



STUDY OF CLINICAL AND ENDOSCOPIC PROFILE OF UPPER GASTROINTESTINAL BLEED IN A TERTIARY CARE CENTER – GRH, MADURAI

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ABSTRACT

BACKGROUND:

Upper gastrointestinal bleed is a medical emergency commonly encountered in medical practice. Even with medical advances the mortality among them tend to be 5-10%. The epidemiology of upper gastrointestinal bleed varies among population and there is a paucity of data.²

AIM OF THE STUDY:

This study was planned with an aim to identify clinical and endoscopic profile of patients with upper gastrointestinal bleed coming to our hospital and to study the factors associated with etiology, morbidity and mortality.

SETTINGS AND DESIGN:

Descriptive Observational study

MATERIALS AND METHODS:

This study is conducted at government Rajaji hospital, Madurai which is a tertiary care referral center in southern Tamilnadu. Sample of 100 patients presenting with upper gastrointestinal bleed were included in the study. Patients were assessed clinically, stabilised, and subjected to endoscopic evaluation. The results are documented and interpreted and statistical analysis done.

STATISTICAL ANALYSIS:

One way ANOVA, Pearson correlation and Chi square test.

RESULTS:

This study revealed variceal bleed as the most common finding constituting 36% of study population. Peptic ulcer disease was the second common cause with 25% of study population. Other findings include Erosive gastroduodenal lesions 10%, Neoplasm 7%, Mallory-Weiss tear 6%, Esophagitis 3%, other lesions 2%. No identifiable lesion was recorded in 11% of study population. Factors associated with mortality were presence of comorbidities like renal failure and cardiac failure. Rebleed and mortality were associated with Rockall score of >7 and Glasgow Blatchford score of >5 which were statistically significant. Rebleed and mortality was significantly absent in patients with Rockall score of 0-3 and Glasgow Blatchford score of 0.⁴

CONCLUSIONS:

Variceal bleed is the leading cause of upper gastrointestinal bleed in this study. Renal failure and cardiac diseases are associated with higher mortality. Rockall score of 0-3 and Glasgow Blatchford score of 0 shows better prognosis among study population.⁹

KEYWORDS : Upper gastrointestinal bleed, Etiology, Variceal bleed, Rockall score, Glasgow Blatchford score.

INTRODUCTION:

Upper gastrointestinal bleeding (UGIB) is a common gastrointestinal (GI) emergency and mortality rates of 5% to 11% have been reported representing a serious and life-threatening entity, despite advances in diagnosis and treatment.

- The epidemiology of UGIB varies among population and there is a paucity of data on UGIB and the factors associated with morbidity and mortality from India.
- This study was planned with an aim to identify clinical and endoscopic profile of patients with UGIB coming to our hospital, which is a tertiary referral center and to study the factors associated with etiology, morbidity and mortality

MATERIALS AND METHODS:

Study Population: This study was conducted among 100 patients who presented with upper GI bleed and underwent upper GI scopy at Government Rajaji Hospital, Madurai, during the study period

Inclusion Criteria:

1. Patients undergoing upper GI endoscopy for evaluation of upper GI bleed comprising hematemesis or/and melena.

2. Age > 14 years

3. Gender: Both Male and Female

Exclusion Criteria:

Age < 14 years

Known case of bleeding diathesis

Patients who satisfy inclusion criteria and are hemodynamically unstable to undergo upper gastrointestinal scopy

Ethical Committee Approval: Obtained.

Period Of Study:

Six months January 2016 to July 2016

Study Protocol:

Patients who presented with upper GI bleed were assessed clinically and evaluated. Supportive measures and treatment were initiated and once patient are hemodynamically stable, endoscopy is done after obtaining consent. Clinical parameters, Laboratory values, Endoscopic finding are assessed and documented and appropriate therapy was provided. Patients were observed post procedure and treated as inpatient or outpatient based on their health status. Follow up and review was done regularly.

STATISTICAL ANALYSIS:

The obtained data were recorded and analysed. Statistical analysis of frequencies, percentage, mean, chi-square test were done using computing system with the recent available tool – IBM SPSS statistics version 21. Statistical values were interpreted and significance recorded and results were reported

RESULTS:

In this study, total samples of 100 patients, most of them falls under 4th and 5th decade. Age 40 -50 years comprises 29%; 50-60 years comprises 25% and 30-40 years comprise 23%; 20-30 years comprises 12%.

