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Research Article

Efficacy of Terlipressin in Upper GI Bleeding Due to Liver Cirrhosis

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ABSTRACT:

Objective;To determine the efficacy of Terlipressin in upper GI bleeding due to liver cirrhosis.

Methodology: This cases series study was carried out at Department of Medicine, Services Hospital, Lahore during July to December 2017. In the present study, the cases of liver cirrhosis of both genders having age of 30 to 60 years were included. Liver cirrhosis and GI bleeding were assessed by history and medical record of shrunken liver and portal vein size of more than 1 cm. The cases with portal hypertension other than cirrhosis and those with excessive NSAID use were excluded. The Terlipressin was given in the form of intravenous injection in dose of 1mg every 6 hour. These cases were then followed and efficacy was labelled as yes where there was no bleeding for another 12 hours. The total therapy was given for 3 days.

Results: In this study, 100 cases of upper GI bleed due to cirrhotic liver were selected with mean age of 53.58±10.23 years. There were 61 (61%) males and 39 (39%) females in this study. Out of 100, 38 (38%) were in Child Pugh Class B while 62 (62%) cases in class C. The efficacy of Terlipressin in out study was noted in 58 (58%) of the cases. There was no significant difference in terms of age groups; however, the efficacy was better in age group 30-50 years, where it was seen in 14 (63.63%) of cases with p= 0.15. The efficacy was significantly high in cases that were in child class B where it was seen in 26 (68.42%) out of 38 cases with p= 0.02.

Conclusion; Terlipressin has been proved with good efficacy in cases with upper GI bleeding and its efficacy is significantly better with child pugh class B.

Key words. GI bleeding, Terlipressin

INTRODUCTION:

Cirrhotic liver disease is one of the highly prevalent health issues especially in the developing countries due to rising number of hepatitis B and C virus infections. It is the end result of liver fibrosis and can result due to various causes.Along with various hepatitis viruses, alcohol, glycogen and other mineral storage diseases are one of the common causes. It is approaching the top ten causes of death in United States.[1] There are wide range of complications that can result due to liver cirrhosis and portal hypertension is one of the highly symptomatic entity. It can lead to increased back pressure in the vasculature that not only can lead to impaired flow but also lead to enhanced flow to the splanchnic system and leading to varices formation. There varices can be graded from grade I to IV depending upon their size, tortuosity and shape. According to a survey these are seen in 60% of decompensated and 30% compensated liver disease.[2-3]

Gastrointestinal (GI) bleeding is the major concern of varices that can be fatal from mere anemia to a heavy life threatening bleed.GI endoscopy is the investigation of choice to directly visualize the varices and it can also be therapeutic. Sometimes medical management is also preferred especially where the varices are small, the cases are unfit for any intervention or rate of bleeding is so high that nothing can be visualized. The medical management

only had led to success rate in as high as 70–80% of cases.[4-5]

Various drugs have been used for this purpose and amongthem Terlipressin is widely used. Terlipressin is preferred due to its high efficacy, lower side effect profile, bolus dosing as compared to continuous infusion and better compliance.[6]

OBJECTIVE: To determine the efficacy of Terlipressin in upper GI bleeding due to liver cirrhosis.

Study Design: Case series

Settings: Department of Medicine, Services Hospital, Lahore.

Study Duration: July 2017 to December 2017

Sample technique: Non probability consecutive sampling

MATERIAL AND METHODS:

In the present study, the cases of liver cirrhosis of both genders having age of 30 to 60 years were included. Liver cirrhosis and GI bleeding were assessed by history and medical record of shrunken liver and portal vein size of more than 1 cm.The cases with portal hypertension other than cirrhosis and those with excessive NSAID use were excluded.The Terlipressin was given in the form of intravenous injection in dose of 1mg every 6 hour. These cases were then followed and efficacy was labelled as yes where there was no bleeding for another 12 hours. The total therapy was given for 3 days.

