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General Surgery

A CLINICAL STUDY OF ACUTE UPPER GASTROINTESTINAL BLEEDING IN ADULT PATIENTS ADMITTED IN A TERTIARY CARE CENTRE

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ABSTRACT **Background:** Acute upper gastrointestinal(GI) hemorrhage is a common condition worldwide that has an estimated annual incidence of 40-150 cases per 100000 population1. Upper gastrointestinal (GI) bleeding is defined as bleeding from a source proximal to the ligament of Treitz2. It is a potentially life-threatening emergency that remains a common cause of morbidity and mortality worldwide. Causes of upper GI bleeding are classified into variceal (e.g. esophageal and gastric varices) and non variceal(e.g. peptic ulcer, erosive gastroduodenitis, reflux esophagitis, tumors, vascular ectasia etc3. **Methodology:** Present study was carried out in the department of General Surgery at tertiary care teaching hospital. This is a prospective descriptive study. Present study was conducted over a period from December 2020 to October 2022. During the study period, 50 adult patients presenting with acute gastrointestinal bleeding were studied. Esophageal varices secondary to portal hypertension is the most common cause of UGI bleeding in the adults in our study population. Associated co-morbid conditions contributed to the high mortality from GI bleeding in our study. This study showed that upper GI bleeding is more common in male patients with the most common cause being portal hypertension. EVL is the best modality for hemostasis in variceal bleeding.

KEYWORDS : Upper GI bleed, Portal Hypertension, Oesophageal Varices

INTRODUCTION:

Acute upper gastrointestinal(GI) hemorrhage is a common condition worldwide that has an estimated annual incidence of 40-150 cases per 100000 population[1]. Upper gastrointestinal (GI) bleeding is defined as bleeding from a source proximal to the ligament of Treitz[2]. It is a potentially life-threatening emergency that remains a common cause of morbidity and mortality worldwide. Causes of upper GI bleeding are classified into variceal (e.g. esophageal and gastric varices) and non variceal(e.g. peptic ulcer, erosive gastroduodenitis, reflux esophagitis, tumors, vascular ectasia etc[3].

Clinically, patients with upper GI bleeding often present as hematemesis or malaena or sometimes hematochezia. The disease spectrum has a wide range of clinical severity, ranging from insignificant bleeds to catastrophic exsanguinating hemorrhage. Approximately 80-85% of upper GI bleeding stops spontaneously and supportive therapy only is required[4]. In the remaining 15%-20% of cases, bleeding continues or recurrent bleeding develops, and these patients constitute the high-risk group with substantially increased mortality and morbidity[5].

Despite recent developments of new therapeutic tools such as the proton pump inhibitors, endoscopic interventions and surgical approaches, the overall clinical outcome of patients with UGIB has not changed significantly during the past decade and mortality rate remains around 10% in most studies reported in the literature[6]. The etiology and outcome of upper GI bleeding varies significantly in different geographic regions depending on the demographic and socioeconomic characteristics of the local population.

The aim of the present study is to determine the incidence, etiology, clinical presentation, management and final outcome in patients presenting with upper GI bleeding in our institution.

MATERIALS AND METHODS

Present study was carried out in the department of General Surgery at tertiary care teaching hospital. This is a prospective descriptive study. Present study was conducted over a period from December 2020 to October 2022. During the study period, 50 adult patients presenting with acute gastrointestinal bleeding were studied. Patients who met inclusion criteria were requested to sign a written informed consent form before being enrolled into the study.

Selection Of Cases

Inclusion Criteria

1. All the patients of age 18 years and above, irrespective of sex, presenting with acute upper GI bleeding will be included in this study.

Exclusion Criteria

1. Patients below the age of 18 years.
2. Patients having bleeding disorders.
3. Patients not willing or unfit for endoscopy.

When patients of acute gastrointestinal bleeding arrived in casualty, as much information as possible was obtained from the patient himself. When patient was not in a condition to give history, it was obtained from the relatives of the patient or from the person who had brought the patient. On admission detailed history regarding age and sex, time of appearance of bleeding, number of episodes of bleeding, approximate quantity of blood vomited and duration of symptoms were noted in prescribed format. Any concomitant pathology and associated co-morbidity was also documented. History of use of non-steroidal anti-inflammatory drugs, steroids, anti-platelet agents was noted. History of alcohol consumption, cigarette smoking also documented. Past history of any upper GI surgery was also enquired and documented.

Thorough clinical examination of patient was done and vitals like blood pressure, pulse rate, respiratory rate were recorded. At the time of admission if patient was found in hypotension, then adequate IV fluids administered. If patient was found pale, then blood transfusion was given after blood grouping and crossing matching. Once patient become haemodynamically stable, then endoscopic examination was carried out as early as possible to find out the cause of bleeding. Endoscopic findings were recorded and accordingly the therapeutic intervention (like banding, clipping, epinephrine injection, injection sclerotherapy conservative management etc) carried out. Radiological investigation (USG abdomen, Chest x-ray, CT scan abdomen) were performed indicated patients. If patient was in critical condition on admission then the patient was shifted in Surgical ICU for continuous monitoring in consultation with anaesthetist. Rockall score was calculated in every patient. After discharge patients were followed up for the first 6 months for the detection of late complications, if any.

RESULTS:

Table-I - Distribution of patients according to age group

Sr No	Age Group	Number of patients	Percentage	Mean age (in years)
1	18-20	2	4%	43.3
2	21-40	19	38%	
3	41-60	22	44%	
4	61-80	5	10%	
5	>80	2	4%	
Total	50	50	100%	

From above table it is evident that the most commonly affected age group in our study is 41-60 years.

