ORIGINAL ARTICLE

Efficacy of Intravenous Octreotide in Prevention of Early Variceal Rebleed after Sclerotherapy

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ABSTRACT

Objective: To evaluate the efficacy of intravenous octreotide following sclerotherapy in prevention of early variceal re bleed.

Methods: 200 patients of variceal bleed were selected for this study. All patients were infused octreotide 50 µg bolus followed by continuous intravenous infusion at 50µg/hour and followed by sclerotherapy 12-24 hours later. After sclerotherapy these 200 cases were continued with intravenous octreotide at 50µg/hour for 48 hours. All patients were observed for evidence of early re bleed within 05 days that is history of hematemesis and melena.

Results: In our study the mean age of the patients was 41.3+9.8 years. There were 30(15%) patients of grade 1, 78(39%) patients of grade 2 and 92(46%) patients of grade 3 varices. There were 135(67.5%) patients having ascites and 65(32.5%) patients had ascites absent. In the distribution of re bleed 28(14%) patients had hematemesis and melena present and 172(86%) patients have no presence of hematemesis/melena.

Conclusion: Intravenous octreotide is an effective treatment method in prevention of re bleed within 5 days after sclerotherapy in cirrhotic patients.

Keywords: Cirrhosis of liver, esophageal varices, sclerotherapy, octreotide.

INTRODUCTION

Cirrhosis is very common disease in our country due to hepatitis B and C infection[1]. Cirrhosis is a chronic liver disease culminating in disorganization of hepatic lobular and vascular architecture leading to hepatic dysfunction, Porto systemic shunting and portal hypertension resulting in ascites, spontaneous bacterial peritonitis, hepatic encephalopathy and variceal bleed[2]. Chronic hepatitis C is the commonest cause of cirrhosis 47% followed by chronic hepatitis B 32%. 3% of patients have both hepatitis B & C[3,4].

Almost 84.6% patients of cirrhosis and portal hypertension develop gastro esophageal varices[5] but only one third of them develop serious vertices bleed[6]. If untreated half will re bleed during hospitalization. Mortality within two weeks after acute bleeding episode is 30%[7].

Acute variceal bleed is a common emergency in Pakistan with high risk of re bleeding and death[9]. Early endoscopy is required to confirm the diagnosis as well as to perform therapeutic procedures such as sclerotherapy and banding. This can be combined with I/v drug treatment such as octreotide[9&10].

Treatment options for acute episode are octreotide, terlipressin, balloon tamponade, emergency endoscopic banding and sclerotherapy[11]. Without further therapy there is 60-80% risk of re-bleed over 2 years, and 50% of re-bleed within 7 days[7]. For prevention of re bleed, sclerotherapy, banding, beta blockers, nitrates and Tran's jugular intrahepatic Porto systemic shunt (TIPS) are used[12]. Early variceal rebleed within 10 days after sclerotherapy is a problem[7]. Whether octreotide, if used for 48 hours after sclerotherapy, prevents this early re bleed, is debatable nowadays.

This study was aimed to see the efficacy of intravenous octreotide in prevention of early re bleed after sclerotherapy so that a better treatment strategy could be adopted. An overall impression based on the hemodynamic status at the end of the study suggested that patient were clinically more stable who were given octreotide infusion following injection sclerotherapy and there was reduction in re bleed after sclerotherapy.

MATERIAL AND METHODS

It was descriptive case series study. This study was conducted in all the medical wards of Mayo Hospital Lahore. 200 patients of cirrhosis with age 20-60 years male/female, confirmed by ultrasound abdomen, presented with upper gastrointestinal bleed due to esophageal varices confirmed by gastroscopy, were entered in study. Patients were asked about the name, age and sex confounding variables, hemoglobin level, grade of varices and

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presence of ascites were studied through stratification. All patients were infused octreotide 50µg bolus followed by sclerotherapy. 12-24 hours later these 200 cases were continued intravenous octreotide at 50µg/hour for 48 hours. All patients received all other standard medication that is antibiotics, lactulose and proton pump inhibitors. All patients were observed for evidence of variceal re bleed within 05 days i.e. history of hematemesis and melena; symptoms of re bleed were also recorded. Data was analyzed using SPSS version 10.

