Frequency Of Gastric Varices In Patients Presenting With Upper Gastrointestinal Bleed

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ABSTRACT

Upper gastrointestinal bleeding (UGIB) is frequently treated emergency by gastroenterologists1. The role of radiological intervention is increasing in patients with severe and recurrent bleeding who do not respond to endoscopic treatment. Mortality from UGIB have is considerable (mortality around 10%)2; despite all advances. Varicial bleeding is a common cause of upper GI Bleeding, of which Gastric varicial bleeding is more serious condition.

OBJECTIVE: To determine the incidence of gastric varices in patients presenting with upper GI bleed.

MATERIALS AND METHODS: A study which was conducted from July 2018 to December 2018 in which total of 93 patients were observed. Patients were admitted in ward. Detailed history and thorough physical examination were carried out. Necessary baseline investigations were done. All endoscopic procedures were done by an expert gastroenterologist to detect gastric varices. The information gathered above along with demographic details of the patients like name, age, gender, height, weight, BMI Kg/m2 [weight (in kg) / height (m2)], Smoking, Physical inactivity was recorded on a pre-designed pro forma.

RESULTS: In this study mean age was 37 years with SD ±12.2. Male were fifty four percent while females were fourty six percent . Patients with gastric varices were twenty two percent while seventy eight percent patients didn't have gastric varices.

CONCLUSION: Our study concludes that the incidence of gastric varices was 22% in upper GI bleed cases.

KEY WORDS: Gastric varices, upper, gastrointestinal bleed.

INTRODUCTION

Upper GI bleeding (UGIB) is a frequently managed emergency by gastroenterologists1. Mortality from UGIB is considerable (mortality around 10%)2; despite all advances. The cost of UGIB treatment is quite high, imposing significant burden on healthcare system3.

During management of UGIB, risk assessment is vital and plays central role in planning optimal therapeutic stratagies 4. Major risk factors for further bleeding and mortality are 5Age, hemodynamic instability, comorbidity, diagnosis at presentation, admission hemoglobin level etc.

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Varices are divided into gastroesophageal varices (GOV) and isolated gastric varices (IGV). GOV are than grouped in to GOV1 and GOV2 , GOV1 are those which go down the gastroesophageal junction (GEJ) and traval along the lesser curve of the stomach, while GOV2 are those which go down the GEJ onto the fundus of the stomach. IGV includes IGV1, which are present in the fundus of the stomach and IGV2, which are present anywhere in the stomach6.

Esophageal and gastric varices behave differently despite the fact that increases pressure in portal vein is the common etiology of both esophageal and gastric varices . Gastric varices bleeds more severely than esophageal varices. They bleed at a lesser portal pressure than esophageal varices. They have higher rates of encephalopathy, rebleed and mortality7. The therapeutic options like Banding /sclerotherapy, pharmacotherapy and balloon tamponade, all of which have shown good results in the treatment of esophageal varices but have not shown such results in the treatment of gastric varices8. In a study, 21% of patients presenting with UGIB had gastric varices9 while in another study 13.7% patients had gastric varices who presented with UGIB.10

This study is designed to find out frequency of GV among

patients presenting with UGIB. As reported above, the burden of GV varies among different studies which may be due to variation in its risk factors. UGIB is a life threatening condition if not managed in time. This study will provides us the latest and updated information regarding frequency of gastric varices in cases of upper GI bleed.

OBJECTIVE

To determine the frequency of gastric varices in patients presenting with upper GI bleed .

MATERIALS AND METHODS

1. This study was conducted at Department of Gastroenterology, Hayatabad Medical Complex, Peshawar , Pakistan from conducted from July 2018 to December 2018 .Our Sample size was 93, using 13.7% proportion of gastric varices among patients with UGIB10, 95% confidence level and 7% margin of error under WHO software for sample size determination . All patients presenting with upper GI bleed (hematemesis or malena) within 48 hours ,patients of either gender ,patients in age range 18 to 60 years were enrolled .

Patients with bleeding disorders on history and past medical records(on the bases of history) , Patients taking anti-coagulant medications(on the bases of history) ,Patient taking anti-ulcer medications(on the bases of history) were excluded from the study.

