



CODEN [USA]: IAJ PBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF  
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1298685>Available online at: <http://www.iajps.com>

Research Article

**INCIDENCE OF SPONTANEOUS BACTERIAL PERITONITIS  
IN ASYMPTOMATIC PATIENTS OF DECOMPENSATED  
LIVER CIRRHOSIS HAVING ASCITES**<sup>1</sup>Mehjabeen Sadiq, <sup>2</sup>Hafiza Mehi Jabeen, <sup>3</sup>Dr Muhammad Umer<sup>1</sup>Shehbaz Shareef Hospital, Multan.<sup>2</sup>Children Hospital Multan / Institute of Child Health Multan<sup>3</sup>Dental Surgeon RHC 6/G, Chishtian, Bhawalnagar**Abstract:**

**Objective:** The aim of the study is to find asymptomatic spontaneous bacterial peritonitis in patients with decompensated liver cirrhosis having ascites.

**Study design:** cross-sectional research.

**Place and Duration:** The study was carried out in the East Medical Unit of Mayo Hospital, Lahore for a period of one year from January 2016 to January 2017

**Materials and methods:** A total of 140 cases were included in this study. After receiving informed consent, the acid liquid sample was taken and confirmed for spontaneous bacterial peritonitis by a complete biochemical and cytological examination.

**Results:** 22 patients (15.7%) were between the ages of 61 and 70 years, and 31 patients (22 patients, 62.15%) were between 21 and 40 years of age. The mean age of the patients was 73 (52.1%) and 67 (47.9%) were female and the rest were female (53.27 ± 9). The frequency of asymptomatic spontaneous bacterial peritonitis was observed in 16 patients (11.4%).

**Conclusion:** Spontaneous bacterial peritonitis frequency was found to be high in asymptomatic patients with decompensated liver cirrhosis.

**Keywords:** Translocation, Spontaneous bacterial peritonitis, Acids, Decompression liver cirrhosis.

**Corresponding author:**

**Mehjabeen Sadiq,**  
Shehbaz Shareef Hospital,  
Multan.

QR code



Please cite this article in press Mehjabeen Sadiq et al., **Incidence of Spontaneous Bacterial Peritonitis in Asymptomatic Patients of Decompensated Liver Cirrhosis Having Ascites**, Indo Am. J. P. Sci, 2018; 05(06).

**INTRODUCTION:**

Cirrhosis is a serious and irreversible disease. It usually occurs as an end result of hepatocellular lesion leading to fibrosis and nodular regeneration. The common complaints of the presentation are upper gastrointestinal bleeding, spontaneous bacterial peritonitis, ascites, hepatocellular carcinoma, hepatic encephalopathy and hepatorenal syndrome. Previously described Spontaneous bacterial peritonitis is a sterile intra-abdominal infection and there is no source of intraabdominal infection. Patients with ascites and cirrhosis are more prone to bacterial infections; their spontaneous bacterial peritonitis (SBP) may be the most common and potentially fatal. More than 92% of SBP cases are monomicrobial (gram-negative aerobic basals account for more than two thirds of all cases, and *Escherichia coli* is most often followed by *Klebsiella* spp.). It develops in 10-30% of hospitalized patients. First, the mortality rate was > 90% when first described. However, early recognition of the disease and timely and appropriate antibiotic therapy reduced in-hospital mortality to an estimated 20% in an SBP period. The clinical presentation of PAS is not often specific and includes abdominal pain or tenderness, fever, chills, hepatic encephalopathy, and changes in gastrointestinal motility (vomiting, ileus, diarrhea). One third of patients with infected peritoneal fluid do not have symptoms or symptoms such as fever or abdominal pain at the time of first admission. Diagnosis is made by thoroughly examining ascitic fluid (cell number and culture sensitivity) after abdominal paracentesis. A high number of white blood cells is considered to be > 500 cells / mm<sup>3</sup> or an absolute number of polymorphic cells (PMN) > 250 / mm<sup>3</sup> or positive culture SBP. Cirrhotic patients with spontaneous bacterial peritonitis may be asymptomatic, meaning that there may be no clinical signs and symptoms of peritonitis such as abdominal pain, abdominal pain and fever. Spontaneous bacterial peritonitis may be silent to induce SBP diagnosis; Abdominal paracentesis is necessary to prevent complications such as septic shock, hepatorenal syndrome and hepatic encephalopathy. There are many studies about asymptomatic SBP frequency, but the results vary. An international study indicates that asymptomatic

SBP prevalence is low, ie, 3.5-8% and 5.4%, while local studies in Pakistan are quite high, ie 10% and 21%, respectively. The reason for this study is that there are differences in the spontaneous asymptomatic bacterial peritonitis frequency in Pakistan and abroad in the studies mentioned above. For this reason, this study was conducted to determine the asymptomatic SBP frequency in the local population.

