CLINICAL PRESENTATION OF ACUTE HEPATIC FAILURE - A STUDY OF 40 CASES

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Abstract:
Acute hepatic failure (ALF) is a medical emergency. The clinical presentation of acute liver failure depends upon the causes. A total 40 patients of ALF were observed for clinical presentation during the period from January 2003 to July 2004. The patients were admitted in three different tertiary care hospitals in Bangladesh. The patients were selected randomly by the diagnostic criteria. Male predominant majority of the patients were between the age 10 – 40 years & presented within the 4th week of illness. Patients presented with jaundice and varying grades of hepatic encepalopathy. Most of the patients presented with nausea, Vomiting and loss of appetite. About a quarter patients presented with bleeding manifestation. About half of the patients presented with fever but itching & ascites were the least presenting features in this study.

Introduction
Acute hepatic failure (ALF) is characterized by the development of hepatic encephalopathy within eight (8) weeks after the onset of acute live disease[1]. Its etiology shows considerable geographical variation. The viruses are the most common causes of it worldwide, whilst acceptaminophen induced hepatotoxicity form the most common precipitant in many developed countries[2]. Clinical presentation of ALF are variable depends upon the causes of ALF. Viral hepatitis is common in Bangladesh. Acute hepatic failure is a infrequent complication of acute viral hepatitis. The acute liver failure is characterized by the disturbances in electroencephalographic changes[3]. Altered mental status in a jaundiced patients is the hallmark of fulminant hepatic failure. The patient may show antisocial behaviour, inversion of sleep- rhythm, slurred speech, hiccough, convulsion, nightmare, headache & dizziness. Neurophychiatric changes may develop even before jaundice[4]. With the facts in mind, the present study was designed to observe the various clinical presentation of patients of ALF admitted in different tertiary care hospitals in Bangladesh in our setting giving emphasis on age, sex and severity of the presentation on the fatal outcome.

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Materials and Methods
The study comprises 40 patients with acute hepatic failure. The patients were admitted in different tertiary care hospitals. Among these, twenty four (24) patients from Dhaka Medical College Hospital (DMCH), five (5) patients from Bangabandhu Sheikh Mujib Medical University (BSMMU) and Eleven (11) patients from Jahurul Islam Medical College (JIMCH) were observed during the period of January 2003 to July 2004. The patients were selected randomly on the basis of diagnostic criteria. Chronic hepatitis cases have been excluded in this study by doing serology, USG of abdomen specially hepatobiliary system & in some cases endoscopic examination of upper gastrointestinal tract. The following criteria were used to diagnose acute hepatic failure[5].

Biochemical and haematological features suggestive of hepatitis (Raised serum bilirubin, raised serum transaminase and prolonged prothrombin time).

Hepatic encephalopathy within 8 weeks from the onset of acute hepatitis.

No pre-existing liver disease.

The selected patients presented with jaundice and hepatic encephalopathy. The clinical grades of hepatic encephalopathy were done by following ways of "Modified Conn & Liebeerthal grading system"[4].

Grade I : Confused, altered mood or behavior, psychometric defects, disordered sleep pattern.

Grade II : Dorwsy, lethargy, inappropriate behaviour, personality change.

Grade III : Stuporous but speaking and obeying simple commands. Inarticulate speech, marked confusion, amnesia & occasional fits.

Grade IV : Coma.

History, physical findings and investigations results of each patients were recorded on a predesigned data collection form. All the patients were treated conservatively and monitored periodically. The mean duration of observation was four (4) weeks.

Observation and Results:
A total 40 patients of acute hepatic failure (ALF) were observed clinically on the basis of diagnostic criteria. Their age and sex distribution are shown in (Table-I and Table-II) respectively. Twenty eight (70%) patients were between the age 10 and 40 years and only five (12.5%) patients were above 50 years. In this study, twenty-one (47.5%) patients were female and the

rest nineteen (52.5%) patients were male. Only three patients were pregnant among these 19 female patients.

Table-I: *Age distribution in patients of acute hepatic failure in this study (n=40).*

Age group (years)	Number of patients	Percentage
10-20	8	20
21-30	8	20
31-40	12	30
41-50	7	17.5
>50	5	12.5

Table-II: *Sex distribution in patients, of acute hepatic failure in this study (n=40).*

Sex	Number of patients	Percentage	Male: Female
Male	21	52.5	1.1:1
Female	19	47.5	

The duration of illness from the onset to the time of presentation of the patients are shown in (Table-III). About eighty seven percent (87.5%) patients were admitted within fourth week of illness and the rest (12.5%) were admitted after the 4th week but within eight week of illness.