Sex distribution shows more of males contributing 72% and females 28%. This reflects more prevalence of upper GI bleed in males. Hematemesis alone occurred in 48% of patients. Melena alone occurred in 19% of patients. Both Hematemesis and melena occurred in 33% of patients. Analysing the etiology of upper GI bleed in this study revealed Variceal bleeding as the most common cause in our hospital, which is a tertiary referral center in this region. Variceal bleeding occurred in 36% of patients. Next to varices is the peptic ulcer disease which constituted 25%. Other etiological findings in

decreasing order is as Erosive gastroduodenal disease 10%, Neoplasm 7%, Mallory-Weiss tear 6%, Esophagitis 3%, vascular ectasia 2%. No identifiable lesions was found in 11% of the patients enrolled in the study. Alcohol intake was found to be in 44% of patients and absent in 56% of patients.

Regarding alcohol and gender relation, Alcohol intake was found only among males who were enrolled in this study. NSAIDs intake was found in 15% of patients enrolled in this study. Antiplatelet drug intake was recorded in 4% of study population. History of smoking was recorded in 11% of study population and distributed only among male gender. Among the study population, co-existing morbidities were found in 19% of patients. Chronic kidney disease was found in 7%, Ischemic heart disease in 9% and Heart failure in 3% of patients. Information regarding pre-existing liver disease was recorded from history and previous records and found to be in 21% of the study population. Upper GI bleed as initial presentation in liver disease among study population. Risk stratification of patients presenting with upper GI bleed was done with Rockall score. 20% of population falls with score 0, 38% falls within score 1-3, 32% falls within score 4-7 and 10% falls in the score of greater than 7. Risk of rebleed was assessed with Rockall score. There was no bleed among patients with score 0-3. 10 patients (31.3%) had rebleed among 22 with score 4-7. 6 patients (60%) had rebleed among 10 with score >7. Thus rebleed was more with higher score. The association was significant with p value 0.000. There was no mortality in patients with Rockall score 0-3. Among 32 patients with score 4-7, 2 patients expired constituting 6.3% mortality.

In patients with score >7, 8 were dead among 10 constituting 80% mortality. Association Between rockall score and mortality was significant statistically with P value .0010%. Risk stratification with Glasgow Blatchford score shows 26% having score of '0', 53% having score less than 5 and 21% having score greater than 5. Patients with score 0 had no rebleed. There was 4 rebleed among 53 patients (7.5%) with score less than 5. 12 rebleed among 21 patients with score 21 (57.1%). The association was significant with P value 0.0001.

Comparing glasgow Blatchford score and mortality¹⁰, there was no death in patients with score 0 and score less than 5. Among 21 patients with score greater than 5, mortality occurred in 10, constituting 47.6% among them. P value was significant .000. Rebleed after the initial episode and after diagnostic endoscopic procedure was found in 16% patients. 50% of them are due to variceal bleed and other 50% are peptic ulcer related. In the study population mortality occurred in 6 patients (6%) due to variceal bleed, 3 patients (3%) due to PUD and in one patient (1%) due to neoplasm. Mortality within each etiology shows 16.7% mortality among variceal bleed, 14.3% among neoplasm and 12% among PUD patients. Among study patients who suffered from CKD, mortality was 57.1%; who had ischemic heart disease mortality was recorded in 44.4% and among heart failure patients death occurred in 66.7%.

Glasgow Blatchford score among study population:

GBScore	Frequeny	Percentage %
0	26	26
<5	53	53
>5	21	21
Total	100	100

Rebleed among study population:

Rebleed	Frequeny	Percentage %
Present	16	16
Absent	84	84

Age distribution among study population:

Age in years	Frequeny	Percentage %
<20	2	2
21-30	12	12
31-40	23	23
41-50	29	29
51-60	25	25
61-70	7	7
>70	2	2
Total	100	100

Gender distribution among the study population :

Sex	Frequency	Percent
Male	72	72.0
Female	28	28.0
Total	100	100.0

Discussion:

The study conducted with aim of finding the pattern of upper GI bleed in our locality, the results are analysed and showed similarities and variation when compared with similar studies conducted in various parts of India. The results analysed are discussed with relation to each variable below.

Age distribution among study population :Incidence of UGIB in the study population was more among 40 – 50 years of age, followed by 50 -60 years of age and then 30-40years of age.