**MATERIALS AND METHODS:**

This was a cross-sectional study conducted at the East Medical Unit of Mayo Hospital, Lahore for a period of one year from January 2016 to January 2017. Included and asymptomatic PAS frequency fractions with 140 patients, 95% confidence level and 5% error margin .

inclusion criteria expected:

1. Patients of any sex between the 20-70 years of age.
2. Decompensated liver cirrhosis patients having ascites (according to the operative definition).
3. Asymptomatic patients, ie, without fever history or abdominal pain.

Exclusion criteria:

1. Patients receiving antibiotics within the last two weeks.
2. Patients with paracentesis procedure in the last two weeks.
3. Patients with upper gastrointestinal bleeding or bleeding traumas within the last two weeks.
4. Patients who do not give consent.

After informed consent, 10 ml of ascitic fluid sample was taken by paracentesis and the presence of PAS was confirmed. Data was analyzed on SPSS version 19.

**RESULTS:**

A total of 140 cases were included in this study during the one year study period, from January 2016 to January 2017 . When the age distribution of the patients were examined, 22 (15.7%) patients were between the ages of 21 and 40, 87 patients (62.1%) were between the ages of 41 and 60, and 31 patients (22,1%). The mean age of the patients was  $52.14 \pm 9.61$  (table 2). Of the 140 patients, 73 (52.1%) were male and the remaining 67 patients (47.8%) were female (Table 3).

**Table 1:** Distribution of cases by Age.

Age (Year)	Number	Percentage
21-40	22	15.7%
41-60	87	62.15%
61-70	31	22.15%
Total	140	100%
Mean $\pm$ SD	52.14 $\pm$ 9.61	

**Table 2:** Distribution of Cases by Sex.

Sex	Number	Percentage
Male	73	52.1%
Female	67	47.9%
Total	140	100%

Criteria for SBP were positive in 16 patients (11.4%) (Table 3).

**Table 3:** Frequency of Asymptomatic SBP

Sample Positive for SBP	Number	Percentage
Yes	16	11.4%
No	124	88.6%
Total	140	100.0

## DISCUSSION:

Spontaneous bacterial peritonitis (SBP) is a life threatening complication of cirrhosis and is caused by ascitic fluid infection. Acid-forming patients with decompensated cirrhosis may transmit this infection by bacterial translocation in the intestine. It develops in 10-30% of hospitalized patients. The death rate is high. However, early recognition of the disease and timely and appropriate antibiotic therapy can reduce the mortality of an SBP. SBP may present non-specific symptoms, such as abdominal pain or about three-quarters of patients with symptoms or signs of sensitivity, fever, chills, hepatic encephalopathy and impaired gastrointestinal motility (vomiting, intestinal obstruction, diarrhea) but, for example, peritoneal fluid infection deficiency During fever or abdominal pain. Spontaneous bacterial peritonitis may be silent to induce SBP diagnosis; Abdominal paracentesis is also necessary in asymptomatic patients to prevent complications such as septic shock, hepatorenal syndrome and hepatic encephalopathy. Asymptomatic PAS frequency in patients with asymptomatic decompensated liver cirrhosis has been the subject of ongoing debate. The asymptomatic SBP frequency in our study was 11.6%. Similar results have been observed in a study

at the Hayber Training Hospital, from January 2008 to July 2009, which showed that the pace of this study is 10% asymptomatic PBE frequency in medical units. Another study from India in 2011. H. pylori infection was detected in 22 (63%) of 35 patients with MHE.

## CONCLUSION:

In our study, asymptomatic spontaneous bacterial peritonitis (SBP) showed higher frequency in patients with liver decompensated cirrhosis. Early diagnosis and treatment of SBP can prevent serious PBS-related complications such as septic shock, hepatorenal syndrome, and hepatic encephalopathy. Although PAS testing is not routine in asymptomatic cirrhotic patients, it is important to consider all this asymptomatic infection in patients with acid cirrhosis to improve their quality of life. Further work is needed to evaluate the arguments for and against the PAS tests in asymptomatic patients with hepatic cirrhosis associated with ascists.

