of UGIB was oesophageal varices in 56.82% of cases followed by peptic ulcer disease in 38.63% of patients.

Conclusion: Oesophageal varices followed by peptic ulcer disease are the commonest causes of UGIB in our setting.

Key Words: Chronic liver disease, Upper GI bleeding, Esophageal varices.

INTRODUCTION

Upper gastrointestinal bleed (UGIB) refers to the hemorrhage in the upper GI tract. Anatomically it is defined as bleeding occurring proximal to the ligament of Treitz which connects the 4th part of duodenum to the diaphragm near the splenic flexure of the colon.

Upper GI bleed is most important medical emergency and requires urgent admission to the hospital for diagnosis and management. Mortality due to upper GI bleed is 11% in emergency admissions and 33% in inpatients[1].

Usual presentation of UGIB is hematemesis which is vomiting of red blood or coffee ground material. It may present as hematochezia (maroon colored stools) if bleeding is rapid and severe or as melena (black, tarry, foul smelling stools) if bleeding is small and gradual.

The various causes of UGIB are peptic ulcer disease (35-62%), gastroesophageal varices (4-31%), Mallory Weis tears (4-13%), gastroduodenal erosions and erosive esophagitis (2-8%), gastric malignancy (1-4%), angiodsyplasia, dieulafoy's lesions, aortoenteric fistula, hereditary hemorrhagic telangiectasia and uremia. Coagulation disorders may present as upper GI bleed[2].

It is concluded from various studies that 90% of the cirrhotic patients will develop gastroesophageal varices over the span of 10 years but only one third of these will result in upper GI bleed[3]. After stabilization of patient an attempt is to be made to establish the cause of bleeding. The evaluation through history should focus on known causes of upper GI bleed. To establish the site of bleeding history and clinical examination are seldom helpful but some signs and symptoms may give clue to the underlying pathology which has resulted in upper GI bleed. The site of bleeding is determined by upper GI endoscopy whose accuracy and competence has been well documented[4, 5]. Arteriography has its own limitations it can locate the site of bleeding provided, culprit lesion is oozing blood at a rate more than 1 ml per minute. Oespophageal varices due to chronic liver disease are most important cause of upper GI bleed in this part of world which is mostly post viral. One study has reported esophageal varices due to CLD as cause of UGIB in 44% of the cases and peptic ulcer disease in 19.7% of cases [6]. Another study has reported esophageal varices as culprit for UGIB in 65% of the cases and gastric erosion in 15% of cases[7]. The present study was designed to see the frequency of various causes of UGIB at tertiary care hospital.

MATERIALS AND METHODS

This descriptive cross-sectional was conducted in the Department of Internal Medicine, Nishtar Hospital, Multan during the period from August 2009 to January 2010. Permission to conduct this study was obtained from Institutional Ethical Review Board. A total of 88 patients were registered. Informed consent was taken

from each patient and upper GI endoscopy was done to find out the source and cause of bleeding. All information were recorded in a predesigned proforma. Data collected were entered and analyzed through SPSS-11.

RESULTS

A total of 88 patients were included in this study. It included 49 (55.70%) male and 39 (44.30%) female patients with male to female ratio of 1.3:1 (Table-1).

Majority of the patients 38 (43.18%) were between 36-50 years of age. Three (3.41%) patients were having age more than 65 years (Table-2).

There were 54 (61.36%) patients who presented with both hematemesis and melena, 19 (21.59%) patients had melena and 15 (17.50 %) patients had hematemesis alone (Table-3).

Table No.1: Gender Distribution of Patients with UGIB (n=88)

Gender	No. of patients	%age
Male	49	55.70
Female	39	44.30

Table No.2: Age Distribution of Patients with UGIB (n=88)

Age (years)	No. of patients	%age
<20	05	05.68
21-35	22	25.00
36-50	38	43.18
51-56	20	22.73
>65	03	03.41

Mean age ± SD = 41.64±13.56 years.

Table No.3: Presentation of UGIB (n=88)

Complaints	No. of patients	%age
Hemetemesis/melena	54	61.36
Hemetemesis	15	17.05
Melena	19	21.59

Table No.4: Causes of Upper Gastrointestinal Bleed (n=88)

Cause	No. of Patients	%age
Esophageal varices	50	56.82
Peptic Ulcer disease		
Gastroduodenal erosions	14	15.91
Gastric ulcers	11	12.50
Duodenal ulcers	09	10.22
Mellory Weis tear	1	1.14
Gastric carcinoma	1	1.14
Erosive esophagitus	1	1.14
Coagulopathy	1	1.14
Total	88	100

In our study the commonest cause of UGIB was oesophageal varices in 56.82% of cases followed by peptic ulcer disease in 38.63% of patients. Acute gastroduodenal erosions were present in 15.91% patients (Table-4).