Statistical analysis:

The data wasentered and analyzed by SPSS version 23. Effect modifiers were controlled through stratification and post stratification chi-square test was applied taking p-value $\leq$ 0.05 as significant.

Results;

In this study, 100 cases of upper GI bleed due to cirrhotic liver were selected with mean age of53.58±10.23 years. There were61 (61%) males and 39 (39%) females in this study. Out of 100, 38 (38%) were in Child Pugh Class B while 62 (62%) cases in class C. The efficacy of Terlipressin in out study was noted in58 (58%) of the cases (figure 01). There was no significant difference in terms of age groups;however, the efficacy was better in age group 30-50 years, where it was seen in 14 (63.63%) of cases with p= 0.15 as in table 01.The efficacy was significantly high in cases that were in child class B where it was seen in26 (68.42%) out of 38 cases with p= 0.02 (table 02).

Figure no. 01. Efficacy of Terlipressin

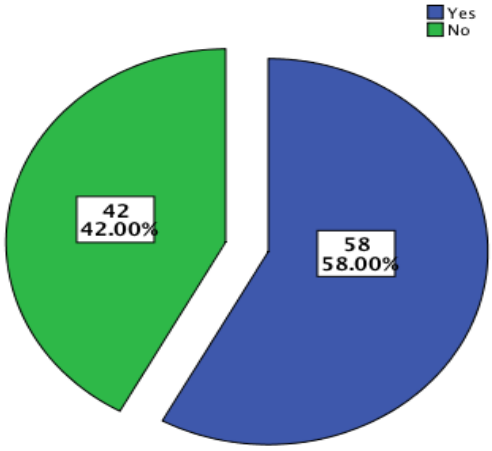

Table no. 01. Efficacy among age groups of study subjects

Age groups	Efficacy		Total	p value
	Yes	No		
30-50	14 (63.63%)	08 (36.37%)	22 (100%)	
51-70	44 (56.41%)	34(43.59%)	78 (100%)	0.15
Total	**58 (58%)**	**42 (42%)**	**100 (100%)**	

Table no. 02. Efficacy among child pugh class groups of study subjects

Child Pugh Class	Efficacy		Total	p value
	Yes	No		
B	26 (68.42%)	12 (31.58%)	38 (100%)	
C	32 (51.61%)	30 (48.39%)	62 (100%)	0.02
Total	**58 (58%)**	**42 (42%)**	**100 (100%)**	

DISCUSSION;

Gastro intestinal (GI) bleeding is one of the life threatening emergencies encountered in the medical emergencies and warrant urgent treatment. Liver cirrhosis is one of the leading cause and must say, it's the number one causes of upper GI bleed in the developing countries. Endoscopy is the treatment of choice but is not readily available on each center and in cases of active bleeding, might not be a good tool due to obscured vision. Terlipressin has shown promising results at this stage in the managemt of such bleeding.[7-8]

In the present study the efficacy of Terlipressin was seen in 58 (58%) of the cases. There results were slightly lower as compared to the studied done by Ioannou et al and Escorsell et al, wherethey found that this efficacy in 75% and 80% respectively at 48 hours and it was seen that the use of this drug for extended period of time i.e. for 5 days it was seen in as high as 87% of the cases with upper GI bleed.[9-10]

The efficacy was significantly high in cases that were in child class B where it was seen in 26 (68.42%) out of 38 cases with p= 0.02. There are multiple studies that have shown clear and significant correlation regarding the significant efficacy of Terlipressin in milder form of disease in the form of child pugh class A and B as compared to class C ($p < 0.05$).[11-12]This can be explained by the factor that the milder the disease and the lesser the degree of bleeding was there due to early grade of varices and these cases responded better to Terlipressin as compared to the severe disease in child pugh class C.

CONCLUSION;

Terlipressin has been proved with good efficacy in cases with upper GI bleeding and its efficacy is significantly better with child pugh class B.

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