Table-II Sex-wise distribution of cases of acute upper GI bleeding

Sr no.	Sex	Number of cases	Percentage
1	Male	35	70
2	Female	15	30
Total		50	100

From above table it is evident that majority of patients in our study were males. Thus males clearly outnumber the females. The male to female ratio in our study is 2.3:1.

Table-III – Distribution according to clinical presentation

Sr No.	Clinical presentation	No. of patients	Percentage
1	Hematemesis	25	50%
2	Malaena	8	16%
3	Hematemesis+malaena	17	34%
4	Hematochezia	0	0%
	Total	50	100%

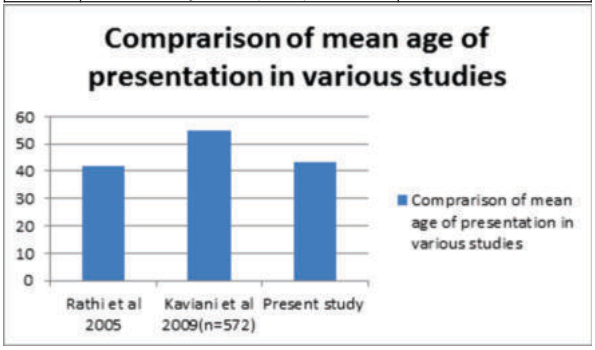
From above table it is evident that hematemesis is most common symptom of presentation followed by both hematemesis and melena both.

DISCUSSION

Upper gastro intestinal bleed is a common medical emergency with significant morbidity and mortality leading to high economic loss for the patient. This loss is even more if the hospital stays increases. We carried out this prospective observational study with the aim to find out the etiology of upper GI bleeding, clinical presentation and mortality rate and factors affecting final outcome of Upper GI bleeding in adult patients in our area.

Table No. 1: Comparison of mean age of presentations in various studies

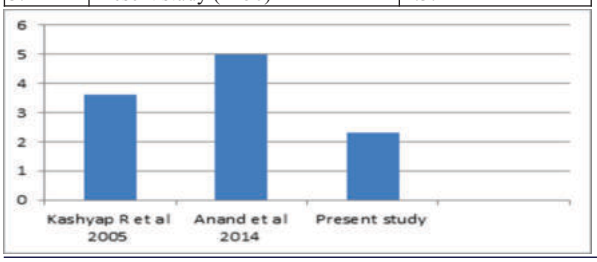
Sr No	Studies	Mean age (in years)
1.	Rathi et al 20057	42
2.	Kaviani et al 2009(n=572)8	54.9
3.	Present study 2017 (n=50)	43.5



The minimum age of the patients was 19 years and the maximum age was 83 years, with most common age group between 40-60 years and with mean age of 43.5 years. This confirms our study with study series of Kaviani et al 2009(n=572) having mean age 54.9 years and Rathi et al (2005) 42 years. People of this group because of their activities and stress and strains of life are prone for analgesic abuse, alcohol abuse and acid peptic disease.

Table No. 2: Overall Male: Female Ratio in Various Studies

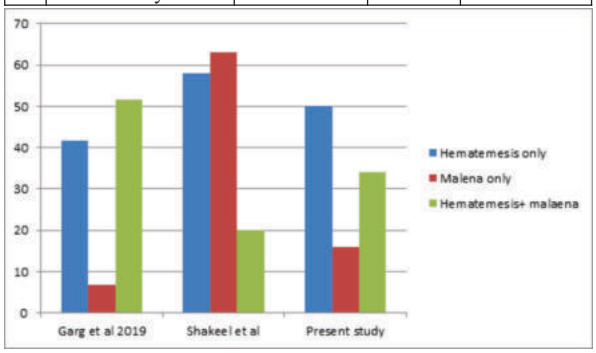
Sr No.	Studies	Male to female ratio
1.	Kashyap R et al 2005 (n=111) 9	3.6:1
2.	Anand et al 2014 (n=114) 10	5:1
3.	Present study (n=50)	2.3:1



In our study UGIB was found to be more common in male when compared to females. Male to female ratio was 2.3:1. Present study confirms with Anand et al (2014) with male female ratio of 5:1, and Kashyap R et al (2005) with male female ratio of 3.6:1.

Table No 3 : - Comparison of Clinical presentations with other studies.

Sr No	Studies	Hematemesis only	Malena only	Hematemesis + malaena
1.	Shakeel et al 201311	58%	63%	20%
2.	Garg et al 201912	41.7%	6.7%	51.6%
3.	Present study	50%	16%	34%



In our study 50% of cases presented with hematemesis only 16 % of the patients presented with melena and remaining 34 % presented with both malena and hematemesis. Results are comparable with study conducted by Shakeel et al 2013 (121) where 58 % were presented with hematemesis only, 21 % of the patients presented with melena only and remaining 21 % presented with both malena and hematemesis. Results are comparable with study Lakhani et al in 2008 where 55 % patients presented with hematemesis only, 32 % of the patients presented with melena only and remaining 13 % presented with both melena and hematemesis. Possible reason is that in our study most common etiological factor was esophageal varices so most of patient presented with hematemesis.

CONCLUSION

- Esophageal varices secondary to portal hypertension is the most common cause of UGI bleeding in the adults in our study population.
- Associated co-morbid conditions contributed to the high mortality from GI bleeding in our study.
- The most common cause of UGIB in the present study was portal hypertension.
- It is thus recommended that aggressive public education should be initiated with close monitoring in patients who are found to have alcohol-related liver diseases. With increasing life expectancy, care of more elderly and patients with comorbid conditions should be taken, which contributes to the high mortality from GI bleeding.

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