

**CLINICAL STUDY OF PATIENTS PRESENTING WITH HEPATIC ENCEPHALOPATHY WITH SPECIAL REFERENCE TO OUTCOME AND ETIOLOGY.****Dr. Mohan D. Kashinkunti\* , Dr. Hemamalini G. \*\* and Dr. Kareti Sanjana \*\*\***

\*Professor of Medicine, SDMCMS &amp; H, Sattur, Dharwad.

\*\* Assistant Professor of Medicine, SDMCMS &amp; H, Sattur, Dharwad.

\*\*\*Intern, SDMCMS &amp; H, Sattur, Dharwad.

**\*Correspondence for Author: Dr. Mohan D. Kashinkunti.**

Professor of Medicine, SDMCMS &amp; H, Sattur, Dharwad.

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**ABSTRACT**

**Introduction:** Hepatic encephalopathy is a complex ,potentially reversible neuropsychiatric abnormality resulting from acute or chronic liver failure. It is characterized by change in personality , consciousness, behavior and neuromuscular function. It is a disease with poor outcome and is associated with high morbidity and mortality.

**Methods:** Prospective and observational study of 120 patients with age > 14 years presenting with clinical symptoms and signs of hepatic encephalopathy . Necessary laboratory investigations were done. Patients were followed during hospital stay and outcome and associated etiology was noted. **Results:** Most common age group affected was 41-60 years with male to female ratio of 9:1. Most common presenting symptoms were altered sensorium and yellowish discoloration of sclera followed by abdominal distension, hematemesis and malena. Majority of the patients had cirrhosis and alcohol was the most common etiology associated. Mean duration of stay was between 1-2 weeks.

**KEYWORDS:** HEPATIC ENCEPHALOPATHY, CIRRHOSIS.**INTRODUCTION**

Hepatic encephalopathy is defined as a spectrum of neuropsychiatric abnormalities in patients with liver disease after exclusion of other known neurological disorders.<sup>[1]</sup> Its spectrum ranges from minimal hepatic encephalopathy to signs of overt hepatic encephalopathy with risks of cerebral oedema and death.<sup>[2]</sup> It is a potentially reversible condition.<sup>[3]</sup> It may arise spontaneously but more commonly will develop as a result of some precipitating factors such as sepsis, gastrointestinal bleeding, constipation and diuretic use in the course of acute or chronic liver disease.<sup>[4]</sup> It is characterized by changes in the behavior, personality, consciousness and neuromuscular function of the individual. Disease burden especially cirrhosis is increasing with regard to rise in the number of patients with hepatitis C and E and also non alcoholic steatohepatitis. Hence recognition of complications of cirrhosis including HE and need for better management of these patients becomes imperative.<sup>[5]</sup> HE has significant negative effect on quality of life even in patients with minimal HE.<sup>[6]</sup> with increasing awareness and better diagnostic modalities, the burden of HE is likely to attain epidemic proportions. we have studied various etiological factors and outcome of HE so as to have better awareness regarding the disorder which may help in early identification and prevention of mortality in future.

**MATERIALS AND METHODS**

This prospective and observational study was conducted on 120 patients of HE admitted to sdm medical college and hospital between 2014 – 2015. patients aged more than 14yrs ,presenting with features suggestive of HE and having acute or chronic liver disease were included in the study. A questionnaire was used to extract the following: biodata , clinical features including laboratory findings, any identified precipitants, complications as well as management and outcome.

Statistical analysis was performed using SPSS 14.3 which involves paired and unpaired t- tests. Mean value and SD were calculated for each group and compared with other studies. P value <0.05 were taken as a point of minimal statistical significance.

**RESULTS**

As shown in figure 1, most common age group affected was 41-60 years with mean age group of 44.67±4 years. 93% of patients were male and 7% were female patients. Male to female ratio was 9:1 as shown in figure 2.

As depicted in figure 3, yellow discoloration of sclera was reported in all patients. Altered behavior was seen in all patients since it is *sine qua non* for clinical diagnosis of HE. Abdominal distension was the next most common presenting complaint seen in 86% of patients followed by swelling of lower limbs, malena, and hematemesis.

In our study majority of the patients had chronic liver disease in whom alcoholic cirrhosis, cryptogenic and post necrotic cirrhosis was found to be the main etiological factors as shown in figure 4.

As shown in figure 5 over all mortality was 20%. 59% showed significant improvement with treatment, 30% of patients showed no improvement even with treatment.

Duration of hospital stay ranged from 1- 2 weeks with 50% of patients improving in a week and around 8% of patients requiring more than 2weeks.

