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Original Research Article

Study of Clinical and Endoscopic Profile of Patients with Upper Gastrointestinal Bleed at Tertiary Care Center

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Abstract

Background: The most common medical emergencies, acute upper gastrointestinal bleed have a significant mortality. This study aims to study patients' endoscopic profile and clinical outcome, presenting with upper gastrointestinal bleeding in this region.

Methods: This study was conducted on 100 patients admitted with upper GI bleeding. These patients underwent endoscopy of the upper gastrointestinal track after the initial examination. The status of patients in the study group was recorded at discharge.

Results: The mean age of patients was 48.98 ±14.50 years with male to female proportion of 2.57:1. The foremost common causes of upper GI bleed were related to portal hypertension (Oesophageal and gastric varices) and were seen in 48% of patients. In 45% of the patients, non-portal hypertensive lesions causing UGI bleed (peptic and other injuries) were seen whereas endoscopy was normal in 7% patients. We found no relationship of mortality and with components like age, history of alcohol and NSAIDs use, peptic ulcer, infection and presence of cirrhosis.

Conclusion: Portal Hypertension is the foremost common cause of upper gastrointestinal bleeding in this region. Peptic ulcer and erosive gastro-duodenitis are other leading causes. With effective and prompt management and timely endoscopic intervention mortality can be reduced as in our study it was 4%. However, there is no correlation between age, alcohol and NSAIDs use, peptic ulcer, infection and presence of cirrhosis with death.

Keywords: Causes of upper gastrointestinal bleed, Cirrhosis, Duodenal ulcer, Gastric ulcer, Gastrointestinal bleeding.

Introduction

Upper gastrointestinal endoscopy can be very helpful in diagnosing and treating many gastrointestinal diseases. The most common indications for diagnosis today are evaluation of gastrointestinal bleeding (UGIB).

The reported mortality rate for gastrointestinal bleeding ranges from 5% to 11%, indicating that it is a serious and life-threatening problem.

Early Endoscopic examination not only helps diagnose the cause of bleeding, but also opens a window for early treatment, reducing hospital costs and length of stay.

We aimed to examine the clinical, etiological, and endoscopic features of patients with upper gastrointestinal bleeding.

Methods

This study was conducted from September2021 to September 2022 at the Department of Gastro enterology, Mahatma Gandhi Medical College and Hospital, Jaipur, Rajasthan, India.

Clinical and endoscopic data in patients (18 years and older) undergoing upper gastro intestinal endo scopy (UGIE) were collected and analysed.

A total of 100 patients were evaluated, including inpatient (IPD). Historically, UGIB has been described as hematemesis and/or Malena. All subjects were evaluated for medical history and diagnosis, including history of gastrointestinal disorders associated with liver disease (such as infection, alcohol), history of non-steroidal anti-

inflammatory medication, antiplatelet and associated comorbidities.

Clinically and hemo dynamically unstable patients (such as shock, acute perforation, acute myocardial infarction) who were unsuitable for UGIE were excluded from the study.

Statistical analysis was performed using SPSS 20.0. Chi-square test, Fisher's exact test were used everywhere. AP value less than 0.05 was considered significant.

Results

Group Study consisted of 100 subjects who underwent to UGIE for high gastrointestinal bleeding. The age range among subjects with UGIB was 18 to 84 years. The male to female ratio was (M: 74, F: 26)

Table 1: Age group distribution

Patient age	N (100)
10-19	2
20-29	5
30-39	27
40-49	35
50-59	26
60-69	2
70-79	2
80-89	1

Table 2: Male to Female Ratio

Study Group	N (100)
Male	74
Female	26

Table 3: Clinical Profile of upper GI bleed

Hematemesis	63%
Melena	77%
Hematemesis and Melena	40%

Table 4: Etiological profile of patients with upper GI bleeding

Parameters	Subject	Percent (%)
Alcohol	40	40
NSAIDS	18	18
Alcohol & NSAIDS	11	11

The most common admissions are Melena followed by hematemesis while many of the patients complain of both Hematemesis and Melena. Almost half of UGIB patients (40%) were long-term alcohol users and (18%) had taken NSAIDs (such as aspirin) at the time of GI bleeding. In this study, portal hypertension causing oesophageal and/or gastric varices was the most common cause of UGIB, followed by peptic ulcer, erosive gastro duodenitis and gastrointestinal malignancies. No endoscopic lesions were found in 7 of UGIB patients.

Table 5: Endoscopic profile of upper GI bleed patients

Final Diagnosis	Subject	Percent (%)
Portal HTN	48	48
Gastric-Duodenal Ulcer	14	14
Erosive gastro-duodenitis	11	11
GERD	9	9
Normal	7	7
Oesophageal ulcer	5	5
Mallory Weiss Tear	4	4
GI Malignancy	2	2

The most common lesion causing upper bleed related to portal hypertension was variceal bleeding. In patients with variceal upper GI bleed, oesophageal varices were the main cause. In the study 30 patients underwent variceal ligation for oesophageal varices and 5 patients were

injected with cyanoacrylate glue for gastric varix. 3 patients had gone for argon plasma coagulation therapy. 8 patients underwent endotherapy (adrenaline injection) for ulcers. Rest patients did not require any endoscopic intervention. Death within 15 days of the initial presentation was found in 4% of the patients. All were in hospital deaths. However correlation of mortality with age, comorbidities like diabetes and liver disease was not found to be statistically significant. Also correlation between mortality and etiologic factors such as NSAIDs/ Antiplatelets use, peptic ulcer disease and cirrhosis with portal hypertension was not significant.

