

Brief Communication

Early Endoscopic Findings in Patients with Upper Gastrointestinal Bleeding in Bangladesh

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Abstract :

Objective: To determine etiological pattern of patients presenting with upper gastrointestinal bleeding in a tertiary care hospital of Bangladesh.

Methods: This study was a prospective observational study, carried out in the Department of Gastroenterology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh from January 2013 to June 2013. Fifty adult patients presenting with haematemesis and/or melaena admitted into gastroenterology inpatient unit from outpatient department or patients referred from other inpatient units of Department of Medicine of BSMMU were included in the study. Endoscopic examination was performed within 24 to 48 hours of presentation. Lower GI endoscopy was done in selected cases.

Results: The study patients were predominantly young or of early middle age with mean age being 34.45 ± 16.5 yrs. A male preponderance was observed with male to female ratio being 7.3:1 (44 male and 6 female). 62% of the patients presented with both haematemesis and melaena, 26% with melaena only and 12% with haematemesis alone. Endoscopy of upper gastrointestinal tract demonstrated duodenal ulcer to be predominant finding (50%), followed by gastro-esophageal erosions (20%), gastric ulcer (12%), esophageal varices (10%), gastric adenocarcinoma (4%) and stomal ulcer (4%).

Conclusions: Endoscopy revealed that duodenal ulcer was the most common cause of upper gastrointestinal bleeding followed by oesophageal erosion, gastric ulcer, esophageal varices and stomal ulcer. Peptic ulcer disease still remains as the major cause of acute upper gastrointestinal haemorrhage, though cases of oesophageal erosion were also significant.

Key Words: Hematemesis, Melaena, Endoscopy

Introduction :

Haematemesis is vomiting of blood or coffee ground material.

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Melaena is black, tarry and foul smelling stool¹. Upper gastrointestinal (GI) bleeding refers to blood loss within the intraluminal gastrointestinal tract from any location between the upper esophagus to the duodenum at the ligament of Treitz². If vomiting occurs shortly after the onset of bleeding, the vomitus appears red and later turns into dark red, brown, or 'coffee grounds'. Melaena develops after as little as 50-100 ml of blood loss from upper gastro-intestinal tract. Melaena may also occur with bleeding from any lesion proximal to and including the caecum.

Acute blood loss greater than 50-100 ml may produce melaena for as long as a week, when stool color returns to normal, but the test for occult blood may remain positive. The black, tarry character of melaena is due to degradation of blood to hematin or other hemochromes by bacteria and should not be confused with greenish character of ingested iron or the black, non-foul smelling stool caused by ingestion of bismuth. Haematemesis results from a combination of large amount of blood filling the stomach together with the urge to vomit. So haematemesis generally indicates a more severe bleeding episode than melaena. Clinical presentation depends on the site, extent and rate of haemorrhage and presence of coincidental disease. Upper GI bleeding is more common in men and elderly people^{3,4}. The most common presenting features of upper gastrointestinal haemorrhage are haematemesis, melaena, syncope or hypovolaemic shock⁵.

There are a number causes for upper GI bleeding. But there is limited study on causes with which the patients most frequently present in tertiary care hospitals of Bangladesh

with upper GI bleeding. The data on etiological pattern of upper GI bleeding in the context of our population are very important for choosing better management of these patients. Our study was intended to find the etiological pattern of upper GI bleeding in our country.

Materials And Methods:

Adult (18 years and above) patients presenting to Gastroenterology in patient department in Bangabandhu Sheikh Mujib Medical University (BSMMU) from January 2013 to June 2013 with haematemesis and/or melaena were included in the present study. Patients presenting with haematemesis and or melaena who were haemodynamically stable, were evaluated through proper history taking, clinical examination, relevant investigations and endoscopic examination within 24 to 48 hours of first presentation to find out the site of lesion and type of lesion. Patients, who were not stabilized haemodynamically within 48 hours of presentation and endoscopy could not be done within that period were excluded from this study. Clinical characteristics studied were history of NSAIDs intake, previous peptic ulcer disease, passage of dark, tarry stools, bleeding per rectum, vomiting of blood, duration and frequency of haematemesis and melaena, degree of pallor, pulse, BP, level of consciousness, stigmata of chronic liver disease, and epigastric mass. Stool occult blood test (OBT) was done at bed side by strip (Hema-screen) in all patients presenting with haematemesis and/ melaena. Complete blood count (CBC) with ESR was done. Anemia was defined as a state in which the level of hemoglobin in the blood is below the reference range appropriate for age and sex (Hemoglobin percentage below 12 g /dl in case of female and below 13 g/dl in case of male)⁶. Tachycardia is defined as pulse more than 100 beats/minutes and hypotension is defined as Systolic blood pressure less than 90 mm of Hg or diastolic blood pressure less than 60 mm of Hg.

