

FREQUENCY OF ISOLATED GASTRIC VARICES IN CASES WITH LIVER CIRRHOSIS

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ABSTRACT

Background: Liver cirrhosis, associated with upper gastrointestinal (GI) bleed, is one of the leading cause of morbidity and mortality. Esophageal and isolated gastric varices, both are common but the later is the more difficult to treat. **Objective:** to determine the frequency of isolated gastric varices in cases with liver cirrhosis presenting with upper gastrointestinal bleeding. **Methodology:** This cross sectional study was conducted at Hamza Medicare Hospital, Rahim Yar Khan from 1st January 2015 to 31st July 2016. The cases with upper GI bleeding due to liver cirrhosis (assessed by presence of ascites, splenomegaly and deranged liver functions like LFTs, PT) were included in this study. Sociodemographic data was collected like age, gender and other data like type of viral hepatitis and other examination to label for their child pugh class. The cases then underwent upper GI endoscopy with Olympus GIF-XQ140 and were assessed for presence of ulcers or varices from esophagus to stomach. The cases with varices of any size or type only in the gastric area were labeled as isolated gastric varices (IGV). The data was entered and analyzed by SPSS version 21. **Results:** In this study there were total 662 cases of liver cirrhosis out of which 180 (27.19%) were females and 482 (72.81%) males. The mean age was 58.50± 15.51 years. There were 495 (74.77%) cases with hepatitis C and 167 (25.23%) with hepatitis B virus. Isolated gastric varices (IGV) were seen in 54 (8.17%) cases. All the cases were in GV 1 class and all has size of more than 10 mm. IGV were seen in 34 (7.05%) males as compared to 20 (11.11%) females (p value= 0.53). There was no significant association of GV with any age group with p= 0.17. There was significant association of IGV with child pugh class C (p=0.03). There was no significant association with type of hepatitis with IGV (p=0.21). **Conclusion;** Isolated gastric varices are common entity and every twelfth case of liver cirrhosis develops this. Child pugh class C is significantly associated with isolated gastric avarices.

Key words: Liver cirrhosis, Isolated Gastric Varices, Hepatitis

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INTRODUCTION

Liver cirrhosis is the end result of chronic inflammatory response to damaging and insulting etiologies, which can end up in various complications. Portal hypertension (PH) is one of the most reported complication which is the result of architectural distortion in the liver parenchyma. Intra hepatic vasoconstriction adds another 20-30% of resistance, which is caused by decreased in Nitric Oxide production by the damaged liver.² This PH leads the collaterals to develop that shunt the blood to systemic circulation especially splanchnic circulation.³

Gastric varices can be divided into further categories by various classifications devised by Hashizome, Arakawa's and Sarine's. According to Sarine's classification of varices, it can be divided into Gastro esophageal varices I and II. In type I the varices extend from the esophageal varices and are considered its part as well over the less curvature of the stomach. This is in contrast to type II where they are found over the fundus and have more tortuous nature. Isolated gastric varices (IGV) are the type that are found only in the gastric

area without having concomitant attached esophageal varices and have 2 subtypes. Type I (IGV1) is the one which is found in the fundus and type II involve the area of antrum, fundus, body and around the pylorus. Splenic vein thrombosis is another etiology along with PH as a cause for IGV.^{4,5} Gastric varices (GV) specially isolated gastric varices are relatively found in lower number than that of esophageal varices. The prevalence of it is found in 5%-33% of the cases with PH.⁶⁻¹⁰ The risk of bleeding is directly associated with size of the varices, severity of liver cirrhosis regarding child pugh class and reddish spot on the variceal mucosal area. The size is usually defined as large having more than 10 mm, medium 5 to 10 mm and the small ones with size less than 5 mm.⁸ The diagnostic choice for detected of GV is the upper GI endoscopy, which is also recommended as surveillance to diagnose these cases early.⁹ Management of such cases with conventional band ligation is slightly difficult because of the technical reasons to approach and ligate the varices. Sclerotherapy, Trans jugular intrahepatic Porto systemic shunts (TIPS), injectable therapy with glues like N-butyl cyanoacrylate, isobutyl-2- cyanoacrylate or thrombin, all have been

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tried with different degree of success depending upon the individual cases and the available resources. Beta blockers are used for long term prophylaxis to avoid re-bleeding.¹⁰⁻¹¹ This study was conducted to determine the frequency of isolated gastric varices in the cases with liver cirrhosis presenting with upper gastrointestinal bleeding.

METHODOLOGY

This cross-sectional study was conducted at Endoscopy unit of Hamza Medicare Hospital, Rahim Yar Khan from 1st January 2015 to 31st July 2016. The cases with upper GI bleeding due to liver cirrhosis, irrespective of their etiology were included in this study. Inclusion criteria: All cases of age 15 to 70 years and both genders. Cases of liver cirrhosis of any child pugh class presenting with upper GI bleed of any amount assessed by the record in cases with liver cirrhosis (assessed by the presence of ascites, jaundice, encephalopathy, deranged LFTs, PT) due to any cause.

