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# SBP IN LIVER CIRRHOSIS; 100 CASES

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**Abstract:**

***Objective:*** *To determine the frequency of spontaneous bacterial peritonitis (SBP) in cases with liver cirrhosis.*

***Subject and Methods:*** *This was a cross sectional study, carried out at Shaikh Zayed Hospital, Rahim Yar Khan during August 2017 to December 2017. In this study the cases of liver cirrhosis of either gender and with age range of 20 to 70 years were included. The diagnosis of liver cirrhosis was made on clinical examination and on USG abdomen revealing coarse echo texture with or without splenomegaly. Child pugh classes were documented. The cases with alcoholism and hepatocellular carcinoma were rule out. SBP was labelled when Serum ascitic albumin gradient >1.1, total leukocyte count >500/ml and neutrophil count > 250/ml.*

***Results:*** *In this study there were total 100 cases of liver cirrhosis and out of these 64 (64%) were males and 36 (36%) females. The mean age of the patients was 51.34±9.62 years. There were 67 (67%) in Child Pugh class C. SBP was seen in 32 (32%) of the cases. There was no significant difference in terms of gender and age with p values of 0.97 and 0.95 respectively. However, SBP was significantly high in cases that had child pugh class C where it was seen in 25 (37.21%) of case as compared to 7 (21.21%) of cases in class B with p value of 0.04.*

***Conclusion:*** *SBP is seen in almost every 3rd case of liver cirrhosis and is seen significantly high in cases that had Child pugh class C.*

**Key Words:** *Liver cirrhosis, SBP*

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## INTRODUCTION:

Liver disorders are the most common disorders in the gastroenterology and medical clinics and among them hepatitis is the salient one due to increase in number of hepatitis B and C infections. Acute inflammation lead to ongoing injury and then ultimately fibrosis of the liver parenchyma leading to cirrhosis [1,2].

Liver cirrhosis is can result in various complications and portal hypertension leading to ascites is a highly prevalent one. Ascites need to be drained both for diagnostic and therapeutic purposes as it can only be transudative needing no aggressive treatment or can be exudative augmenting intensive diagnostic workup. Both needs recurrent aspirations and endanger the spread to infection in the peritoneal cavity [3,4]. Spontaneous bacterial peritonitis (SBP) is the development of peritonitis i.e. infection in the abdominal cavity, despite the absence of an obvious source for the infection [5]. Organism isolation is not common but E coli is the most common isolated organism. It can be fatal and need urgent aggressive treatment [6]. Saqib A et al [7], in their study found SBP in 31% of the cases having liver cirrhosis. The other studies have shown that this is associated with high mortality rate.[8,9].

## METHODOLOGY

The study was conducted in Sheikh Zayed Hospital, Rahim Yar Khan from August 2017 to December 2017. In this study the cases of liver cirrhosis of either gender and with age range of 20 to 70 years were included. The diagnosis of liver cirrhosis was made on clinical examination and on USG abdomen revealing coarse echo texture with or without splenomegaly. Child pugh classes were documented. The cases with alcoholism and hepatocellular carcinoma were rule out. SBP was labelled when Serum ascitic albumin gradient >1.1, total leukocyte count >500/ml and neutrophil count > 250/ml.

### Statistical analysis

The data was stratified by using SPSS-version 22. The effect modifiers were controlled and post stratification chi square test was used and p value < 0.05 was considered as significant.

## RESULTS:

In this study there were total 100 cases of liver cirrhosis and out of these 64 (64%) were males and 36 (36%) females. The mean age of the patients was 51.34±9.62 years. There were 67 (67%) in Child Pugh class C. SBP was seen in 32 (32%) of the cases. There was no significant difference in terms of gender and age with p values of 0.97 and 0.95 respectively as shown in table I & II. However, SBP was significantly high in cases that had child pugh class C where it was seen in 25 (37.21%) of case as compared to 7 (21.21%) of cases in class B with p value of 0.04 as shown in table III.

**Table I: SBP vs gender**

| Gender | SBP | | Total | p value |
|---|---|---|---|---|
| | Yes | No | | |
| **Male** | 21 (32.81%) | 43 (67.19%) | 64 (100%) | |
| **Female** | 11 (30.55%) | 25 (69.45%) | 36 (100%) | 0.97 |
| **Total** | **32 (32%)** | **68 (68%)** | **100 (100%)** | |

**Table II: SBP vs Age groups**

| Age groups | SBP | | Total | p value |
|---|---|---|---|---|
| | Yes | No | | |
| **20-50** | 24 (31.57%) | 52 (68.43%) | 76 (100%) | |
| **>50** | 08 (33.33%) | 16 (66.67%) | 24 (100%) | 0.95 |
| **Total** | **32 (32%)** | **68 (68%)** | **100 (100%)** | |

**Table III: SBP vs Child pugh class**

| Child pugh class | SBP | | Total | p value |
|---|---|---|---|---|
| | Yes | No | | |
| **B** | 7 (21.21%) | 26 (78.79%) | 33 (100%) | 0.04 |
| **C** | 25 (37.21%) | 42 (62.79%) | 67 (100%) | |
| **Total** | **32 (32%)** | **68 (68%)** | **100 (100%)** | |

## DISCUSSION:

Liver cirrhosis is an end stage fibro sing disease and can result in wide range of physiological and mechanical complications. Some complications are direct and the others are associated with other conditions like Spontaneous bacterial peritonitis is seen in cases having ascites and those that undergo recurrent therapeutic and diagnostic aspirations.

In this study SBP was observed in 32 (32%)of the cases having liver cirrhosis. This result was close to the results of the studies done in the past where similar protocol and operational definitions were used and it was seen in 31 and 33% of the cases respectively by the studies done by Jaffery et al [10] and Iqbal et al.[11] This finding was in contrast to the results of the international studies where this prevalence was seen in 7 -22% [12]. This can be explained by the factor of better hygienic condition and aseptic measures for thoracentesis.

SBP was significantly high in cases that had child pugh class C where it was seen in 25 (37.21%) of case as compared to 7 (21.21%) of cases in class B with p value of 0.04. This was also supported by the studies done in the past where they revealed that the higher the degree of the disease; and higher were the chances to develop this, which might be due to recurrent aspirations of ascitic fluid which is common in advanced cirrhosis. However, this finding was in contrast to a study done by by Zaman H et al[16] where they found most cases in class B having 57.7% of the cases with overall frequency of SBP in 39% of the cases.

## CONCLUSION:

SBP is seen in almost every 3rd case of liver cirrhosis and is seen significantly high in cases that had Child pugh class C.

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