World Journal of Pharmaceutical and Life Sciences
WJPLS
www.wjpls.org
SJIF Impact Factor: 5.008

SPONTANEOUS BACTERIAL PERITONITIS (SBP) IN CASES WITH LIVER CIRRHOSIS

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Article Received on 22/09/2018 **Article Revised on 12/09/2018** **Article Accepted on 02/10/2018**

ABSTRACT

Objective: Frequency of SBP in cases presenting with liver cirrhosis. **Methodology:** This Cross sectional study was done at Medical Department of Holy Family Hospital, Rawalpindi during July 2017 to December 2017. The cases of liver cirrhosis of at least one year irrespective of the age and gender suffering from hepatitis B and C were selected. SBP was labeled on the basis of fever, abdominal pain and supported by the laboratory data of serum ascitic albumin gradient >1.1, TLC more than 500/ml and Neutrophil count more than 250/ml. **Results:** In this study 100 liver cirrhotic cases were selected. Out of these 71% were males and the mean age of the cases of this study was 55.24±7.13 years of. There were 62% of the cases in Child pugh class B. SBP was seen in 24 (24%) out of 100 cases. SBP was more common in cases with child Pugh class C where this was observed in 16 (42.10%) of cases with p= 0.02. SBP was also significantly high in cases that had duration of cirrhosis for more than 5 years affecting 19 (33.33%) of cases with p= 0.03. **Conclusion:** SBP is a fatal complication of liver cirrhosis and is significantly associated with duration of cirrhosis and child pugh class C.

KEYWORDS: Hepatitis B, C, SBP, Cirrhosis.

INTRODUCTION

Hepatitis B and C are amongst the most common causes of infection disease and has the capability to change into a chronic infection and hence lead to an un interrupted liver damage that enhances the chronic inflammatory response and lead to Liver cirrhosis. It is considered among the top 10 causes of mortality in the United states.[1-2]

It can result in wide arrange of clinical and pathological changes in the body and can impact any organ of the body. The complications included upper gastrointestinal (GI) bleed, portal hypertension, splenomegaly, caput medusa, ascites, hepatic encephalopathy etc.[3-5] Ascitic fluid is susceptible to various infection and is defined by the development of peritonitis that can be due to infection of the abdominal cavity, even in the absence of an obvious source for the infection.[5] It is a serious and potentially life-threatening complication that can occur in cirrhotic patients with ascites.[6] this can also be a factor to describe a poor prognosis in cases of liver cirrhosis. In Pakistan its prevalence range from 30-40% of the cases. Considering the impact of this complication on prognosis, this study is planned to look for its prevalence in our specific community.[6-9]

OBJECTIVE

Frequency of SBP in cases presenting with liver cirrhosis.

MATERIAL AND METHODS

Setting
Medical Department of Holy Family Hospital, Rawalpindi.

Study design
Cross sectional.

Duration
July 2017 to December 2017.

Sampling technique
Non-probability, consecutive sampling.

Sample Selection
Methodology
The cases of liver cirrhosis of at least one year irrespective of the age and gender suffering from hepatitis B and C were selected. They were assessed on the basis of clinical and laboratory data and were labelled as child pugh class. SBP was labeled on the basis of fever, abdominal pain and supported by the laboratory data of serum ascitic albumin gradient >1.1, TLC more

than 500/ml and Neutrophil count more than 250/ml.

Statistical analysis

This was done by using SPSS version 23.0. Chi square test was used to analyze the statistical significance and p value < 0.05 was taken as significant.

RESULTS

In this study 100 liver cirrhotic cases were selected. Out of these 71% were males and the mean age of the cases of this study was 55.24±7.13 years of. There were 62% of the cases in Child pugh class B. SBP was seen in 24 (24%) out of 100 cases. SBP was more common in cases with child Pugh class C where this was observed in 16 (42.10%) of cases with p= 0.02. (Table 1) SBP was also significantly high in cases that had duration of cirrhosis for more than 5 years affecting 19 (33.33%) of cases with p= 0.03 (table 02).

Table 1: SBP and Child Pugh Class (n= 100).

Child Pugh Class	SBP		Total
	Yes	No	
B	8 (12.91%)	54 (87.09%)	62 (100%)
C	16 (42.10%)	22 (57.90%)	38 (100%)
Total	**24 (24%)**	**76 (76%)**	**100 (100%)**

p=0.02

Table 2: SBP and Child Pugh Class (n= 100).

Duration of Cirrhosis	SBP		Total
	Yes	No	
< 5 years	5 (11.63%)	38 (88.90%)	43 (100%)
> 5 years	19 (33.33%)	38 (66.67%)	57 (100%)
Total	**24 (24%)**	**76 (76%)**	**100 (100%)**

p=0.03

DISCUSSION

Cirrhosis of liver is a highly morbid and fatal entity and can impact a great social, financial and health care burden in the community and this is highly affected by the rising trends if hepatitis B and C in the Asia. It can lead to different complication like ascites which also predispose to a highly morbid condition of Spontaneous bacterial peritonitis (SBP) augmenting another set of treatment and prolonging the hospital stay.

Spontaneous bacterial peritonitis (SBP) was seen in 24 (24%) of the cases with liver cirrhosis due to hepatitis B and C in this study. The results of the previous studies is variable and almost similar to the studies done in the Pakistan. According to two studies done in the same country by Iqbal et al and Jaffery et al, the prevalence of those complications was seen in 30 to 35% of the cases.[10-11] However internationally the prevalence was at slightly lower rates and was seen in less than 205 of the caes.[12] It can be explained by the factor of different health care facilities and better diagnostic and therapeutic options in the developed world.

SBP was more common in cases with child Pugh class C where this was observed in 16 (42.10%) of cases with p= 0.02 and furthermore it was also significantly high in cases that had duration of cirrhosis for more than 5 years affecting 19 (33.33%) of cases with p= 0.03. These findings were also reinforced by the results of the studies done in the past according to studies done by Gunjača I et al, Nouman S et al and Khan et al, all of them found child class C and longer duration of cirrhosis to be significantly associated with the development of SBP.[13-15] This can be explained by the factor that the longer the duration of liver damage an higher is the class of child pugh and are more prone to developed SBP. Zaman H et al; however controversially found more cases in class B affecting 57.7% of the cases and the overall prevalence of SBP as 39% in their study.[16]

There were few limitations in the present study, as we did not assess for different organisms detected in fluid analysis and also the history that these cases undergone previous needle aspirations or this SBP occurred spontaneously.

CONCLUSION

SBP is a fatal complication of liver cirrhosis and is significantly associated with duration of cirrhosis and child pugh class C.

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