INTRODUCTION

Spontaneous bacterial peritonitis (SBP) is an infection of ascitic fluid particularly common in chronic liver disease patients. Patients with chronic liver disease with compensated cirrhosis develop ascites. Due to inadequate defense mechanism chronic liver disease patients with ascites are susceptible to infection. Our study done to know the microbiological profile of spontaneous bacterial peritonitis in chronic liver disease patients. This was done over a period of two years from October 2017 to September 2019. Ascitic fluid sample collected aseptically, culture on blood agar and Mac Conkey agar. Positive cases obtained on culture were included in this study. Isolates are identified by standard protocol as per standard bacteriological technique. Out of 150,60 diagnosed as culture positive cases in spontaneous bacterial peritonitis patients.

Bacterial isolates recovered from ascitic fluid sample, most commonly isolated species are E. coli, Klebsiella spp., Staphylococcus aureus, Pseudomonas spp. and Acinetobacter baumannii. In our hospital chronic liver disease is most common cause of ascites and Culture positive E. coli is most common isolate in spontaneous bacterial peritonitis (SBP) pts.

MATERIAL AND METHODS

This was a retrospective study done over a period of last two years from October 2017 to September 2019. All patients were subjected to ascitic fluid tap under aseptic conditions preferably before administration of the antibiotics.

Ascitic fluid sample collected aseptically studied in the patients who were admitted with chronic liver disease with ascites in our hospital6. Culture done on blood agar and Mac Conkey agar. Positive cases obtained on culture were included in this study. Isolates are identified by standard protocol as per standard bacteriological technique6. Our study was approved by ethics committee.

RESULT

A total of 150,60 SBP pts were culture positive for pathogenic bacteria isolates. The most commonly bacteria isolated was E. coli followed by klebsiella pneumoniae, Staphylococcus aureus, Pseudomonas spp., and Acinetobacter baumanii4,5. All gram negative isolate was sensitive to amikacin, ciprofloxacin, piperacillin +tazobactum, ceftriaxone, ceftriaxone and cefpodoxime26.

Pseudomonas spp. was another common isolate was sensitive to, Ceftriaxone, Ciprofloxacin, Cefuroxime Piperacillin+tazobactum, Amikacin, and Imipenem4. Gram positive isolate, Staphylococcus aureus was sensitive to cefuroxime, cefotaxime, cefoxitin, amoxicillin-clavulanic acid, ciprofloxacin, linezolid10,11.

Table: Frequency of bacterial isolates

<table>
<thead>
<tr>
<th>Species</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.coli</td>
<td>20</td>
<td>33.33</td>
</tr>
<tr>
<td>Klebsiella Spp.</td>
<td>16</td>
<td>26.66</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>12</td>
<td>20.0</td>
</tr>
<tr>
<td>Pseudomonas spp.</td>
<td>7</td>
<td>11.66</td>
</tr>
<tr>
<td>Acinetobacter baumanii</td>
<td>5</td>
<td>8.33</td>
</tr>
</tbody>
</table>

DISCUSSION

Most common cause of SBP in ascitic fluid patients in our hospital was chronic liver disease12. In earlier retrospective, prevalence of spontaneous bacterial peritonitis (SBP) in hospitalized patients range between 10%-30%12,13. The early diagnosis of the disease with appropriate antibiotic and prompt management, in house patient morbidity and mortality has been reduced14. We found spontaneous bacterial peritonitis (SBP) in 40% of all ascites cases admitted over last two years. Most common causative microorganisms in spontaneous bacterial peritonitis (SBP) are E. coli and Klebsiella spp followed by Gram positive cocci. We also had E. coli in 33.33% of culture positive isolates isolated followed by S. aureus in 20% while Klebsiella spp. 26.66%, Pseudomonas spp. were 11.66 % and acinetobacter baumanii spp. is 5% each. Commonest etiology of SBP in our setting was chronic liver disease with included cases of alcoholic liver disease. HBV and HCV related cirrhosis10,11,15. The antibiotic sensitivity pattern shows that most gram positive and pseudomonas spp. isolates were sensitive to amikacin followed by amoxiclavulinic acid and most of them also sensitive to Ciprofloxacin.

CONCLUSION

In our study spontaneous bacterial peritonitis (SBP) in case of chronic liver disease with ascites were most commonly caused by gram-negative bacteria. Escherichia coli is the most common microorganism isolated in 33.33% of positive ascitic fluid cultures. All Chronic liver disease with ascites should undergo diagnostic ascitic fluid examination during admission because the chance of bacterial infection is high in cases of spontaneous bacterial peritonitis (SBP).

REFERENCES

6. The prevalence and clinico-microbiological profile of spontaneous bacterial peritonitis in chronic .. DOI: 10.9799/iosrjournals.org 71 | Page