Original Article

A study of factors associated with poor prognosis of hepatic encephalopathy at ICU of tertiary health center

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Abstract

Introduction: Hepatic encephalopathy (HE) is usually interpreted as a sign of liver failure and has ominous considerations. However, as for other complications of cirrhosis (e.g. jaundice, hepatocellular carcinoma, hepatorenal syndrome, the prognosis of patients with HE is not uniform. **Aims and Objectives:** To Study Factors associated with Poor Prognosis of Hepatic Encephalopathy at ICU of tertiary health center. **Methodology:** This was cross-sectional study in the patients who were died because Hepatic Encephalopathy or having End Stage liver disease or Require long standing hospital stay with poor prognosis at the ICU of the tertiary health care center during the one year period January 2105 to January 2016 were studied. The Data was collected from the Patients, Relatives of the patients and the Case – records from the record section of the tertiary health care center. All the information like Demographic characteristics, Clinical information, blood investigations involving WBC, Bilirubin, Uric Acid, Creatnine etc. were collected. **Result:** The majority of were form the age group >60 i.e. 34.72% followed by 50-60-30.55%; 40-50-20.83%; 30-40-11.11%; 20-30-2.78%. The majority of the patients were Male i.e. 80.56% followed by Females 19.44%. Most of the risk factors associated with the poor out-come were Old Age -65.27% followed by Hepatic end stage disease -59.72%; Hepato-renal Syndrome -52.77%;Jaundice-48.61%; Sepsis -44.44%; Raised WBCs(Blood)-40.27%; Raised Bilirubin(Blood)-34.72%; Raised Uric acid (Blood)-31.94%; Raised Creatnine (Blood) -29.16%.Decreased Albumin (Blood) -26.38%; Increased PT time-23.61%. **Conclusion:** In our study the most common risk factors associated with poor outcome wereOld Age, Hepato-renal Syndrome, Presence of Jaundice, Sepsis, Raised WBCs, Raised Bilirubin, Raised Uric acid, Raised Creatnine, Decreased Albumin, Increased PT time.

Keywords: Hepato-renal Syndrome, Raised WBCs (White Blood Cells), Raised Bilirubin, Raised Uric acid,Increased PT time (Pro-thrombin time).

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INTRODUCTION

Hepatic encephalopathy (HE) is usually interpreted as a sign of liver failure and has ominous considerations. However, as for other complications of cirrhosis (e.g. jaundice, hepatocellular carcinoma, hepatorenal syndrome, the prognosis of patients with HE is not uniform, the prognosis of patients with HE is not uniform. Establishing the prognosis is difficult and requires a precise assessment of neurological and hepatic function[1]. HE is characterized by a myriad of neurological manifestations, diverse underlying liver disorders and a variety of precipitating factors[2]. The development of HE in a patient that was previously asymptomatic should prompt the diagnosis of acute liver failure (ALF). This is a rare condition in which rapid deterioration of liver function results in altered mentation and coagulopathy[3]. The presence of HE is a requirement for the diagnosis; in other words, ALF cannot be diagnosed in the absence of HE. The most prominent causes of ALF are drug induced liver injury, viral hepatitis, autoimmune liver disease and shock[4]. However, approximately 20% of cases have no

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discernible cause [5]. The neurological status influences survival; severe HE (grade 3–4) upon admission and during hospitalization is a significant determinant of poor outcome[5]. For this reason, some centres have decided to use the severity of HE as a main determinant to select patients for liver transplant[6] Despite the use of sophisticated diagnostic and therapeutic approaches, including expensive microbiological evaluations, many patients do not survive. Therefore, identification of clinical parameters that allow risk stratification at the time of ICU admission is required [7–9]. The most consistent and 'robust' predictor of death in cirrhosis is the CTP score, followed by all its components [albumin, bilirubin, ascites, encephalopathy, and prothrombin time (PT). However, it does not help predict mortality or resource utilization in cirrhotic patients who have multiorgan failure [10–12].

