ORIGINAL RESEARCH

Assessment of clinical and Biochemical profile of Acute and Chronic Liver Diseases

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ABSTRACT

Background: It has been determined that hepatitis viruses A–G are the causative agents of several liver diseases. The present study was conducted to assess clinical profile and hematological parameters in acute and chronic liver diseases.**Materials & Methods:** 60 patients with liver diseases of both genders were included. Detailed history, physical examination, and necessary investigations such as blood urea, serum creatinine, urine analysis ix. USG abdomen, liver function tests such as HBsAg, anti-HCV, liver biopsy, reticulocyte count, prothrombin time, etc. were recorded.**Results:** Out of 60 patients, males were 39 and females were 21. In the present study, majority of the patients consumed >60 grams/24hrs (56.6%) of alcohol, 30.8% of people consumed 50- 60 gm /24 hrs and 12.6% consumed 50 gm /24 hrs. Symptoms were nausea/vomiting in 45, jaundice in 37, fever in 21, abdominal extension in 15, pain abdomen in 22, G I bleeding in 10 and altered behaviour in 7 patients. The difference was significant (P< 0.05). In present study enzymes AST, ALT and ALP was raised in 66.66% cases. The serum bilirubin ranged from 3.6 mg/dl to 8.8 mg/dl. Bilirubin was raised in 80.0% cases, albumin in 41.66% cases and Globulin in 50.0% cases.**Conclusion:** Chronic alcohol consumption is more common in adult males. Chronic alcoholics consume more amount of alcohol. Alcoholic liver disease has a varied clinical presentation and is associated with deranged biochemical parameters.These biochemical parameters may help clinicians to support the diagnosis of ALD and non-ALD.

Keywords: Liver, hematological, USG.

INTRODUCTION

The liver plays a vital role in maintaining the body's metabolic homeostasis, which involves processing food amino acids, carbohydrates, lipids, and vitamins; eliminating bacteria and toxins from splanchnic blood; establishing the body's systemic circulation; and detoxifying and excreting endogenous waste products into bile.[1] Hepatocellular carcinoma, alcoholic liver disease, and viral hepatitis are the three most common primary liver diseases. Infectious liver illnesses predominate in hepatology clinical practice. Alcoholic liver disease (ALD) is a spectrum ofclinicopathological abnormalities, reflecting an acute or chronic inflammation of the liver parenchyma induced byalcohol use. The prevalence of ALD worldwide is 94.8per 10000. Alcohol is directly hepatotoxic. Toxic protein aldehyde, endotoxins, oxidative stress, immunologicactivity and pro inflammatory cytokines contribute to theliver injury. It is paradoxical that, if damaged past a critical point, an organ of such importance can hardly heal itself. A damaged liver not only impairs the liver's normal function but also causes other organs to act abnormally.[5-9] The present study was conducted to assess clinical and Biochemical profile of Acute and Chronic Liver Diseases

MATERIALS & METHODS

The present study consisted of 60 patients with liver diseases of both genders. All gave their written consent to participate in the study.

Data such as name, age, gender, etc. was recorded. Detailed history, physical examination, and necessary investigations such as blood urea, serum creatinine, urine analysis ix. USG abdomen, liver function tests, liver biopsy, reticulocyte count, prothrombin time, etc. were recorded.Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 60		
Gender	**Male**	**Female**
Number	39	21

Table I shows that out of 60 patients, males were 39 and females were 21.

Table II Assessment of parameters

Parameters	Variables	Number	P value
Symptoms	Nausea/vomiting	45	0.02
	Jaundice	37	
	Fever	21	
	Abdominal extension	15	
	Pain abdomen	22	
	G I bleeding	10	
	Altered behaviour	7	

Table IIshowed various symptoms such as nausea/vomiting in 45, jaundice in 37, fever in 21, abdominal extension in 15, pain abdomen in 22, G I bleeding in 10 and altered behaviour in 7 patients. The difference was significant (P< 0.05).

Table II: Biochemical parameters

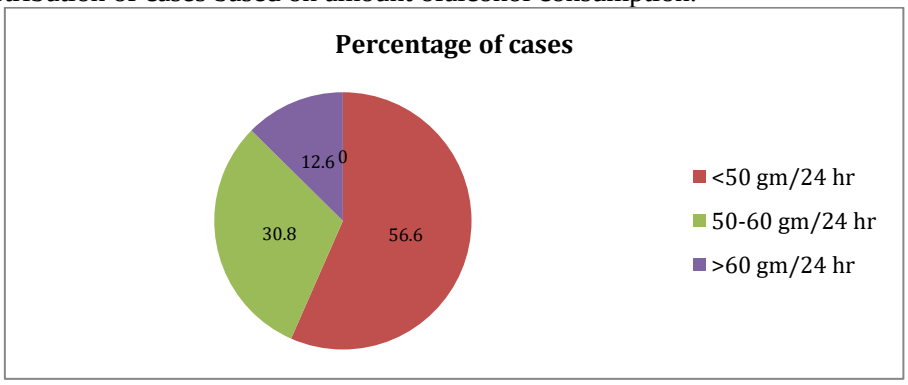
Biochemical parameters	No. of cases (60)	Percentage
AST> 40 IU/L	40	66.66
ALT> 40 IU/L	40	66.66
ALP> 280 IU/L	40	66.66
GGT> 66 IU/L	56	93.33
Bilirubin > 2 mg/dl	48	80.00
Albumin < 3 gm/ dl	25	41.66
Globulin > 3.5 gm/dl	30	50.00

In present study enzymes AST, ALT and ALP was raised in 66.66% cases. The serum bilirubin ranged from 3.6 mg/dl to 8.8 mg/dl. Bilirubin was raised in 80.0% cases, albumin in 41.66% cases and Globulin in 50.0% cases.

Table III: Distribution of cases based on duration ofalcohol consumption.

Duration of alcohol consumption (years)	No. of cases	Percent
1-2	3	5
2-3	8	13.33
3-4	15	25
>5	34	56.67

Table IV: Distribution of cases based on amount ofalcohol consumption.



DISCUSSION

Alcoholism is diagnosed on the basis of clinical history, questionnaire about alcohol consumption and many laboratory investigations. Distinguishing ALD from non-ALD has important implications for treatment and management. But many times, it becomes difficult, as history can be unreliable. So, we evaluated the patients of ALD, NASH and acute viral hepatitis by various biochemical laboratory parameters.[10,11] The present study was conducted to assess clinical profile and biochemical parameters in acute and chronic liver diseases.

We found that out of 60 patients, males were 39 and females were 21.

The patients in Zeeba et al.[12] study ranged in age from 1.5 months to 18 years. Given that the male-to-female ratio was 1.34:1, there was a clear male preponderance. The majority of cases (95.7%) had loss of appetite, which was followed by hepatomegaly (75.2%), nausea and vomiting (90.6%), icterus (53.9%), abdominal pain (51.3%), fever (45.3%), gastrointestinal bleed (34.2%), ascites (24.8% cases), varices (24.8% cases), pruritus (15.4% cases), and altered sensory system (8.6% cases). Cases' histopathological diagnoses showed There were twenty-four (20.5) instances with portal hypertension and hepatic cirrhosis. Every hepatitis patient exhibited increased transaminases and icterus. Ten (35.7%) had serological evidence of hepatitis A infection, and nine had hepatitis B. There was no viral marker found in the remaining 5 cases.

We found that mean hemoglobin was 11.7 g/dl, bilirubin was 9.3 mg/dL, SGOT was 425.1 IU/L and SGPT was 576.2 IU/L. In present study enzymes AST, ALT and ALP was raised in 66.66% cases. The serum bilirubin ranged from 3.6 mg/dl to 8.8 mg/dl. Bilirubin was raised in 80.0% cases, albumin in 41.66% cases and Globulin in 50.0% cases.Khatroth S was found in their study, bilirubin was raised in 83.3%, cases. The serum bilirubin ranged from 3.6 mg/dl to 8.8 mg/dl. The enzymes such as AST, ALT and ALP each were also elevated in 66.6 % cases. The serum AST ranged from 60 IU/L to 480 IU/L and the serum ALT ranged from 80 to 520 IU/L. ALP enzyme was also elevated with a range of 290 to 320 IU/L. The enzyme GGT was elevated in 95.8% cases and ranged from 75 to 200 IU/L. