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ORIGINAL ARTICLE

Non-variceal Upper Gastro-intestinal Bleeding in Patients of Liver Cirrhosis

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ABSTRACT

Aim: To determine the frequency of non-variceal upper gastro-intestinal bleeding (NVUGIB) in patients of liver cirrhosis.
Methods: A total number of 136 patients of liver cirrhosis having upper GI bleeding who presented in medical emergency of Nishtar Hospital Multan were included in this cross-sectional analysis. Gastric Endoscopy was done all patients to determine the presence of NVUGIB in all patients. Data regarding patient's age, Body mass index (BMI), gender and duration of upper GI bleed was also collected.
Results: Mean age was 47.23±9.45 years. Mean body mass index (BMI) was 24.94±3.35 kg/m^2. Mean duration of upper UGIB was 3.45±3.03 months. There were 94(69.12%) male and 42(30.88%) female patients. NVUGIB was found in 76(55.88%). There was a significant association of age with NVUGIB. In patients of age 20-49 years, NVUGIB was found in 47(62.7%) patients. In having age 49-65 years, NVUGIB was found in 29(47.5%) patients.
Conclusion: NVUGIB in patients with liver cirrhosis is very common and it is more common in younger age patients. So diagnostic endoscopy should be done in liver cirrhosis patients presenting with upper GI bleeding in emergency departments. This will aid in proper diagnosis and in deciding the appropriate treatment in these patients.
Keywords: Non-variceal upper gastro-intestinal bleeding, liver cirrhosis, Hepatitis.

INTRODUCTION

Upper gastrointestinal bleeding (UGIB) is a common medical emergency accounting for 70% of the cases presenting with acute visceral bleeding, while the remaining 30% cases have non-visceral cause.[1] UGIB accounts for a total of 8% hospital admissions. The prevalence rate of UGIB is 50 to 150/100,000 people in USA and 100 to 107/100,000 per year in UK.[2] UGIB is associated with significant mortality rate ranging from 4 to 15%[3,4].

UGIB is defined as a bleeding disorder whose origin is above the level of Treitz ligament.[5] The common presentation in these patients is melena occurring in 70% to 80% cases and hematemesis occurring in 40% to 50% cases.[6] Hematochezia is a rare presentation and in majority of these cases the source is usually the lower GI bleeding[6] The occurrence rate of gatro-esophageal varices is about 7%/year[7]. Varices occur in about 12% of the patients of liver cirrhosis each year with 5% patients developing small varices and up-to 7% large varices.[8]Up-to 30 to 40% patients with UGIB have non-visceral cause frequently caused by gastric ulcers, portal gastropathy, Mallory-Weiss tears and duodenal erosions[9].

In this study we determined the frequency of non-variceal upper gastro-intestinal bleeding (NVUGIB) in patients of liver cirrhosis. As there is a difference in the management of variceal versus non-variceal UGI bleeding in liver cirrhosis patients. So determining the frequency of NVUGIB can help to decide empirical treatment in patients of liver cirrhosis presenting with UGIB.

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METHODS

In this descriptive cross-sectional study, we included 136 patients of liver cirrhosis of age 20 to 65 who presented in the medical emergency of Nishtar Hospital Multan from June-2020 to Feb-2021 with suspicion of UGIB (such as hematemesis or melena) were included. Patients who presented with UGIB without evidence of liver cirrhosis were excluded. Approval of study was obtained from ERC of hospital.

After admission, gastric Endoscopy was done in all patients to determine the presence of NVUGIB in all patients.Presence of bleeding proximal to the ligament of Treitz along with presence of normal mucosal wall of esophagus, gastric or duodenum on endoscopy was labelled as NVUGIB.

Data was analyzed using SPSS v23. Frequency and percentage were used to present gender, and presence of NVUGIB. While age, BMI and duration of upper GI bleed were presented as mean ± standard deviation. Chi-square test was applied to determine the association of age and gender with NVUGIB, taking p-value ≤0.05 as significant.

RESULTS

Mean age of patients was 47.23±9.45 years.Minimum BMI was 18.40 kg/m^2 and maximum BMI was 34.70

kg/m^2.Mean duration of upper GIB was 3.45±3.03 months. There were 94(69.12%) male and 42(30.88%) female patients (Figure 1). NVUGIB was found in 76(55.88%) patients (Figure 2).

There was a significant association of age with NVUGIB. In patients of age 20-49 years, NVUGIB was found in 47(62.7%) patients. In having age 49-65 years, NVUGIB was found in 29 (47.5%) patients. However, the p-value did not reach to significant association (p-value 0.07). There was also no association of gender with NVUGIB. In male patients, NVUGIB was found in 54(57.4%) Male patients and in 22(52.4%) male patients (p-value 0.583) (Table 1).

Figure 1.Frequency of Gender.