Out of the 50 patients of Oesophageal varices due to chronic liver disease, 3 (6%) were less than 20 years of age, 11 (22%) were 21–35 years, 24 (48%) were 36–50 years, 10 (20%) were 51–65 years and 2 patients (4%) were > 65 years of age (Table-5).

Out of the 50 patients having esophageal varices due to chronic liver disease, 29 patients (58%) were male and 21 (42%) were females.

Table No.5: Age Distribution of Patients with UGIB in relation to CLD (n=50)

Age (years)	No. of patients with CLD	%age
<20	03	06.0
21-35	11	22.0
36-50	24	48.0
51-56	10	20.0
>65	02	04.0

DISCUSSION

Upper gastrointestinal bleed is a real medical emergency and is an important cause of morbidity and mortality accounting up to 8% of hospital admissions[8]. The prevalence of UGIB is 170 cases per 100000 per year and its incidence varies from 50 - 150 per year in USA and 100-107 per 100000 per years in United Kingdom[9, 10]. The mortality due to UGIB is 3-14 % and it rises with increasing age. Mortality is also associated with other comorbid conditions. Local data from our country describes that common causes of UGIB are esophageal varices, duodenal and gastric ulcer, gastric erosions, superficial mucosal ulceration and Mallory Weiss tears[7, 11-12]. The most common cause of UGIB in our study is esophageal varices as compared to peptic ulceration in western countries. It may be due to post viral chronic liver disease as hepatitis B and C are common in our setting.

The mean age of patients in our study was 41.64 +- 13.56 years with peak occurrence in 36-50 years of age. Shaikh et al [13] in their study on UGIB from Karachi reported that 65% patients were between 20-50 years. Similar findings have been reported by Sabir et al [14]. Peak incidence of UGIB in western countries is in 5th to 6th decade mentioned by Parente[10] and Golanova[15]. This could be due to higher average life span of western population. In our study there were 55.70% male and 44.30% female patients with UGIB and male to female ration was 1.3: 1. Iqbl in this study reported male to female ratio as 1.5: 1 [12].

Qari[16] in his study has reported that 42 (60%) of cases presented with hemetemesis, 11 cases (15.7%) with melena and 17 (24.8%) cases with both whereas in our study 54 (61.36%) of patients presented with both hemetemesis and melena, 19 (21.59%) patients with

melena and 15 (17.05%) of patients with hemetemesis alone.

In our study frequency of esophageal varices was 56.82% while peptic ulcer disease was 38.63% in patients of UGIB. Several local studies have demonstrated that esophageal varices as leading cause of UGIB in Pakistan followed by peptic ulcer disease. Shaikh et al[13] have labeled variceal bleed in 59.1% of cases, other studies by Chaudhary[7] from Raheem Yar Khan and Khan[17] from Peshawar all have concluded that variceal bleed is a common cause of UGIB. Qari[16] also reported variceal bleed in 57% of cases while Svoboda et al [18] has reported it in 57.4% of cases. It can be explained by much high incidence of hepatitis B&C in our country as compared to western country. In western literature esophageal varices are less common cause as mentioned by Villanueva et al[19] where esophageal varices were noted in 15%. In National American Society for Gastrointestinal Endoscopic Bleeding Survey (ASGE) on UGI tract involving 2225 patients esophageal varices was present in 15.4%[20]. H. Pylori and NSAIDS are important factor included in the causation of peptic ulcer disease. Alcohol also increase the risk of acute UGIB among NSAIDs users. Most of international data as reported by Boonpongmanee[21] and Eirtkin[22] says that peptic ulcer disease is commonest cause of UGIB. Silverstein et al from USA reported that peptic ulcer disease is the commonest cause[20]. The same has been reported by Rockall[1] and Wilcox from UK[23].

In our study more than 70% of patients having esophageal varices were more than 36 years of age, while Shaikh et al[13] has reported esophageal varices in relatively younger age group 20-30 years (22%). The reason may be more prevalence of chronic liver disease at younger age group.

Shaikh et al[13] have also reported peptic ulcer disease as 2nd most common cause of UGIB in 25.8% of cases and Iqbal[12] in 19%. Sub-mucosal lesions which include esophagitus, gastritis, duodenitus and Mellory Weis tears were in 20% of the cases and gastric neoplasm in 4%. In our study gastric carcinoma was the cause of bleeding in 1.14% and the same has been reported in other studies by Shaikh[13] and Qureshi[24].

The patients with variceal bleed had greater morbidity than bleeding from other causes. The fact may be attributed to underlying decompensated disease which appears as independent predictor of mortality in multivarient analyses.

CONCLUSION

Oesophageal varices followed by peptic ulcer disease are the commonest causes of UGIB in our setting.

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