In a study done by Rathi et al. in Western India the mean age of patients presenting with UGIB was 42 years. In a study by Lakhwani et al. in 2000, mean age of patients were 51.9 years Sex distribution among study population : Male patients comprised 72% of study population and females 28% of study population. In Deep Anand et al study UGIB was found to be more common in men (83.33%) as compared to women (16.66%)(2).

Symptoms distribution among study population :Hematemesis alone was recorded in 48% of patients and melena alone was recorded in 19 % of patients. Both occurred in 33 % of study population. Deep Anand et al observed 27.19% of isolated hematemesis, 64% patients presented with complaints of hematemesis and melena, 12.28% isolated melena, 0.87% patient presented with hematochezia (2). Etiology of upper GI among study population: Analysing the etiology of upper GI bleed using upper GI scopy revealed variceal bleed as the most common finding constituting 36% of study population.⁵ Peptic ulcer disease was the second common cause with 25% of study population. Other findings include Erosive gastroduodenal lesions 10%, Neoplasm 7%, Mallory weiss tear 6%, Esophagitis 3%, other lesions 2%. No identifiable lesion was recorded in 11% of study population Referral to tertiary care, patients refusal to evaluation of GI bleed in cases of suspected acute erosive gastritis, higher percentage of alcohol consumption in the study population might contribute to variceal bleed as most common cause. Study done at Dehradun- Northern india by Deep Anand et al revealed 56.14% patients had portal HTN related esophageal and fundal varices, 14.91% had gastric and duodenal ulcer, 12.28% had gastric erosions/gastritis, 8.77% had Mallory-Weiss tear, 4. 38% had gastric malignancy(2) Anand et al. from North India, causes of bleeding were esophageal varices in 45.5%,⁵ duodenal ulcer in 25%, gastric ulcer in 5% and gastritis in 8.5%. [12]. Dilawari et al. found variceal bleeding due to portal hypertension (36%) as the most frequent cause followed by peptic ulceration (24%) and gastric erosions (19%). [13]. Differing with other studies, was the one done at coastal odisha in 2013³, most common cause in endoscopic diagnosis was duodenal ulcer in 57.6% patients, variceal bleed in 12.8%, gastric ulcer in 1.8% , Mallory-Weiss tear in 1.8% , erosive gastritis in 1.8% patients and malignancy comprised of 7.7% [8]. Alcohol was found as risk factor among the population. 44% study population had alcohol. 15% had history of NSAIDs intake. 4% had Antiplatelet drug.

History of Smoking was recorded in 11%. The morbidity and mortality was more when associated co morbid conditions existed. CKD was recorded in 7%, Ischemic heart disease in 9%, Heart failure in 3% of study population. Pre-existing liver disease was recorded in 21% (21 patients) of study population. Among 36 patient with variceal bleed, 14 (38.8%) were new patients who had not been diagnosed to have liver disease previously. The initial presenting feature which made them sought medical advice is the UGIB. Risk stratification of patients presenting with upper GI bleed was done with Rockall score. Risk of rebleed and mortality was found to be increased in patients with score 4-7 and much higher in score >7. Ther was no re bleed and mortality among patients with score 0-3. The association was significant with p value 0.001 In various validating studies done around the world, Rockall score of 0-3 has no intervention needed, score 4-7 had good outcome with minimal intervention and score more than 7 had significant hospital stay, rebleed and mortality. Risk stratification with Glasgow Blatchford score shows that patient

with score 0 had no rebleed, no mortality and required no intervention. There was no mortality in patients with score less than 5 and less intervention was needed. Patients with score >5 had significant rebleed and mortality which was statistically significant. In the original study done by Blatchford, the intervention and hospital stay was significantly low in score group 0. Overall mortality occurred in 10% of patients. 6% occurred due to variceal bleed, 3% due to peptic ulcer disease and 1% due to neoplasm. Mortality within each category revealed higher percent among variceal bleed followed by neoplasm. Anand et al study shows overall mortality of 21% among study population, with portal hypertensive group being the common followed by peptic ulcer disease. In a study by Chalasani et al [22] a total of 231 subjects were included, and their in-hospital, 6-week, and overall mortality rates were 14.2%, 17.5%, and 33.5%, respectively.

Conclusion:

1. Variceal bleed is the most common cause in this study reflecting upon the population of this region.
2. Small percent of liver disease manifested with upper gastrointestinal bleed as initial presentation.
3. Patient risk stratification for intervention and can be prioritised with scoring system. Prognosis is poor in patients with comorbidities and with higher score in scoring system.

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