

Frequency of Gastric Varices in Cirrhotic Patients Presenting with Upper Gastrointestinal Bleeding: A Descriptive Cross-Sectional Study

Frequency of
Gastric Varices
in Cirrhotic
Patients

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ABSTRACT

Objective: To ascertain how often gastric varices occur in individuals with cirrhosis who arrive with upper gastrointestinal bleeding.

Study Design: Descriptive, cross-sectional study.

Place and Duration of Study: This study was conducted at the Department of Gastroenterology, ATH, Abbottabad from 14th September 2022 to 13th March 2023.

Methods: There were 101 patients in all, male or female, aged 20 to 50, who had severe upper gastrointestinal bleeding in addition to cirrhosis. Individuals having a history of pregnancy, hypertension, stomach or duodenal ulcers, or HCC were not accepted. All patients had upper gastrointestinal endoscopies performed by skilled endoscopists with at least three years of post-fellowship experience, and gastric varices were detected.

Results: The study's age range was 20 to 50 years old, with a mean age of 38.20 ± 7.00 years. According to Table I, the majority of the 66 patients (65.35%) were in the 36–50 age range. With a male to female ratio of 1:1, 50 (49.50%) of the 101 patients were male and 51 (50.50%) were female (Figure I). The sickness lasted an average of 2.09 ± 1.17 years (Figure II). As shown in Figure IV, 16 (15.48%) of the cirrhotic patients who presented with upper gastrointestinal haemorrhage had a high frequency of stomach varices. Age-group stratification of gastric varices revealed no significant differences between the groups, as Table II illustrates. Gender-based stratification of gastric varices also revealed no significant differences between the male and female groups, as Table III illustrates.

Conclusion: This study concluded that frequency of gastric varices in cirrhotic patients presenting with upper gastrointestinal bleeding is 15.48%.

Key Words: upper gastrointestinal bleeding, gastric varices, cirrhosis.

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INTRODUCTION

The incidence of upper gastrointestinal bleeding (UGIB) ranges from 48 to 160 incidents per 100,000 persons annually, making it a serious medical problem globally. Gastroenterologists are most often visited for UGIB, which is also linked to high rates of morbidity and mortality.^{1,2}

The clinical results for these individuals have signifi-

cantly improved because to developments in medication and endoscopic hemostasis.³ Close ward observation and early endoscopic intervention to identify and treat bleeding sources are often necessary, especially for high-risk patients. There are several prediction risk scores for UGIB that are mostly based on endoscopic results and patient characteristics. Hematemesis (40–50%) and melena (70–80%) are the most common presentations, whereas hematochezia (mainly of colonic origin) may occur with fresh blood loss of up to 1000 ml, accounting for up to 10% of cases.⁴ Even though most episodes of upper gastrointestinal bleeding resolve on their own, every patient who has this kind of bleeding needs to be carefully assessed and may need both a therapeutic and diagnostic endoscopy. Upper gastrointestinal bleeding may be caused by a variety of conditions, such as vascular abnormalities, peptic ulcers, portal hypertension, erosive gastritis, erosive esophagitis, and Mallory-Weis tears. Up to 40% of upper gastrointestinal bleeding in the West is still caused by peptic ulcers, with portal hypertension accounting for the second-highest frequency (10–20%).⁵ In contrast, non-variceal causes of bleeding

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accounted for 26.1% of cases, unclear reasons for 3.8%, and variceal causes for 70.1% of cases, according to an Egyptian research. Six Several more studies report a 12% one-year incidence of variceal haemorrhage. It is often caused by gastro-duodenal ulcers (e.g., gastro-duodenal erosions in 10.6%, Mallory Weiss tears in 11.3%, portal gastropathy in 14.4%, stomach ulcers in 24.4%, and duodenal ulcers in 20.6%.⁷ The source of the bleeding (e.g., rupture of the esophageal varices, gastric or duodenal ulcer, portal-hypertensive gastropathy, rupture of the gastric varices, hemorrhagic gastritis, Mallory-Weiss syndrome, etc.); the severity of the bleeding (hemodynamic impact, etc.); the degree of hepatic failure (measured by the Child-Pugh criteria), and the association of other pathologies (diabetes, infections, chronic respiratory diseases, etc.) are some of the factors that affect the complications and mortality in cirrhotic patients after the first UGIB.⁸ The death rate for these individuals has not decreased despite improvements in recent decades, which is noteworthy in instances with variceal haemorrhage. Esophageal varices, which afflict 60% of cirrhotic patients and have a 10–20% hospital mortality rate, are the most frequent side consequence of portal hypertension. These patients often have other bleeding causes, however.⁹ A study by Hadayat R. et al. found that stomach varices were present in 33.3% of cirrhotic individuals who had upper gastrointestinal bleeding.⁷ In a study conducted by Sibia RS et al., stomach varices were found in 15.09% of cirrhotic patients who had upper gastrointestinal haemorrhage.¹⁰ The people in our neighbourhood have very limited access to information on this subject. In addition, as the aforementioned studies show, study on this subject has yielded a variety of results.^{9,10} Thus, in order to collect data, I would need to know how often stomach varices arise in cirrhotic people who present with upper gastrointestinal bleeding. The results of my research will pave the way for further community members to look into this issue^{11,12}.

METHODS

A descriptive, cross-sectional study was conducted at the Department of Gastroenterology, ATH, Abbottabad, from 14th September 2022 to 13th March 2023. A total of 101 cirrhotic patients aged 20-50 with severe upper gastrointestinal bleeding underwent upper gastrointestinal endoscopies to detect gastric varices.

RESULTS

The study included 101 cirrhotic patients, with a mean age of 38.20 years. Of these, 65.35% were aged 36–50, and the male-to-female ratio was 1:1. Gastric varices were detected in 15.48% of patients presenting with upper gastrointestinal bleeding.

Table No. 1: Age distribution of patients (n=101).

Age (in years)	No. of Patients	%age
20-35	35	34.65
36-50	66	65.35
Total	101	100.0

• Mean ± SD = 38.20 ± 7.00 years

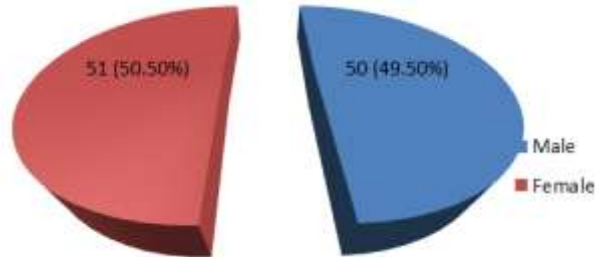


Figure-I: Distribution of patients according to gender (n=101).

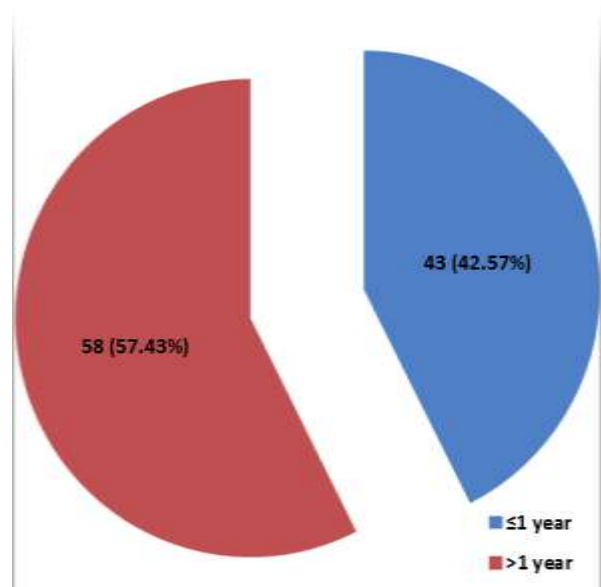


Figure No.2: Distribution of patients according to Duration of disease (n=197)

• Mean ± SD = 2.09 ± 1.17 years

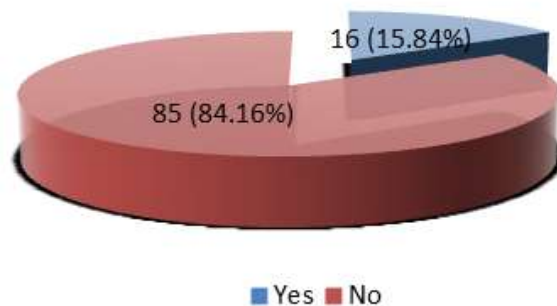


Figure No.3: Frequency of gastric varices in cirrhotic patients presenting with upper gastrointestinal bleeding (n=101).

Table No. 2: Stratification of gastric varices with respect to age groups.

Age (years)	gastric varices		p-value
	Yes	No	
20-35	07	28	0.405
36-50	09	57	

Table No. 3: Stratification of gastric varices with respect to gender.

Gender	gastric varices		p-value
	Yes	No	
Male	05	45	0.111
Female	11	40	

Table No. 4: Stratification of gastric varices with respect to duration of disease.

Duration of disease	gastric varices		p-value
	Yes	No	
≤1 year	04	39	0.121
>1 year	12	46	

DISCUSSION

Gastrointestinal varices Comparatively speaking, there are less specifically isolated gastric varices than esophageal varices¹³. Its frequency ranges from 5% to 33% in PH.89–93 patients. The size of the varices, the degree of liver cirrhosis in relation to the child Pugh class, and the reddish mark on the variceal mucosal region are all strongly linked to the risk of bleeding. Generally speaking, a size is classified as big if it is more than 10 mm, medium if it is between 5 and 10 mm, and tiny if it is less than 5 mm.^{14,15} Upper GI endoscopy is the primary diagnostic option for instances with identified GV and is also suggested as a surveillance procedure to diagnose these patients. Early this research was carried out to ascertain the prevalence of gastric varices in patients with cirrhosis who present with upper gastrointestinal bleeding¹⁶. The study's age range was 20 to 50 years old, with a mean age of 38.20 ± 7.00 years. Sixty-six (65.35%) of the patients were in the age range of 36 to 50. With a male to female ratio of 1:1, 50 (49.50%) of the 101 patients were male and 51 (50.50%) were female¹⁷. Of the cirrhotic patients who presented with upper gastrointestinal haemorrhage, 16 (15.48%) had gastric varices. According to a research by Hadayat R. et al., 33.3% of cirrhotic patients who presented with upper gastrointestinal bleeding had stomach varices⁷. Sibia RS, et al. found in another research that among cirrhotic patients presenting with upper gastrointestinal haemorrhage, the frequency of stomach varices was 15.09%. Compared to esophageal varices, gastric varices are less common and affect 5–33% of patients with portal hypertension. In two years, a reported 25% of cases of gastric varices result in bleeding, with fundal varices having a greater prevalence of bleeding¹⁰. The size of fundal varices (defined as >10 mm, 5–10 mm, and <5 mm,

respectively), Child class (C>B>A), and endoscopic presence of variceal red spots (defined as localised reddish mucosal area or spots on the mucosal surface of a varix) are risk factors for gastric variceal haemorrhage¹⁸. Gastric varices are often categorised according to where they occur in the stomach as well as how they relate to esophageal varices. There are two forms of gastroesophageal varices (GOV), which are an extension of esophageal varices. Type 1 (GOV1) varices, which run along the weaker curvature, are the most prevalent. They need to be treated similarly to esophageal varices as they are thought of as their extensions. Gastric varices of type 2 (GOV2) are often longer and more twisted, and they run the length of the fundus. There are two forms of isolated gastric varices (IGV), which arise when esophageal varices are absent. Type 2 (IVG2) are found in the body, antrum, or the area around the pylorus, while type 1 (IGV1) are found in the fundus and are often twisted and complicated. One must rule out splenic vein thrombosis in order to diagnose IGV1 fundal varices¹⁹. 19.6% of people had stomach varices in one research. 96 IGV1 was the most often encountered kind in our investigation. The current research's stomach varices prevalence is 8%. Given that the majority of their patients had less severe clinical presentations than our patients, this may be explained²⁰. Our study underscores the importance of considering gastric varices as a potential source of UGIB in cirrhotic patients. Early recognition and appropriate management of gastric varices are essential for optimizing patient outcomes and reducing the morbidity and mortality associated with UGIB in this high-risk population. The current research reveals that the prevalence of stomach varices remains unchanged. But the most prevalent variety they saw in these patients was GOV-1. First reported in 1931, gastric varices are associated with portal hypertension. In individuals with portal hypertension, the incidence of stomach varices ranges from 20% to 70%.^{99–101} Compared to bleeding from esophageal varices, the incidence of bleeding from gastric varices is comparatively modest, ranging from 10% to 35%. Although incidence seems to have decreased recently, mortality from a first variceal haemorrhage may still reach 20% within six weeks following the first bleed²¹.

CONCLUSION

According to the study's findings, 15.48% of cirrhotic patients who present with upper gastrointestinal bleeding had stomach varices. Therefore, we advise doctors to treat patients with upper gastrointestinal bleeding with particular care and to intervene early to save these patients' lives.

Author's Contribution:

Concept & Design of Study: Syeda Anam Noor Kazmi
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Data Analysis: Farid
 Revisiting Critically: Hafizullah Khan
 Syeda Anam Noor Kazmi,
 Rabia Sundus
 Final Approval of version: Syeda Anam Noor Kazmi

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