

CHRONIC LIVER DISEASE AND PATTERNS OF DIFFERENT ASSOCIATED INFECTIONS

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ABSTRACT

Objective: Patients of chronic liver disease (CLD) are subjected to various infections. The objective of the present research was to determine the frequency distribution of different infections in these patients.

Material and Methods: This was a cross sectional descriptive study. It was conducted in the Department of Medicine, Combined Military Hospital (CMH) Rawalpindi and CMH Jhelum. (September 2011- August 2016). All patients (both indoor and out patients) having CLD were included in this study. All observations were made on predesigned proforma. Follow-up average period was 6-11 months.

Results: During the study period 365 patients were enrolled. Male patients accounted for 65.81 % and females for 34.19 %. Maximum patients had spontaneous bacterial peritonitis (31.94 %) followed by urinary tract infections (26 %).

Conclusions: This study concluded that in patients of chronic liver disease (cirrhosis liver) multiple co-infections can aggravate the clinical manifestations.

Key Words: Cirrhosis liver, Infection, Associated clinical manifestations and complications.

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INTRODUCTION

Chronic Liver Disease (CLD) may lead to cirrhosis and are amongst the common cause of morbidity and mortality in Pakistani population [1]. Many factors can be attributed for increased number of CLD. Nonetheless, major etiological factor is the high incidence of HBV and HCV in our community. The development of Hepatic encephalopathy (HE) in these patients indicates poor prognosis [2]. Other factors that may contribute to varying degrees for increased morbidity and mortality, includes infections due to defects in immune system, gastrointestinal bleeding, constipation, electrolyte imbalance and high protein diet [3].

This objective of this long-term study was carried out to determine exact frequency of various infections in cirrhotic patients encountered in our set-up.

MATERIALS AND METHODS

This cross-sectional descriptive study was conducted at the Medicine department, Combined Military Hospital (CMH) Rawalpindi and CMH Jhelum from September 2011 to August 2016. Departmental permission was taken and study was approved by

departmental IRB. Total 365 CLD patients were included. Patients of both genders with age 30 years or above were included. Patients with fever, cough, abdominal pain, vomiting, myalgia, mental weakening (not due to neurological disease) were included. Patients having meningitis with lateralizing signs or neck rigidity on examination and other conditions like chronic kidney diseases (CKD) and Chronic obstructive pulmonary disease (COPD) were excluded from this study.

A detailed clinical history of the patients and laboratory finding were recorded on a pro forma and data was entered in SPSS version 10.

RESULTS

Total 365 consecutive patients of chronic liver disease with HE and other associated clinical manifestations were included. The mean age of the study subject was found to be 49.2 ± 3 years. Out of the total patients, 240 (65.81 %) were male and 125 (39.19 %) were female.

Out of 365 patients, 139 (39 %) of the patients had infections and mostly had Spontaneous Bacterial Peritonitis (SBP). SBP accounted for 116 (32 %) of all the infections. Urinary Tract Infections (UTI) occurred in 95 patients (26%), pneumonia in 80 (22%) and sepsis in 30 (8%) of the patients (Figure-1).

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Gastro Intestinal Tract (GIT) related complications were noticed with diffuse abdominal pain. Low fever with or without nausea and loose stools. In addition, patients of UTI had dyspnea and rigors.

The patient of respiratory problems usually presented with fever, cough and chest discomfort. Their total leucocyte count was raised with neutrophils predominance.

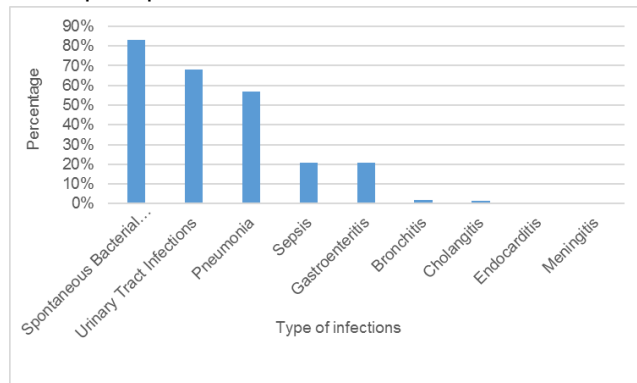


Figure-1: Comparative distribution of different infections in patients of cirrhosis liver due to chronic liver disease (n = 139).

DISCUSSION

In patients of chronic liver diseases (CLD) risk and severity of infections is multitude because of immune system malfunctioning. These patients are therefore at greater risk of developing both communities acquired and hospital acquired infections [4-6]. Multiple studies have already reported high prevalence of concurrent infections in CLD. However, in this study we have reported exact prevalence of different types of infections in Pakistan. Mathurin et al. and Wang et al. have reported similar findings in their study [7,8].

Spontaneous bacterial peritonitis (SBP)- which is the infection of ascitic fluid was observed in 83 % of the patients. It is pertinent to mention that SBP is potentially life-threatening complication in CLD patients. Oladimeji et al. also observed that SBP is a major problem in CLD patients [9]. Nonetheless, the pathophysiology of SBP is not completely understood. It is speculated that bacteria and their endotoxins may translocate from the GIT to the peritoneal fluid. However, the main etiological factor is impaired immunity in CLD patients.

CONCLUSION

This study concluded that CLD patients are at greater risk of developing various infections that can lead to severe complications like hepatic encephalopathy and hepatic comma.

AUTHOR CONTRIBUTION

Khalid Amjad Kiyani: Research hypothesis & data collection

Mohammad Hamza Kiyani: Manuscript writing and data analysis

Muhammad Ishaq: Literature review

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