Endoscopy was done with endoscope (EPM 3500, PANTEX brand) and endoscopic findings included site and type of lesion. Biopsy was taken for histopathology as needed. Other laboratory tests included X-ray chest and abdomen, CT scan abdomen, blood glucose, blood urea and serum creatinine. Having obtained informed consent from the study patients and permission from the Institutional Review Board of BSMMU hospital, data collection began. Data were collected using a structured questionnaire containing all variables of interest. Frequency, percentage, mean and standard deviation from the mean were calculated using standard statistical method.

Results :

Socio-demographic characteristics of the patients presenting with haematemesis and/or melaena are shown in table-I.

Clinical features and endoscopic findings of patients presenting with haematemesis and/or melaena are shown table II and table III respectively.

Table I: Socio-demographic characteristics of the patients

Socio-demographic characteristics	Frequency	Percentage
Age* (years)		
18-25	13	26
26-35	17	34
36-45	14	28
≥ 46	6	12
Sex		
Male	44	88
Female	6	12
Occupations		
Farmers	11	22
Service holder	9	18
Laborers	8	16
Student	7	14
Businessman	4	8
House wife	2	4
Others	9	18
Monthly family incomes (taka)		
<8000	40	80
8000-15000	5	10
15000-20000	4	8
>20000	1	2

*Mean age = 39.9 ± 4.2 years; range = 18 – 90 years.

Table II: Clinical features of patients presenting with upper GI bleeding (n = 50*)

Clinical features	Percentage	Frequency
Symptoms*		
Haematemesis and melaena	31	62
Melaena alone	13	26
Syncope	8	16
Haematemesis alone	6	12
Signs*		
Anemia	33	66
Tachycardia	26	52
Hypotension	12	24
Epigastric mass	8	16

* Multiple response table has been used

Table III: Endoscopic findings of patients presenting with hematemesis and melaena

Endoscopy of upper GIT	Percentage	Frequency
Duodenal ulcer	25	50
Esophageal erosion	10	20
Gastric ulcer	6	12
Esophageal varices	5	10
Stomal ulcer*	2	4

*Stomal ulcer in the site of partial gastrectomy with gastrojejunostomy done for carcinoma stomach.

Outcome of the study patients has been shown in table IV.

Table IV: Outcomes of haematemesis and melaena following management

Outcomes	Percentage	Frequency
Asymptomatic	33	66
Complications*	13	26
Died in the hospital	4	8

*complications were anemia, shock and recurrent haematemesis and /or melaena.

Discussion :

Acute upper GI bleeding is a common medical problem responsible for significant morbidity and mortality³. It is often very difficult to find out the cause and site of bleeding. Bleeding from the GI tract may present in the form of haematemesis and melaena and occasionally in the form of hematochezia (the passage of bright red or maroon blood from rectum)². Occult GI bleeding may be identified in the absence of overt bleeding by special examination of the stool (e.g. guaiac testing)⁸. Finally, patients may present only with symptoms of blood loss or anemia such as light-headedness, syncope, angina, or dyspnea⁹.

In our study, the average age of the patients was about 40 years (range: 18-90 years). Fifty percent of patients were in their second or third decades of life indicating that the disease occurs mostly in active age of life. In the current study, male to female ratio is 7.3:1 for bleeding peptic ulcer. Our study includes farmers (22%), laborers (16%) and students (14%). The figure may vary with respect to geographical location, but it is primarily a disease of people living in poor socio-economic condition predisposing to H. Pylori infection. Poverty acts as a barrier in early diagnosis and treatment resulting in complications like peptic ulcer, chronic liver diseases and others⁹. Thus, poor people suffer most from upper (GI) bleeding⁷.

In our study, endoscopic findings showed that half of the patients had duodenal ulcer followed by oesophageal erosion, gastric ulcer, oesophageal varices which is similar to findings of Khan et al study¹¹. In Thailand a review of 5000 patients of haematemesis and melaena revealed peptic ulcer disease (51%), acute mucosal erosion (31.6%), normal study (2.5%)¹². This is similar to our study findings. In Pakistan, a prospective study was done by Schiller K on 350 cases where study populations presented with only haematemesis¹³. Endoscopic study of upper GIT in those patients revealed oesophageal varices in 24% and superficial mucosal lesion in 17% cases.

The ratio of bleeding duodenal ulcer to bleeding gastric ulcer in our study was 4.2:1. Three other studies done in Bangladesh found this ratio to be 5.7:1, 11.6:1, 3.5:1 respectively^{7,11,14}.

In another study done by Apel et al showed that endoscopy

within 12-24 hours of admission can detect the causes of haemorrhage in about 80% of cases if performed by expert hand¹⁰. Endoscopy should be done within 24 hours of bleeding, for if it is delayed, erosions may be healed and ulcer may lose the features like black base or adherent clot. In Bangladesh endoscopy is now available in almost every medical college hospitals and many diagnostic centers. So patients with upper GI hemorrhage should be evaluated by endoscopy at the earliest possible time. Our study was done on a smaller number of cases and it was the significant limitation of our study.

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