

Assessment of Different Causes of Haematemesis in Patients with Chronic Liver Disease

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ABSTRACT

Aim: To evaluate the frequency of different lesion as a cause of upper gastro Intestinal bleed in patients with liver cirrhosis.

Methods: This study was carried out in medical unit-1, over a span of one year. During this period two hundred (200) patients presented with active haematemesis or recent H/O upper GI bleed. The source of bleeding was determined by early endoscopy in all cases. Diagnosis of portal hypertension was based on the finding of varices whether gastric/esophageal and portal gastropathy, during EGD.

Results: Frequency of upper GI bleed was found to be maximum with esophageal varices and out of 200 patients, 103 patients had variceal bleed. Second most common cause of haematemesis was the presence of acute mucosal lesion with varices and number of patients was forty-three (43). Third lesion was found to be the fundal varix as a cause of upper GI bleed and 27 patients had fundal varices as the cause of UGIB.

Conclusion: Patients with liver cirrhosis and upper gastrointestinal bleeding have haematemesis from variety of lesions. In this study bleeding from esophageal varices is 51.5%, 13.5% have bled from fundal varix while the rest from combined lesion which is 21.5%.

Key words: Upper gastrointestinal bleed (UGIB) esophago gastro duodenoscopy (EGD)

INTRODUCTION

Patients with chronic liver disease (cirrhosis) may develop upper gastrointestinal bleed from variety of lesions which mainly include those that arise by virtue of portal hypertension, namely gastro-esophageal varices and portal hypertensive gastropathy¹. Certain numbers of patients also have acute mucosal lesions in stomach and duodenum and these lesions are like erosions, ulcers or hemorrhagic petechiae along with portal gastropathy². Now the question arises whether these patients with liver cirrhosis, bleed from varices and other lesions equally OR are they more likely to bleed from varices? The aim of this study is to determine the predominant cause of bleeding through EGD in patients with liver cirrhosis³.

Presumptive diagnosis of cirrhosis is based on history, clinical examination, biochemical parameter and ultrasonographic findings suggestive of decompensated liver disease⁴.

Acute variceal bleed is a catastrophic complication of portal hypertension with a mortality ranging from 30-50%. Prompt diagnosis and interventional management is therefore essential. It is universally accepted that early EGD (esophago-gastroduodenoscopy) is the most vigilant and effective mode of diagnosis and management in upper gastro intestinal bleed with decompensated

liver disease⁵.

These considerations would seem to project urgent need and provision of endoscopic facilities in District and Tehsil Headquarter hospitals, where such patients are usually received.

MATERIAL & METHODS

This retrospective study of 200 cases of upper GI bleed was carried out in medical Unit I Services Hospital Lahore during one year (Jan 2013 to Dec 2013), on patients who underwent diagnostic and therapeutic EGD. These cases comprised of patients with decompensated liver disease, presented with active haematemesis or recent H/O haematemesis /malena. Diagnosis of portal hypertension was based on the presence of gastro-esophageal varices during upper gastrointestinal endoscopy. These patients were divided into three groups with respect to lesions.

Group A: Multiple columns of esophageal varices grade II, and III with red sign.

Group B: Presence of fundal varix with sign of recent bleed such as clot attached to lesions.

Group C: Acute mucosal lesions in the body of stomach or duodenum has been considered as a Co-existing / combined lesion with varix in the background of portal hypertensive gastropathy as a 3rd source of upper gastrointestinal bleed.

The severity of liver disease was judged clinically and was divided in to two grades based on

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presentation. Grade I patients simply presented with complain of haematemesis and malena without any significant sign and symptom of decompensated liver disease. Grade II patients usually have the sign and symptoms of Jaundice, Ascities, splenomegaly and edema clinically as a feature of parenchymal and synthetic dysfunction in chronic liver disease.

RESULTS

Two hundred patients were examined and assessed for their predominant lesion and distributed respectively in different tables. Gender ratio was also described in numbers with percentage in all three groups. Mean age was determined to identify most common age at presentation.

Table I: Patients with respect to age distribution (n=200)

Age group	n	%age
20-30	Nil	Nil
31-40	34	17
41-50	105	52.5
51-60	61	30.5

It has been found interestingly that maximum numbers of patients lie in their 4th decade of life and their percentage was 52.5% of total population of patients. This table also shows the duration of pathological process from the onset of chronic active hepatitis to development of decompensate liver disease and the median age was found to be 48.5 years. Pie chart explains the gender distribution showing mainly male predominance which is 70% of total patients. Gender distribution likely explains male predominance which is 70% of total patients.

Fig. 1: Gender distribution

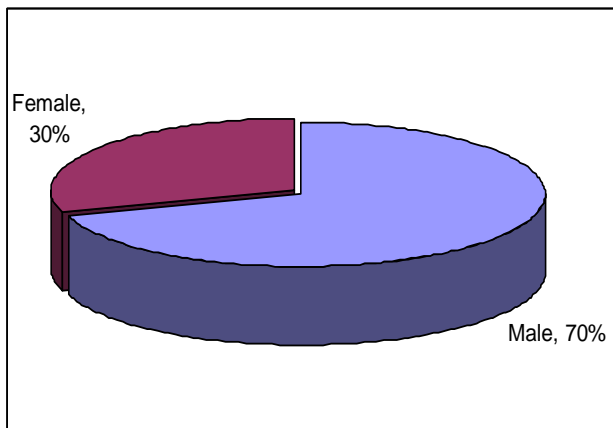
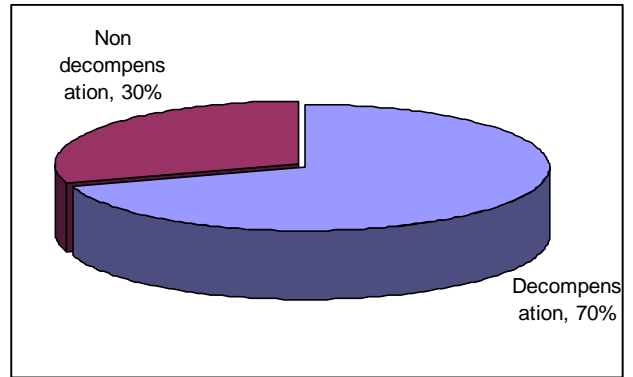


Fig. 2: Severity of liver disease.