RESULTS

A total of 200 patients who full filled the inclusion criteria presented with acute upper gastrointestinal bleeding due to varices in medical emergency department, mayo hospital Lahore were included in this study. Mean age of the patients was 41.3±9.8 years. There were 33(16.5%) patients in the age range of 21-30 years, 60(30%) patients in the age range of 31-40 years, 63(31.5%) patients in the age range of 41-50 years and 44(22%) patients in the age of 51-60 years (Table 1). In the distribution of sex, there were 125(62.5%) male patients and 75(37.5%) female patients (Table 2). In the distribution of hemoglobin level, 137(68.5%) patients had hemoglobin level of less than 10mg/dl and 63(31.5%) patients had more than 10mg/dl. In the distribution of grades of varices there were 30(15%) patients of grade I, 78(39%) patients of grade II and 92(46%) patients of grade III varices (Table 3). Ascites was present in 135(67.5%) patients and absent in 65(32.5%) (Table 4). In the distribution of evidence of re bleed hematemesis/ malena was present in 28(14%) patients and absent in 172(86%) patients (Table 5).

Table 1: distribution by age (n=200)

Age (years)	=n	%age
21-30	33	16.5
31-40	60	30
41-50	63	61.5
51-60	44	22

Mean±SD: 41.9±9.8 SD standard deviation

Table 2: Distribution by sex (n=200)

Sex	=n	%age
Male	125	62.5
Female	75	37.5

Table 3: Distribution by grades of varices (n=200)

Sex	=n	%age
Grade I	30	15
Grade II	78	39
Grade III	92	46

Table 4: Distribution by ascites (n=200)

Ascites	=n	%age
Yes	135	67.5
No	65	32.5

Table 5: Distribution by evidence of re bleed (n=200)

Hematemesis/ malena	=n	%age
Yes	58	14
No	172	86

DISCUSSION

Cirrhosis of liver is a very common disease in our country due to hepatitis B and C infection. Almost 84.6% patients with cirrhosis and portal hypertension develop gastro esophageal varices but only one third of them develop serious variceal bleed. If untreated half will re bleed during hospitalization. Mortality within 2 weeks after acute bleeding episode is 30%. For acute episode octreotide, balloon tamponade, emergency endoscopic banding and sclerotherapy are treatment options. There is 60-80% risk of re bleed over 2 years without further therapy and 50% will re bleed within 10 days.

Early variceal rebleed within 5 days after sclerotherapy is a problem. Whether octreotide, if used for 48 hours after sclerotherapy, prevents this early re bleed, is debatable nowadays. In one study efficacy of octreotide (50µg/hour for 48 hours) combined with sclerotherapy versus sclerotherapy alone in patients with acute bleeding from gasto-oesophageal varices was compared. Primary outcome of study was 5 days survival without re bleeding. Control of bleeding was achieved in 90.2% patients who received combined treatment compared to 75.9% patients in sclerotherapy alone group.

In our study the mean age of the patients was 41.3±9.8 years as compared with the study of Farooqi and Farooqi[13] the mean age of the patients was 52.4±5.4. In our study 62.5% were male patients and 37.5% were female patients as compared with the study of Farooqi and Farooqi[13] 76.52% patients were male and 23.48 were female. In our study the grades of varices are 15% of patients of grade I 39% of grade II and 46% of grade III varices as compared with the study of Farooqi and Farooqi[13] where 20% patient of grade I 42% of grade II and 38% of grade III varices which is comparable with our study. In our study in the evidence of re bleed 14% patients had hematemesis/malena and 86% patients had no evidence of re bleed as compared with the study of Muhammad and Rub[14] overall re bleed found was 10% of patients. They studied 157 consecutive cases of acute variceal bleed who were offered early sclerotherapy immediately followed by a continuous infusion of octreotide (25µg) which is comparable with our study.

Besson et al[15] in double blind prospective trail studies 199 patients with acute variceal bleeding who underwent emergency sclerotherapy were randomly assigned to receive a continuous octreotide infusion (25µg/hour) or placebo for 5 days. After 5 days the proportion of patients who survived without re bleeding was higher in octreotide group and blood transfusion requirement was also lower in octreotide group (p= 0.006).

CONCLUSION

Intravenous octreotide is an effective treatment method in prevention of early re bleed within five days after sclerotherapy in cirrhotic patients.

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ADDENDUM

The name of principal author **Ch. Adnan Ahmed Ather** has been published wrongly as "Adnan Chaudhary" in his original article title ***"Significant Clinical Reperfusion and Reduction of ST Segment in the Patients of Acute Myocardial Infarction after Administration of Streptokinase"*** Published in Vol.6. Oct-Dec 2012 page 1063. This typographical mistake is regretted.