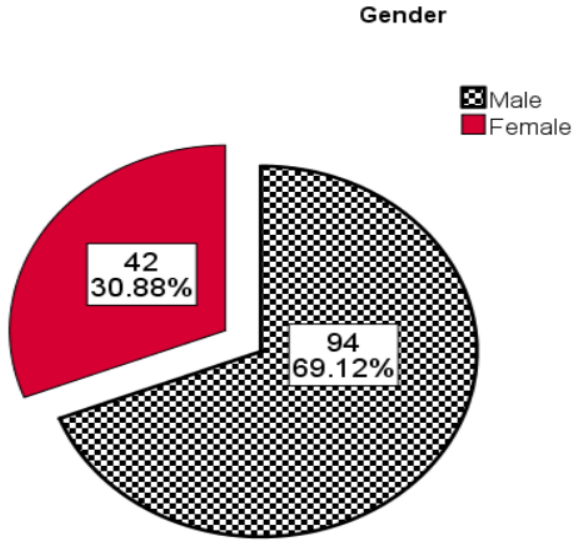

Figure 2.Frequency of Non-Variceal Upper GI Bleeding.

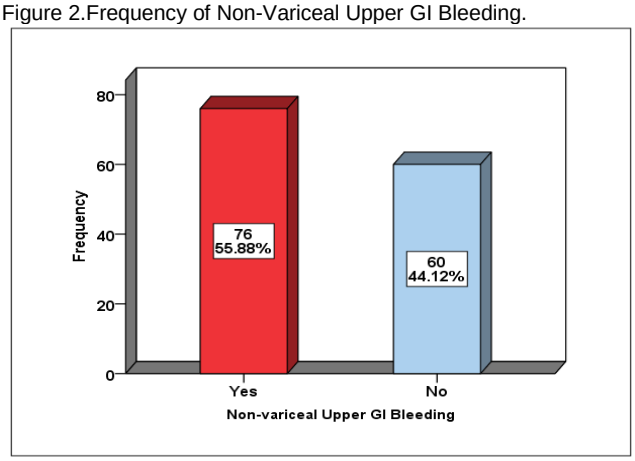

Table 1: Association of Age and Gender with NVUGIB.

Age Group	NVUGIB		P-value
	Yes	No	
20-49 Years	47 (62.7%)	28 (37.2%)	0.07
51-65 Years	29 (47.5%)	32 (52.5%)	
Gender			
Male	54 (57.4%)	40 (42.6%)	0.583
Female	22 (52.4%)	20 (47.6%)	

DISCUSSION

NVUGIB is a routine presentation in the emergency gastroenterology units and is a challenging condition. The annual reported incidence 50 to 150 people per 100,000 people. Despite improvements in endoscopic techniques and supportive care the mortality of NVUGIB remains high even some reports have reported mortality in up-to 35% patients. Incidence is high in old age patients and it occurs in up-to 25% patients of age >80 years and majority of these bleedings occur during hospital stat and is associated with poor prognosis of these patients[10,11].

Association of UGIB in cirrhosis patients is not widely studied and existing guidelines such European and American regarding UGIB have not separated UGIB patients of cirrhosis and non-cirrhosis patients and have reported separate epidemiological profile of these patients.[12-14] However, some authors have investigated this association and reported poor prognosis and higher mortality in patients of UGIB having liver cirrhosis by using multivariate analysis and prediction models[15].

Mean age in present study was 47.23±9.45 years and there were 69.12% male and 30.88% female patients. Pasha et al.reported mean age 47.46±11.79 years. In their study, there were 56% male and 44% female patients.[16]

In our study, NVUGIBwas found in 55.88% patients on endoscopic examination. In González-González et al. trialcontaining a large population of 2217 patients of UGIB, reported NVUGIB in 48.7% patients of liver cirrhosis[17].

A study conducted by Seo et al. reported NVUGIB in 77.7% of cirrhotic patients[18].

While another study by Gabr et al. including 550 patients of liver cirrhosis who presented with UGIB,reported NVUGIB in only 24.5% patients of liver cirrhosis[10].

A study conducted in Pakistan by Mobin et al on 267 patients of UGIB having liver cirrhosisreported NVUGIB in 56.93% patients[19].

The single limitation of this research is that we included data only from a single centre. Moreover, we did not collected data of therapeutic interventions being performed in these patients.

According to present findings, a thorough investigation should be performed in cirrhotic patients who present with UGIB for esophageal and gastric varices and source of bleeding should also be searched in stomach and duodenum during endoscopy.

CONCLUSION

NVUGIB in patients with liver cirrhosis is very common and it is more common in younger age patients. So diagnostic endoscopy should be done in liver cirrhosis patients presenting with upper GI bleeding in emergency departments. This will aid in proper diagnosis and in deciding the appropriate treatment in these patients.

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