Distribution of patients according to severity of liver disease based on clinical evaluation. Pie chart shows 70% have sign and symptoms of decomposition while 30% have Gastroesophageal varices without significant features of decompensated liver disease.

Table II: Distribution of lesion according to gender (n=200)

Endoscopic findings	n	%age	Male	Female
Oesophageal varices	103	51.5	76(38%)	27(13.5%)
Oesophageal varices with other lesion	43	21.5	31(15.5%)	12(6%)
Oesophageal and fundal varices	21	10.5	13(6.5%)	8(4%)
Fundal varices	27	13.5	16(8%)	11(5.5%)
Fundal varices and other lesion	6	3	3(1.5%)	3(1.5%)

This table is based on the endoscopic findings and shows 51.5% patients have been presented with esophageal varices which is the most prevalent lesion. While gender distribution shows male predominant which is 38% and female patients are 13.5%. The next important isolated lesion is fundal varix and frequency of lesion is 13.5% while male patients are 8% and female patients are 5.5%. Fundal varices are also associated with esophageal varices and patient's percentage is 10.5%. Patients with acute mucosal lesion along with esophageal varices and gastric varices are 24.5% which is 2nd most common cause in patients with chronic liver disease.

Table V: Distribution of lesion according to age (n=200)

Endoscopic findings	n	50 & > 50 years	< 50
Oesophageal varices	103	57(28.5%)	46(23%)
Oesophageal varices with other lesion	43	23(11.5%)	20(10%)
Oesophageal and fundal varices	21	6(3%)	15(7.5%)
Fundal varices	27	4(2%)	23(11.5%)
Fundal varices and other lesion	6	0	6(3%)

Main culprit for complain of haematemesis is esophageal varices and sufferers usually present at the age of 50 & fifty plus having percentage of 28.5%, while patients with acute mucosal lesion and esophageal varices have share of 11.5% in patients with 50 years of age and less than 50 are 10%. A next important lesion again is the fundal varix and it is most commonly seen in patients less than 50 years of age having percentage of 11.5%.

DISCUSSION

In this study 200 patients with haemetemesis were included and visualized for the source of upper GI bleed through EGD. Source of bleeding was assessed on the evidence of varices weather gastric or esophageal and acute mucosal lesion in stomach & duodenum. These acute mucosal lesions have been considered as a combined source of upper gastro intestinal bleed with esophageal varices⁶. Upper gastro intestinal bleed (UGIB) is a common, potentially life threatening complication of chronic liver disease and is defined as bleed proximal to the ligament of treitz. A patient with liver cirrhosis has been classically related to rupture of esophageal and fundal varices with resultant complaint of haematamesis⁷. This study also confirms that patients with acute mucosal lesions in the back ground of esophageal/fundal varices and portal gastropathy may also become the cause of UGIB. the issue of combined lesion in which acute mucosal lesions in the back ground of esophageal varices and portal gastropathy may become the cause of upper GI bleed (Palmer 1969) bordes et al 1973. The pattern of hemorrhage differs between one group of bleeding lesion to another, whereas patients with combined lesion did not bleed massively or persistently⁸.

EGD is the prime diagnostic and therapeutic tool for UGIB. This procedure of choice actually differentiate bleeding site and determines the specific cause. It (EGD) provides valuable diagnostic and prognostic information for further management and replaced other diagnostic measures. Although clinical data may favor, but not reliable in localizing the source of bleeding⁹. A comparison of sex and age of patients with respect to source of bleeding gives an interesting result. Among 200 patients, presented with UGIB and confirmed by endoscopy for the source of bleed were 70% male. This could possibly be explained by the more social activism and greater accidental exposure to C- Virus disease of males as compared to females¹⁰.

Most of the patients presented in their 4th decade of life which were 52.5%, that reflects the number of years required for cirrhosis to develop. Cirrhotic patients at the age of 50 and more than 50 years bleed having the incidence of gastroesophageal varices including fundal varix and it is 33.5%. Esophageal varices develop when hepatic venous pressure gradient exceeds 12mmhg¹¹.

Irrespective of severity in liver disease acute mucosal lesion in association with varices has been considered as the cause for upper gastrointestinal bleed as shown in table IV and V. Therefore 21.5% of total patients with cirrhosis who presented with upper gastrointestinal bleed have non variceal source of bleed and these patients have more then one lesion¹². In this study it has been found interestingly that certain number of patients with (UGIB) have isolated lesion of fundal varix having a share of 13.5% out of total number of patients. Therefore it is said that isolated ectopic gastric varices are not uncommon and often can be manage with endoscopic intervention¹³. It has also been noticed that 10.5% patients has esophageal varix as well as fundal varix. These endoscopic findings are not ignorable and it has to be managed before banding the esophageal varices through endoscope¹⁴.

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