Exclusion criteria: The known cases of gastric ulcers. The cases with platelet count less than 50,000. The patients taking NSAIDS for more than one month. Known cases of hepatocellular carcinoma. The cases with end stage renal failure. The cases were assessed for history and examination in accordance with the inclusion and exclusion criteria and to categorize them in different child pugh class and to assess for hepatitis B and C infection. Then all these cases underwent upper GI endoscopy by Olympus GIF-XQ140. The cases were thoroughly examined for presence of ulcers and varices from esophagus to stomach. The data was collected and recorded for the outcome i.e. isolated gastric varices.

In this study, the data was collected, assessed and analyzed on SPSS version 21. Mean and standard deviation were calculated for age, weight, Hb, gender, type of hepatitis and outcomes variable i.e. isolated gastric varices detected or not were presented in terms of frequency and percentages. Further stratification was done to assess for significance with confounding variables and chi square test was applied, taking p value of ≤ 0.05 as significant.

RESULTS

In this study there were total of 662 cases of liver cirrhosis. Out of these 180 (27.19%) were females

and 482 (72.81%) males. The mean age and weight were 58.50 ± 15.51 years and 44.76 ± 9.64 kg respectively. There were 495 (74.77%) cases with hepatitis C and 167 (25.23%) with hepatitis B virus. Isolated gastric varices were seen in 54 (8.17%) cases. (Figure I) All the cases were in IGV class I and all has size of more than 10 mm. 34 (7.05%) were males as compared to 20(11.11%) females.

There was 1 (2.22%) case in Class A, 5 (4.27%) in B and 48 (9.60%) in class C with significant p value of 0.03 (Table I). There were 47 (9.49%) cases of IGV associated with hepatitis C and 7 (4.19%) cases with hepatitis B with p value of 0.21 (Table II).

Table I: IGV VS child Pugh Class N= 662

CHILD PUGH CLASS	IGV	
	Yes	No
Class A	1 (2.22%)	44 (97.88%)
Class B	5 (4.27%)	112 (95.73%)
Class C	48 (9.60%)	452 (90.40%)

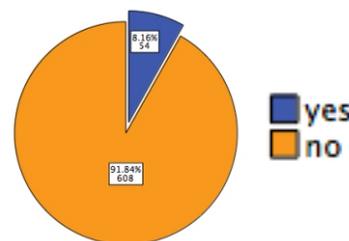
(p=0.03)

Table II: IGV vs type of hepatitis N= 662

TYPE OF HEPATITIS	IGV	
	Yes	No
Hepatitis B	7 (4.19%)	160 (95.81%)
Hepatitis C	47(9.49%)	448(90.5%)

(p=0.21)

Figure I: Isolated gastric varices N= 662



DISCUSSION

In this study isolated gastric varices were seen in 54 (8.17%) patients out of 662 cases. This finding is similar to study conducted by Samiullah S et al that found it in 7.4% cases.¹² In contrast to this, in another study done by Yuksel O et al on 114 cases of upper GI bleed with liver cirrhosis, they found IGV in 37 (32.45%) of cases.¹³ The reason of this higher number is unknown. This can be due to small sample size as compared to our studies or the difference in the severity of cases as their almost all cases had child pugh class C.

There was 1 (2.22%) case in Class A, 5 (4.27%) in B and 48 (9.60%) in class C with significant p value of 0.03. This association was also observed by other studies.¹⁴⁻¹⁵ Child pugh class C was shown to be associated as risk factor of the varices irrespective of the site including isolated gastric varices. This is not only seen with development of the varices, but also linked to increased tendency to bleed.¹⁴

Isolated GV were seen maximum involving 20 (11.36%) out of 176 cases in age group 56 to 75 years almost double to the rest with $p=0.17$. This was also observed by the study done by Saeed-uz-Zaman et al that also had higher number of such varices in higher age groups especially later than the 4th decade of their life.¹⁶

The reason of such higher number in this age can be explained by the longer duration of the disease, which leads to higher portal hypertension and increased likelihood to develop gastric varices. The same study had more cases of GV in males having 8% of cases as compared to 5.5% females. The higher number in males as compared to females can be multifactorial.

The extra add up effect of alcoholism in males can be a possible reason. Secondly, the males also had slightly longer age and more chance to get infection, which can be other causes of increased time for cirrhosis and portal hypertension to develop. There were 47 (9.49%) cases of GV associated with hepatitis C and 7 (4.19%) cases with hepatitis B with p value of 0.21. Hepatitis C prevalence is relatively more than B virus due to various causes including the unavailability of the vaccination. This early infection has more chances to lead to chronic infection and cirrhosis ending up with more chances of variceal formation.

CONCLUSION

Isolated gastric varices are common entity. Every twelfth case of liver cirrhosis develops isolated Gastric varices. Child pugh class C is significantly associated with isolated Gastric varices.

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