Table 6: Finding of portal hypertension related patients

Endoscopic findings in portal Hypertension	N (48)	%
Variceal bleeding	35	73
Severe PHG	7	14.5
GAVE	1	2.8
Post EVL Ulcer bleeding	5	10

Table 7: Mortality in UGIB patients

Parameters	Subjects	%	Mortality	p value
Alcohol	40	40	2	0.71
NSAIDS	18	18	1	0.78
Alcohol & NSAIDS	11	11	1	0.62

Discussion

In our study majority of the patients (56% were within the age bunch of 41-60 years and the mean age came out to be 48.98+14.50 years. Already done study from India have shown comparable age profile of the patients.

In study by Anand et al, mean age of patients were 49-14.26 years. [1] The mean age of our study was also comparable to the studies done by Jain, Dewan and Prasad. [2-4] In a study done in UK by Hearnshaw et al reported much higher mean age of 64.4 years. [5] Majority of our patients were males with male to female proportion being 2.57:1 and similar male dominance was seen in previous study conducted in India and abroad conceivably due the higher prevalence of chance components like smoking and alcohol consumption among males. [1,5,6]

In the current study hematemesis was observed in 63% of the patients and 77% had melena as the displaying complaint. Some of the patients had both hematemesis and melena as the presenting complaint as in the study by Anand et al and Mahajan et al. [1,7] Variants in presentation among upper GI cases bleeding compared in this study to other studies can be explained by the fact that hematemesis and melena are depending on rate, quantity, and site of bleeding. A duodenal ulcer is likely to be present with melena more often than hematemesis. While a bleeding gastric ulcer or oesophageal varices may present with hematemesis more often than melena.

Erosive gastroduodenitis is the third most common cause of UGIB (12%) comparable to that found in a later consider by Dewan KR [3] et al (11%), but over 9% detailed in a few previous Indian thinks about, this could be caused by change in lifestyle, diet, alcohol consumption and NSAIDs. In our study 48% patients reported liver disease. A comparable frequency was obtained in a study about by Gado et al with 50% of the patients having history of liver disease. [8] In other study lower incidence was seen. A study by Hearnshaw et al 9% of all reported a history of liver disease patients and in 4.2% of the patients as detailed by Minakari et al. [5,9] A Tanzanian study had history of liver disease in 16.9% of the patients.[10] A large number of patients with underlying liver infection may be due to high prevalence of alcoholic cirrhosis and hepatitis C in this area (11). Complications caused by alcohol increase globally, it is the Indian scenario similarly, the younger the alcoholic, the increase in per capita consumption increasing trend of hazardous drinking with urbanization, globalization and western lifestyle which the country has accepted [12]

In our study, varices were found in 73% of the patients followed by portal hypertension gastropathy (14.5%). In 14% duodenal ulcer was observed in the patient and a stomach ulcer was found. Erosive Gastro-duodenitis and GI malignancies were found in 11% and 2% of patients. Esophagitis was found in 9% of patients. Mallory Weiss tear was found in 4% patients. In 7% of the patient's normal endoscopy was obtained. 1 patient had gastric antral vascular ectasia (GAVE).

In a study by Anand D et the foremost common cause of UGI bleed was portal hypertension related (oesophageal and gastric varices) seen in 56.14% of patients, peptic ulcer related bleed was seen in 14.91% patients, gastric erosions were dependable for bleed in12.28% patients, Mallory-Weiss tear was seen in 8.77% cases, gastric malignancy accounted for 4.38% of cases, Dieulafoy's lesion

which accounts for bleed in 1.75% cases. [1] A study conducted by Jyoti Jain et al in Central India out of 118 patients who underwent endoscopy 47.4% had oesophageal varices, 27.1% had portal hypertensive gastropathy, 14.4% had gastric gastropathy, 5.9% each had duodenal erosions and esophagitis, 5% had gastric ulcer disease, 4.2% each had Mallory Weiss tear and gastric malignancy, 1.7% had esophageal malignancies and 16.1% had typical endoscopic findings [2].

In our study we found no correlation between mortality with age, co morbidities (diabetes and liver disease), NSAIDs use, peptic ulcer disease and cirrhosis. This is in contrast to the various studies which showed a significant association between the variables. A study done by Prasad et al found factor associated with recurrent bleeding and mortality was chronic liver disease.[12] Similarly Anand D et al concluded that majority of mortality was seen in portal hypertension related bleeding.[1]

High variceal bleed may be a referral bias as being a tertiary referral centre, for patients with this disease. Normal endoscopic findings in 7% of the patients can be explained by the delay in endoscopy and minor mucosal lesions are wellknown to mend rapidly and so the time interval between the bleeding episode and endoscopy impacts endoscopic diagnosis. Indian studies reported death as 8.6%, 21%, 2.1% and 5.8%. The low death rate as compared to the other studies can be due to timely therapeutic endoscopy, effective resuscitation and exclusion of unstable patients.

Conclusion

Variceal bleeding associated with portal hypertension is the most common cause of UGI bleeding in Indian patients. Death within 15 days of the initial presentation was found in 4% of the patients. All were in hospital deaths. Variability in death rate was observed in different studies. The low death rate as compared to the other studies can be due to timely therapeutic endoscopy, effective resuscitation and exclusion of unstable patients. Also it can be attributed to low sample size of the study.

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