

Clinical Assessment of Cases Presented with Esophageal Varices and Portal Hypertension in a Tertiary Healthcare Institute: An Observational Study

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ABSTRACT

Introduction: Portal hypertension (PHT) commonly accompanies cirrhosis of liver. Development of esophageal varices is one of the major complications of PHT. A major cause of PHT-related morbidity and mortality is the development of variceal hemorrhage, which occurs in 25-40% of patients. Esophageal varices are diagnosed by endoscopy. Further follow-up should then relate to the initial size of varices. In case of large varices, endoscopic follow-up is not necessary and primary prophylaxis with a nonselective β -blocker should be started. Endoscopic band ligation is useful in preventing variceal bleeding in patients with medium or large varices. The present study was conducted to assess the clinical presentation of cases of portal hypertension presented with esophageal varices in tertiary healthcare institute.

Material and methods: The present study was conducted at a tertiary healthcare teaching institute from July 2018 to October 2018 and 70 patients were studied. All the cases presented with PHT, which had been diagnosed clinically, biochemically, radiologically and endoscopically were included in the present study.

Results: Incidence of esophageal varices in patients with PHT is approximately 90-95%, but only 30-50% develop variceal bleeding, which is usually associated mainly with fatal outcome. Pallor (88%), ascites (80%) and splenomegaly (70%) were common signs followed by icterus (52%). Asymptomatic esophageal varices were found in 80% of patients, 20% had Grade 1, 26% had Grade 2 and 34% had Grade 3 esophageal varices.

Conclusions: Portal hypertension is largely a preventable condition because the commonest etiology is alcoholism. Asymptomatic esophageal varices, which is quite common, can be easily diagnosed with invasive endoscopy or otherwise suspected with noninvasive platelet/spleen size ratio in country like ours, where financial constraint is a main problem. It can be very useful and applicable at small centers like community health centers (CHCs) and primary health centers (PHCs) in our country with limited resources.

Keywords: Esophageal Varices, Portal Hypertension

INTRODUCTION

Portal hypertension (PHT) commonly accompanies cirrhosis of liver. Development of esophageal varices is one of the major complications of PHT. A major cause of PHT-related morbidity and mortality is the development of variceal hemorrhage, which occurs in 25-40% of patients.¹ Esophageal varices are diagnosed by endoscopy. Further follow-up should then relate to the initial size of varices. In

case of large varices, endoscopic follow-up is not necessary and primary prophylaxis with a nonselective β -blocker should be started. Endoscopic band ligation is useful in preventing variceal bleeding in patients with medium or large varices.

Accurate identification of patients at the highest risk of bleeding allows stratification in an attempt to avoid unnecessary preventive measures in 60-75% of patients who will never have variceal bleeding^{2,3} in future. In order to reduce the increasing burden that endoscopy units will have to bear, some studies have attempted to identify characteristics that noninvasively predict the presence of large esophageal varices like platelet count and splenomegaly.⁴⁻¹⁷ In this study, we have used the platelet count/spleen diameter ratio as a noninvasive predictive parameter. Apparently, the decrease in platelet count in all these patients was most likely due to hypersplenism because of PHT.

The present study was conducted to assess the clinical presentation of cases of portal hypertension presented with esophageal varices in tertiary healthcare institute.

MATERIAL AND METHODS

The present study was conducted at a tertiary healthcare teaching institute from July 2018 to October 2018 and 70 patients were studied. All the cases presented with PHT, which had been diagnosed clinically, biochemically, radiologically and endoscopically were included in the present study. Those who had decompensated liver diseases, HIV, hepatocellular carcinoma, metastasis in liver, parental drug addiction, chronic febrile illness, H/O treatment taken for PHT in form of surgery or endoscopic banding or sclerotherapy were excluded. All patient were subjected to following tests: Hemogram with thin peripheral smear and ESR, RBC

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indices, prothrombin time and INR, serum bilirubin, alkaline phosphatase (ALKP), alanine transaminase (ALT), aspartate transaminase (AST), total serum proteins, albumin and globulin levels, serum electrolytes and blood urea, serum creatinine, random blood sugar, ascitic fluid analysis, HbsAg, chest X-ray and abdominal ultrasonography and portal vein Doppler and barium swallow, upper gastrointestinal endoscopic examination and percutaneous liver biopsy.