DATA COLLECTION PROCEDURE

The study was conducted after the approval of hospital ethical committee. All patients who meet the inclusion criteria (patients with UGIB as per operational definition) were admitted to the Gastroenterology unit through OPD., Informed written consent was obtained and purpose and benefits of the study were explained to the patients.

Patients were admitted in ward. Detailed history taking and thorough physical examination was done. Necessary baseline investigations were done. All endoscopic procedures were done by an expert gastroenterologist to detect gastric varices.

The information gathered above along with demographic details of the patients like name, age, gender, height, weight, BMI Kg/m2 [weight (in kg) / height (m2)], Smoking, Physical inactivity was recorded on a pre-designed pro forma. In order to control confounders and bias in the study results, strict exclusion criteria was followed .

DATA ANALYSIS

The collected data was analyzed on SPSS version 20. Frequency and percentages were calculated for categorical variables like gender, smoking, physical inactivity and gastric varices. Mean + SD was analyzed for numerical variables like age, height, weight BMI. Gastric varices was stratified among age, gender, BMI, smoking, physical inactivity to see the effect modifiers using chi square test with p value of < 0.05 as significant. All results were presented as tables and graphs.

RESULTS

Age distribution among 93 patients was analyzed as 16(17%) patients were from 20 to 30 years, 28(30%) from age 31-40 years, 31(33%) were in 41-50 years range, 18(20%) were in age range 51-60 years. Mean age was 37 years with SD ±12.2 (as shown in Table No 1)

Gender distribution was analyzes and out of 93 patients 50(54%) were male while 43(46%) were female. (as shown in Table No 2)

BMI distribution among 93 patients was analyzed as 63(68%) patients had BMI ≤25Kg/m2 while 30(32%) patients had BMI >25Kg/m2. Mean BMI was 25Kg/m2 with SD ±5.770, Mean height was 00 meters with SD ±5.77 and Mean weight was 00 Kg with SD ±5.77 (as shown in Table No 3)

Status of smoking among 93 patients was assessed, 23(25%) patients were smokers while 70(75%) were not smokers. (as shown in Table No 4)

Status of physical inactivity among 93 patients was analyzed as 37(40%) patients had physical inactivity while 56(60%) patients didn't had physical inactivity. (as shown in Table No 5)

Gastric varices among 93 patients were analyzed as 20(22%) patients had gastric varices while 73(78%) patients didn't had gastric varices. (as shown in Table No 6)

Stratification of gastric varices with respect to age, gender, BMI, smoking, physical inactivity is given in table no 7,8,9,10,11

DISCUSSION

Upper gastrointestinal bleeding (UGIB) is the commonest and urgent emergency treated by gastroenterologists1. Emergency surgery has continued to diminish, while radiological intervention have increased in management of patients with severe and recurrent bleeding who do not respond to endoscopic stratagies. Despite these advances, morbidity and mortality from UGIB have remained considerable (mortality around 10%) ; thus, the cost of UGIB management is high, placing a significant burden on healthcare facilities12,13.

Our study shows that mean age was 37 years with SD ±12.2. Fifty four percent patients were male while 46% patients were female. Twenty two percent patients had gastric varices while 78% patients didn't had gastric varices.

Similar results were observed in another study conducted by Bhutta S et al 14,15 in which mean age was 52.8 years. Most patients were (64.5%) were male. Twenty one percent (21%) patients had bleeding lower esophageal varices (LEV) or gastric varices. Another 3.4% patients had bleeding peptic ulcer in presence of non bleeding LEV . Duodenitis, gastric erosions and erosive gastritis were prsent in 18.4% . In 12.2% patients no cause of upper GI bleed was found.

Similar in another study conducted by Farhan S et al16,19 13.7% patients had gastric varices who presented with UGIB.

Also in a study conducted by Hadayat R et al 17,18 mean age was 57.84 +/- 6.29 years. There were 158 (62.7%) males and 94 (37.3%) females. The commonest endoscopic finding was oesophageal varices (92.9%, n=234) followed by portal hypertensive gastropathy (38.9%, n=98) with almost equal distribution in male and female patients. Gastric varices were present in 33.3% of patients (n=84). Among other causes, peptic ulcer disease was present in 26 patients (10.3%) and gastric erosions were found in 8 patients (3.2%).