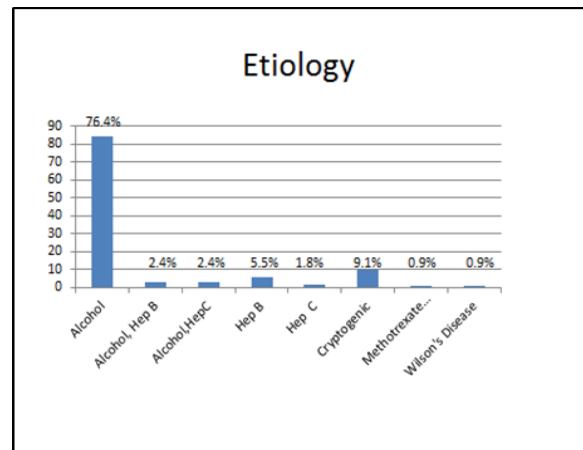


Figure 4

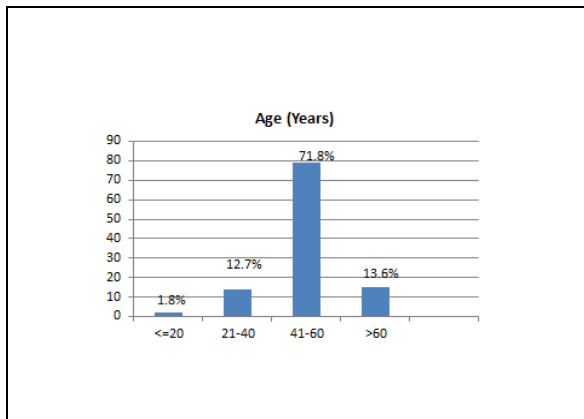


Figure 1

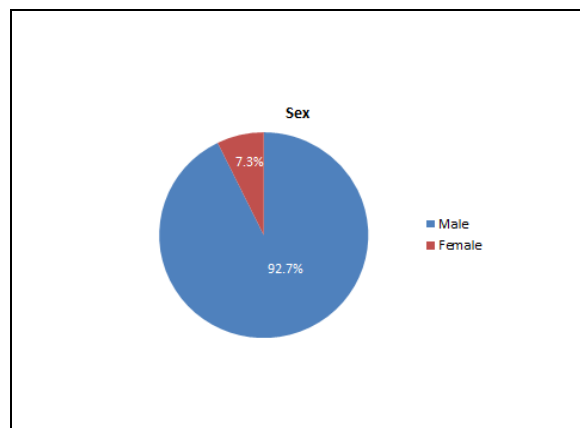


Figure 2

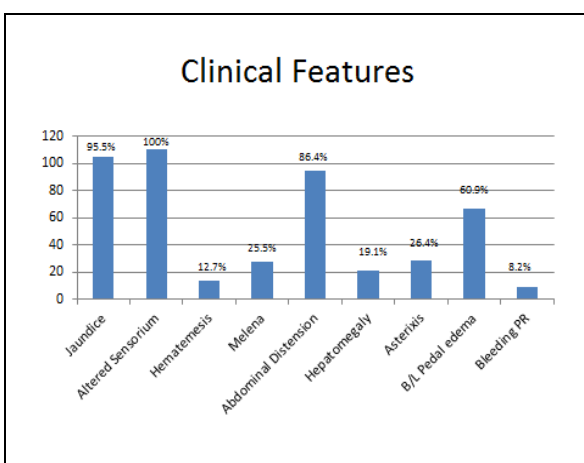


Figure 3

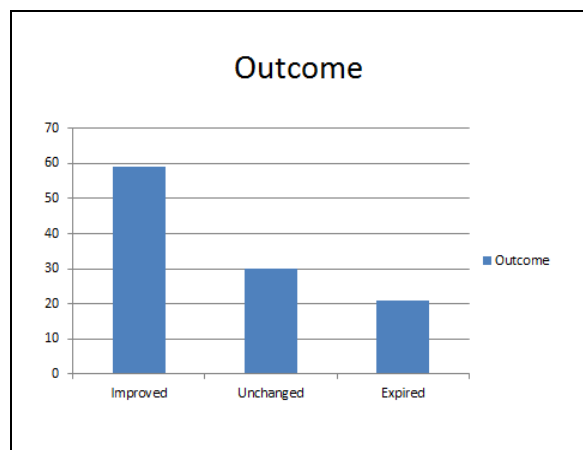


Figure 5

**DISCUSSION**

Hepatic encephalopathy remains an important complication of liver disease associated with high morbidity and mortality even in developed nations. Documentation of its profile including precipitating factors will go a long way in formulating rational strategies in its management including prophylaxis in view of reported poor outcome.

In our study more males presented with HE compared to females. All the patients presented with altered sensorium and yellowish discoloration of sclera. Other common presenting complaints were abdominal distension, melena and hematemesis. Majority of our patients had encephalopathy complicating underlying chronic liver disease and alcoholic cirrhosis was found to be the major etiological cause in most of the patients followed by cryptogenic cirrhosis and post necrotic cirrhosis. Few subjects had hepatitis B related liver disease, while significant alcohol consumption was noted in majority.

Our study is comparable to other studies onykwereetal,<sup>[8]</sup> Garget etal<sup>[9]</sup> where mortality was comparable. The duration of hospital stay ranged from 0 to 10 days with mean of 6 days.

## CONCLUSION

We conclude that HE is associated with a high mortality. Early identification of precipitating factors very much essential in preventing HE. Recognition of minimal HE with the aid of psychometric tools is one of the changing paradigms of chronic liver disease biology which can help in detection and early intervention in downhill spiralling course of disease progression which eventually spell an impending doom.

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