Esophageal varices are graded as follows:

Grade 0: No varices

Grade 1: Varices small and straight

Gender	Number of subjects
Male	41 (80.39%)
Female	9 (19.6%)
Total	50 (100%)

Table-1: Distribution of subjects according to gender

Age Groups (Years)	Number of subjects (%)
Less than 20	4 (7.8%)
20-29	12 (23.52%)
30-39	19 (37.25%)
40-49	8 (15.68%)
50-59	6 (11.76%)
>60	2 (3.9%)
Total	50 (100%)

Table-2: Distribution of subjects according to age

Etiology	No of subjects (%)
Alcoholism	30 (54.9%)
Congenital	3 (5.88%)
Gallstones / Biliary	7 (13.72%)
Malnutrition	5 (9.8%)
Idiopathic	6 (11.76%)
Total	50 (100%)

Table-3: Distribution of subjects according to aetiology

Complaints	Number of patients (%)
Haematemesis	50 (98.03%)
Pain in abdomen	29 (56.86%)
Pallor	19 (37.25%)
Ascites	18 (35.29%)
Splenomegaly	38 (76%)
Melaena	10 (20%)

Table-4: Distribution of subjects according to clinical presentation

Platelet counts	Grades of Esophageal varices			
	Grade 0	Grade 1	Grade 2	Grade 3
<50000	1	3	2	4
50000-1 lac	1	4	5	7
1 lac - 1.5 lac	2	4	2	1
1.5 lac - 2 lac	5	3	2	1
>2 lac	2	2	1	0

Table-5: Comparison between platelet counts and grades of esophageal varices.

Grade 2: Varices obliterating less than one-third of esophageal lumen

Grade 3: Varices obliterating more than one-third of esophageal lumen.

The data was collected with the help of standard, pre-validated, semi-structured case record proforma.

RESULTS

There was a male preponderance, 41 (80.39%) males and 9 (19.6%) female cases (table-1). This study indicates that esophageal varices associated with portal hypertension is seen in all age groups. The peak incidence of their occurrence was in age group of 30 to 39 years, with mean age of 34.65 ± 10.9 years (table-2). Most were from lower socioeconomic class. The etiology was alcoholic in 55%, cryptogenic in 14%, noncirrhotic portal fibrosis in 11.7%, chronic viral etiology in 10% and portal vein thrombosis in 6% of the patients (table-3). Constitutional symptoms (100%) and abdominal distension (80%) were most common presenting features, followed by jaundice and pedal edema. Pallor (88%), ascites (80%) and splenomegaly (70%) were common signs followed by icterus (52%) (table-4). Asymptomatic esophageal varices were found in 80% of patients, 20% had Grade 1, 26% had Grade 2 and 34% had Grade 3 esophageal varices (table-5).

DISCUSSION

Most commonly affected patients were middle-aged males coming from lower socioeconomic class. Most common etiology for PHT was alcoholic cirrhosis of liver, which is a potentially preventable form. Abdominal distension was the most common specific presenting complaint followed by jaundice and edema over feet. Pallor, ascites were common signs followed by splenomegaly and icterus. Incidence of esophageal varices in patients with PHT is approximately 90-95%, but only 30-50% develop variceal bleeding, which is usually associated mainly with fatal outcome. Therefore, regular control and evaluation of esophageal varices with timely introduction of nonselective b-blockers and variceal ligation play an important role in prevention of bleeding. Endoscopy is an invasive and costly diagnostic procedure. Therefore, introduction of noninvasive parameters for assessment of presence and size of esophageal varices is a major goal of numerous studies. To date, seven studies have been published concerning the noninvasive diagnosis of the presence of either any esophageal varices or large esophageal varices in patients with PHT.³⁻¹¹ The reason for this effort is simple: the number of patients undergoing screening for the presence of esophageal varices is going to increase in the near future as a result of the growing pool of patients with chronic liver disease. In general, most important noninvasive parameters esophageal varices are decreased platelet count and splenomegaly.

CONCLUSION

Portal hypertension is largely a preventable condition because the commonest etiology is alcoholism. Asymptomatic esophageal varices, which is quite common, can be easily

diagnosed with invasive endoscopy or otherwise suspected with noninvasive platelet/spleen size ratio in country like ours, where financial constraint is a main problem. It can be very useful and applicable at small centers like community health centers (CHCs) and primary health centers (PHCs) in our country with limited resources.

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