TABLE NO 1. AGE DISTRIBUTION (n=93)

AGE	FREQUENCY	PERCENTAGE
20 -30 years	16	17 %
31 -40 years	28	30 %
41 -50 years	31	33 %
51 -60 years	18	2 0 %
Total	93	100%

Mean age was = 37 years
Standard deviation was=12.2

TABLE NO 2. GENDER DISTRIBUTION (n= 93)

GENDER	FREQUENCY	PERCENTAGE
Male	50	54 %
Female	43	46 %
Total	93	100%

TABLE NO 3. BODY MASS INDEX (n= 93)

BMI	FREQUENCY	PERCENTAGE
≤ 25Kg/m ^{2}	63	68 %
> 25Kg/m ^{2}	3 0	3 ^{2} %
Total	93	100%

Mean BMI was 25 Kg/m2 with SD ±5.77
Mean height was 00 meters with SD ±8.71
Mean weight was 00Kgs with SD ±12.934

TABLE NO 4. SMOKING DISTRIBUTION (n= 93)

SMOKING	FREQUENCY	PERCENTAGE
Yes	23	25 %
No	70	75 %
Total	93	100%

TABLE NO 5. PHYSICAL INACTIVITY (n= 93)

PHYSICAL INACTIVITY	FREQUENCY	PERCENTAGE
Yes	37	40 %
No	56	60%
Total	93	100%

TABLE NO 6. GASTRIC VARICES (n=93)

GASTRIC VARICES	FREQUENCY	PERCENTAGE
Yes	20	2 2 %
No	73	78%
Total	93	100%

TABLE NO 7. STRATIFICATION OF GASTRIC VARICES W.R.T AGE (n=185)

GASTRIC VARICES	20 - 30 years	31- 40 years	41- 50 years	51- 60 years	Total
Yes	3	6	7	4	20
No	13	22	24	14	73
Total	16	28	31	18	93

Chi Square test was applied in which P value was 0.9919

TABLE NO 8. STRATIFICATION OF GASTRIC VARICES W.R.T GENDER (n=185)

GASTRIC VARICES	Male	Female	Total
Yes	11	9	20
No	39	34	73
Total	50	43	93

TABLE NO 9. STRATIFICATION OF GASTRIC VARICES W.R.T BMI (n=185)

GASTRIC VARICES	≤ 25Kg/m ^{2}	> 25Kg/m ^{2}	Total
Yes	14	6	20
No	49	24	73
Total	63	30	93

Chi Square test was applied in which P value was 0.8073

TABLE NO 10. STRATIFICATION OF GASTRIC VARICES W.R.T SMOKING (n=185)

GASTRIC VARICES	Yes	No	Total
Yes	5	15	20
No	18	55	73
Total	23	70	93

TABLE NO 11. STRATIFICATION OF GASTRIC VARICES W.R.T PHYSICAL INACTIVITY (n=185)

GASTRIC VARICES	Yes	No	Total
Yes	8	12	20
No	29	44	73
Total	37	56	93

Our study correlates with another study conducted by Mumtaz et al 20,21,22 in which GV in patients with portal hypertension were present in 15% (220/1436) with the bleeding incidence 22.7% (50/220). Among the 50 patients with GV bleed , frequency of isolated gastric varices (IGV-I) were 22 (44%), gastro-oesophageal varices (GOV) on lesser curvature (GOV-I) in 16 (32%), and GOV on greater curvature (GOV-II) in 15 (30%). IGV-I were noted in 44% (22/50) patients who had bleeding as compared to 23% (39/170) who did not have bleeding (P < 0.003). Re-bleeding were present in 7 (14%) patients after 48 h of initial sclerotherapy. Repeat sclerotherapy were needed in 4/7 (57%) for secondary hemostasis. Three patients died after repeat sclerotherapy, one during transjugular intrahepatic portosystemic stem shunt (TIPSS), one during surgery and one due to uncontrolled bleeding. Treatment failure-related mortality rate was 6% (3/50).

CONCLUSION

Our study concludes that gastric varices are not an uncommon cause of upper GI bleed and when present, can be associated with high mortality and morbidity as compared to other causes of upper GI bleed.

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