## REFERENCES:

1. Ahmed, O., D. M. Rodrigues, M. Brahmaia, and K. Patel. "A188 Low Incidence Of Spontaneous Bacterial Peritonitis In Asymptomatic Outpatients With Cirrhosis Undergoing Paracentesis: A Systematic Review And Meta-Analysis." *Journal of the Canadian Association of Gastroenterology* 1, no. suppl\_2 (2018): 278-278.
2. Ahmed, O., Rodrigues, D.M., Brahmaia, M. and Patel, K., 2018. Su1570-Low Incidence of Spontaneous Bacterial Peritonitis in Asymptomatic Outpatients with Cirrhosis Undergoing Paracentesis: A Systematic Review and Meta-Analysis. *Gastroenterology*, 154(6), pp.S-1181.
3. Tergast, T., Laser, H., Gerbel, S., Manns, M.P., Cornberg, M. and Maasoumy, B., 2018. The role of HbA1c as a risk factor for the development of spontaneous bacterial peritonitis in patients with decompensated liver cirrhosis. *Journal of Hepatology*, 68, pp.S701-S702.
4. Chong, L., Wei, O.N. and Tack, G., 2018. PTH-131 Tapping into knowledge: identifying knowledge gaps to improve care of patients with spontaneous bacterial peritonitis. Mo, S., Bendtsen, F., Wiese, S.S. and Kimer, N., 2018. Low ascitic fluid total protein levels is not associated to the development of spontaneous bacterial peritonitis in a cohort of 274 patients with cirrhosis. *Scandinavian journal of gastroenterology*, 53(2), pp.200-205.
5. King, J.J., Halliday, N., Wey, E., Tsochatzis, E., Gerussi, A., Patch, D., Ryan, J., Graff, J. and

- Westbrook, R., 2018. The prognosis following bacterascites is as poor as spontaneous bacterial peritonitis. *Journal of Hepatology*, 68, pp.S721-S722.
6. Rhead, C. and O'Brien, A., 2018. PWE-087 A review of prescribing for primary antibiotic prophylaxis in spontaneous bacterial peritonitis.
  7. Vieira, Sandra MG, Fernando P. Schwengber, Melina Melere, Marília R. Ceza, Melina Souza, and Carlos O. Kieling. "The first episode of spontaneous bacterial peritonitis is a threat event in children with end-stage liver disease." *European journal of gastroenterology & hepatology* 30, no. 3 (2018): 323-327.
  8. Thomson, M.J., Tapper, E.B. and Lok, A.S., 2018. Dos and Don'ts in the Management of Cirrhosis: A View from the 21st Century. *The American journal of gastroenterology*, p.1.
  9. Mücke, M., Mayer, A., Kessel, J., Mücke, V.T., Schwarzkopf, K., Vermehren, A., Weiler, N., Welker, M.W., Vermehren, J., Kempf, V.A.J. and Zeuzem, S., 2018. Impact of antibiotic prophylaxis of spontaneous bacterial peritonitis on colonization and infections with multidrug-resistant bacteria. *Journal of Hepatology*, 68, pp.S746-S747.
  10. Tergast, Tammo L., Anika Wranke, Hans Laser, Svetlana Gerbel, Michael P. Manns, Markus Cornberg, and Benjamin Maasoumy. "Dose-dependent impact of proton pump inhibitors on the clinical course of spontaneous bacterial peritonitis." *Liver International* (2018).
  11. Clària, J., Moreau, R., Fenaille, F., Amoros, A., Junot, C., Gronbaek, H., Coenraad, M., Oetl, K., Caraceni, P., Alessandria, C. and Trebicka, J., 2018. The kynurenine pathway in cirrhosis. Relationship with the development of acute decompensation and acute-on-chronic liver failure, clinical course and mortality. *Journal of Hepatology*, 68, pp.S120-S121.
  12. Canbay, A., Altevers, J. and Braun, S., 2018. High real-world healthcare costs in non-alcoholic fatty liver disease/non-alcoholic steatohepatitis compensated cirrhosis patients with and without type-2 diabetes mellitus: A large German database study. *Journal of Hepatology*, 68, pp.S720-S721.
  13. Zhao, J., Zhang, Y., Tian, H., Sun, H. and Liang, C., 2018. the efficacy and safety of rifaximin for the prophylaxis of spontaneous bacterial peritonitis in cirrhotic patients. *Alimentary pharmacology & therapeutics*, 47(5), pp.697-698.
  14. Gani, R.A., Mesanti, O., Simadibrata, M., Hasan, I., Sanityoso, A., Rinaldi, C. and Lesmana, A., 2018. Difference in serum procalcitonin levels between decompensated liver cirrhosis patients with and without bacterial infection. *Critical Care & Shock*, 21(1).
  15. Gioia, S., Nardelli, S., Pileggi, R., Pitocchi, F., Pasquale, C., Martino, M.D. and Riggio, O., 2018. Non cirrhotic portal hypertension secondary to oxaliplatin therapy: Incidence and presentation. *Journal of Hepatology*, 68, p.S701.