MATERIAL AND METHODS

This was cross-sectional study in the patients who were died because Hepatic Encephalopathy or having End Stage liver disease or Require long standing hospital stay with poor prognosis at the ICU of the tertiary health care center during the one year period January 2105 to January 2016. The Data was collected from the Patients, Relatives of the patients and the Case –records from the record section of the tertiary health care center. All the information like Demographic characteristics, Clinical information, blood investigations involving WBC, Bilirubin, UricAcid, Creatnine etc. were collected.

RESULT

Table 1: Age wise Distribution of the Patients

Age	No.	Percentage
20-30	2	2.78%
30-40	8	11.11%
40-50	15	20.83%
50-60	22	30.55%
>60	25	34.72%
Total	**72**	**100.00%**

The majority of the were form the age group >60 i.e. 34.72% followed by 50-60-30.55%; 40-50-20.83%; 30-40-11.11%; 20-30-2.78%.

Table 2: Gender- wise distribution of the patients

Sex	No.	Percentage
Male	58	80.56%
Female	14	19.44%
Total	**72**	**100.00%**

The majority of the patients were Male i.e. 80.56% followed by Females 19.44%.

Table 3: Distribution of the Patients as per the Risk Factors associated

Risk-Factors	No.	Percentage
Old Age	47	65.27%
Hepatic end stage disease	43	59.72%
Hepato-renal Syndrome	38	52.77%
Jaundice	35	48.61%
Sepsis	32	44.44%
Raised WBCs(Blood)	29	40.27%
Raised Bilirubin(Blood)	25	34.72%
Raised Uric acid (Blood)	23	31.94%
RaisedCreatnine(Blood)	21	29.16%
Decreased Albumin (Blood)	19	26.38%
Increased PT time	17	23.61%

Most of the risk factors associated with the poor out-come were Old Age -65.27% followed by Hepatic end stage disease -59.72%; Hepato-renal Syndrome -52.77%; Jaundice-48.61%; Sepsis -44.44%; Raised WBCs(Blood)-40.27%; Raised Bilirubin (Blood)-34.72%; Raised Uric acid (Blood)-31.94%; Raised Creatnine (Blood) -29.16%. Decreased Albumin (Blood) -26.38%; Increased PT time-23.61%.

DISCUSSION

In our study we have seen that The majority of the Patients were form the age group >60 i.e. 34.72% followed by 50-60-30.55%; 40-50-20.83%; 30-40-11.11%; 20-30-2.78%. This similar with A study by Gunnarsdottir *et al*. [13]on patient characteristics with ESLD showed that the mean age was around 60 years, whereas O'Brien *et al*. [14]reported that the mean age was 52.5 years with male preponderance (60%). In a study by Parkash *et al*. [15], more men with liver disease (60%) were admitted to the ICU compared with women (40%). Similarly, in our ESLD patients the mean age of our patients with ESLD was 56.23+11.21 and the majority were men (85%). The majority of the patients were Male i.e. 80.56% followed by Females 19.44%. The Most of the risk factors associated with the poor out-come were Old Age -65.27% followed by Hepatic end stage disease -59.72%; Hepato-renal Syndrome -52.77%;Jaundice-48.61%; Sepsis -44.44%; Raised WBCs(Blood)-40.27%; Raised Bilirubin (Blood)-34.72%; Raised Uric acid (Blood)-31.94%; Raised Creatnine (Blood) -29.16%.Decreased Albumin (Blood) -26.38%; Increased PT time-23.61%.This was similar with Hanan M. Nafeh et[16] etall and Rita Garc´ıa-Mart´ınez *et al*[17].

CONCLUSION

In our study the most common risk factors associated with poor outcome were Old Age, Hepato-renal Syndrome, Presence of Jaundice, Sepsis, Raised WBCs, Raised Bilirubin, Raised Uric acid, Raised Creatnine, Decreased Albumin, Increased PT time.

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