Table-III: *Duration of illness in patients of acute hepatic failure at presentation in this study (n=40).*

Duration of illness (Week)	Number of patient	Percentage (%)
<1	7	17.5
1-2	13	32.5
3-4	15	37.5
>4	5	12.5

All the patients presented with mild to severe jaundice and features of hepatic encephalopathy. Loss of appetite was found in thirty-two (80%) patients, while 67.51 % patients' complaints of nausea and vomiting. Fever was presented with 45% patients while bleeding manifestation has been found in 25% patients. Itching was the least complaints found only in 5% patients. Hepatomegaly and ascites were found only in 2.5% patients (Table-IV). Fifteen patients (37.5%) presented with grade-II encephalopathy and eight patients (20%) with grade-I encephalopathy. Seven (17.5%) patients presented with grade IV hepatic encephalopathy & ten (25%) patients with grade-III hepatic encephalopathy (Table-V).

Table-IV: *Presenting features in patients of acute hepatic failure is study (n=40).*

Features	Number of Patients	Percentage %
Jaundice	40	100
Encephalopathy	40	100
Loss of appetite	32	80
Nausea/Vomiting	27	67.5
Fever.f	18	45
Gastrointestinal bleeding	10	25
Haematuria	9	22.5
Hepatomegaly	5	12.5
Itching	2	5
Ascites	1	2.5

Table-V: *Distribution of grades of encephalopathy, and death in patients of acute hepatic failure in this study (n=40).*

Grade of hepatic	Admitted patients		Death of patients	
encephalopathy	Number	Percentage	Number	Percentage
Grade-I	8	20	5	12 . 5
Grade-11	15	37.5	11	27. 5
Grade-III	10	25	8	20.0
Grade-IV	7	17.5	7	17.5

Discussion

Acute liver failure is a fatal condition. This study was done to evaluate the clinical presentation of acute hepatic failure patients admitted in three medical institute of Bangladesh.

Age incidence of the study have shown that 70% of the patients belonged to the age group 10-40 years. This value is close to the findings of other authors. They reported 74.2% and 86.9% cases in two separate study[6,7]. In this study male patients were slightly higher than the female. The ratio was 1.1:1. In other studies found similar findings of greater male patients but the ratio was much higher 3:16.

In this study majority of the patients presented within the fourth week of illness which is closely consistent with other study[6,8].

The clinical features of the patients in this study were anorexia nausea, vomiting, fever, Itching, confusion, disturbance of sleep rhythm and changes in personality. These features have been well recognized in other studies[6]. Only 25% patients had gastrointestinal and urinary bleeding in this study which is

less than the other studies. They have shown upto 50-80% cases of bleeding complications in acute hepatic failure[9,10].

Liver was palpable only in five (12.5%) cases in this study. This is much less than the other study where they found palpable liver in 32.25% cases[6]. Liver size and dullness are important bedside denominators of the severity of acute hepatic failure and the liver is greatly reduced in size in patients dying early in deep coma[11]. The similar feature was also found in the present study.

Varying grades of hepatic encephalopathy is the hallmark of acute hepatic failure. In this study, greater number of patients (37.5%), presented in grade-II encephalopathy. But most of the patients in grade -III and grade -IV hepatic encephalopathy died in this study which is similar to other study[11].

Conclusion

Clinical profiles of 40 patients of acute hepatic failure were studied. The patients were admitted in the different tertiary care hospital in Bangladesh. The patients were selected randomly. All the patients were observed clinically, investigated properly, treated conservatively and monitored periodically. The mean duration of follow up was 4 weeks. Feature of hepatitis and encephalopathy in the absence of any features suggestive of pre-existing liver disease were the key indicators for the diagnosis of acute hepatic failure. Majority of the patient belongs to the age group between 10-40 years with male predominance and presented within the 4t" week of illness. All patients had jaundice and features of encephalopathy ranging from grade-I to grade-IV. Loss of appetite, nausea and vomiting were common association in 70-80% of patients. Forty five percent (45%) patients presented with fever but itching was only 5% complaint in the study. Twenty five percent patients developed bleeding manifestations in this study. Only 12.5% patients had hepatomegaly and ascites was the least presenting feature in this study. Although there are some minute variations in some parameters, most of the finding in the present study are similar as suggested by other authors. In view of the above clinical presentation in patients of acute hepatic failure, further study with larger sample is suggested to evaluate the strength or weakness of this study.

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