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ANALYSIS OF RE-BLEEDING AFTER ENDOSCOPIC MANAGEMENT OF ESOPHAGEAL VARICES IN CIRRHOTIC PATIENTS

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Abstract:

Introduction: *Portal hypertension (PH), defined as hepatic venous pressure gradient of more than 5 mmHg, is one of the major complications of the liver cirrhosis. Clinical complications of portal hypertension, including gastroesophageal varices, become evident once hepatic venous pressure gradient exceeds 10 mmHg.* ***Aims and objectives:*** *The basic objective of the study was to analyze the frequency of re-bleeding after successful endoscopic management of esophageal varices in cirrhotic patients.* ***Methodology of the study:*** *This study was conducted at RHC Ganda Singh Wala, Kasur during 2018. There are 80 patients who were selected for this study. Both males and females were included who have evidence of cirrhosis on the basis of clinical history, examination, biochemical and radiological investigations, had first episode of upper gastrointestinal bleeding secondary to esophageal varices and had undergone band ligation.* ***Results:*** *80 cases with history of cirrhosis and previous band ligation were chosen for the study. Out of which 49 (61.3%) were male and 31 (38.8) were of female gender. Causes of liver cirrhosis were identified as 63(78.8%), 5(6.3%) and 12(15%) for hepatitis C, hepatitis B and Non B, Non C respectively.* ***Conclusion:*** *It is concluded that EVBL is found to be an effective modality in reducing the frequency of rebleeding in cirrhotic patients. Severity of liver disease and number of variceal columns were independent risk contributing to re-bleeding.*

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INTRODUCTION:

Portal hypertension (PH), defined as hepatic venous pressure gradient of more than 5 mmHg, is one of the major complications of the liver cirrhosis. Clinical complications of portal hypertension, including gastroesophageal varices, become evident once hepatic venous pressure gradient exceeds 10 mmHg. In nearly 50% of cirrhotic patients gastroesophageal varices are present at the time of diagnosis. Primary prophylaxis is recommended with either non selective beta blocker (NSBB) or endoscopic variceal band ligation (EVBL) one the basis of patient's preference/tolerance [1]. Both of these modalities are superior to no-treatment in patient with evidence of medium and large size varices. Each episode of esophageal bleeding is associated with 30-70% risk of mortality. The standard of care in these patients is combination of medical therapy and endoscopic band ligation to prevent rebleeding. Secondary prophylaxis is recommended in the form of nonselective beta blockers (NSBB) and endoscopic variceal band ligation (EVBL) after initial episode of variceal hemorrhage. Studies have shown that in comparison to untreated group, patients treated with EVBL had a decreased risk of first bleeding episode by 64% and mortality by 45%. Once patient present with rebleeding the management is same as acute variceal hemorrhage including hemodynamic resuscitation and endoscopic examination [2]. Endoscopic therapies like band ligation, sclerotherapy and detachable snares can be applied on individual basis. Patients with variceal bleeding refractory to endoscopic upper GI bleeds should be considered for transjugular intrahepatic portosystemic shunt (TIPSS) procedure [3,4]. Keeping in view of the high mortality in patients with variceal hemorrhage and effectiveness of endoscopic intervention, as evident in western literature, it's worthwhile to study this in our population [5].

Aims and objectives

The basic objective of the study was to analyze the frequency of re-bleeding after successful endoscopic management of esophageal varices in cirrhotic patients.

METHODOLOGY OF THE STUDY:

This study was conducted at RHC Ganda Singh Wala, Kasur during 2018. There are 80 patients who were selected for this study. Both males and females were included who have evidence of cirrhosis on the basis of clinical history, examination, biochemical and radiological investigations, had first episode of upper gastrointestinal bleeding secondary to esophageal varices and had undergone band ligation.

Exclusion criteria

Patients with other causes of upper GI bleeding, with two or more previous bleeding episodes and patients who undergone surgical procedures for varices or transjugular intrahepatic portosystemic shunt procedure were excluded from the study.

Data collection

Data collected for the gender and age of the patient, etiology of cirrhosis and size of esophageal varices. Less than or equal to 5 mm varices were graded as small sized while more than 5 mm varices were graded as large size varices. Rebleeding was considered in the patient who presented again with hematemesis, melena or drop in hemoglobin of more or equal to 2 grams/dl within 4 weeks of the index endoscopic band ligation.

Statistical analysis

Collected information of the patients was entered into SPSS version 21 and analyzed. Results were presented as mean ± standard deviation for quantitative variables and frequencies for qualitative variables. P value $\leq$0.05 was taken as significant.

RESULTS:

80 cases with history of cirrhosis and previous band ligation were chosen for the study. Out of which 49 (61.3%) were male and 31 (38.8) were of female gender. Causes of liver cirrhosis were identified as 63(78.8%), 5(6.3%) and 12(15%) for hepatitis C, hepatitis B and Non B, Non C respectively. Out of 80, 13(16.2%) patients presented with rebleeding in 4 weeks post band ligation.

Table 1: Demographic values of patients

Variables	Value
Age (years)	51.32±12.57
Gender (%)	
Male	49 (61.3)
Female	31 (38.8)
Etiology (%)	
HCV	63 (78.8)
HBV	5 (6.3)
Non B, Non C	12 (15)
Child-Pugh Class, n (%)	
A	6 (7.5)
B	12 (15.0)
C	62 (77.5)

Table 2: ANOVA results of data

Variable		Recurrent bleeding(n)		P value
		Yes	No	
Child pugh score	A	0	6	0.01
	B	1	11	
	C	12	50	
Number of variceal columns	1-2	1	29	0.02
	3-4	12	38	

DISCUSSION:

Esophagogastric variceal hemorrhage is one of the fatal complications of end stage liver disease. In newly diagnosed patient with cirrhosis, having no varices at the time of diagnosis, annual rate of development of varices is around 5-7%. 12% of patients with esophagogastric varices suffer bleeding episode within 1 year [6]. There is 5% risk of initial bleeding in small size varices while 15% risk in large varices within one year. Advanced cirrhosis and varices with red wale marks pose a high risk of variceal hemorrhage. Variceal hemorrhage is one of the major cause of death in liver cirrhosis, with 15-20% of 6-week mortality rate and it constitute one of the main indication for liver transplantation in patients with end stage liver disease [7]. Endoscopic band ligation which is a modification of the technique that has been used in hemorrhoids, first time described in 1988 by Stiegmann and Goff in human, has now become standard of care for esophageal varices and it appeared to be superior to sclera therapy in terms of better efficacy and superior safety profile. Despite of the availability of such effective therapies, approximately two third of the patients will develop recurrent bleeding after successful hemostasis if further preventive measures are not taken [8]. Factors which can contribute in recurrence variceal bleed include high portal pressure, poor liver function, size of the varices, treatment technique used and presence of infection and portal vein thrombosis. Patients with variceal hemorrhage refractory EVBL should be referred for the advanced procedure like TIPSS and other novel techniques should be utilized like self-expandable metallic stents (SEMSs), hemostatic powder and endoscopic ultrasonography (EUS) guided angiotherapy. Another major factor contributing re-bleeding after successful EVBL was number of variceal columns [9].

CONCLUSION:

It is concluded that EVBL is found to be an effective modality in reducing the frequency of rebleeding in cirrhotic patients. Severity of liver disease and number of variceal columns were independent risk contributing to re-bleeding.

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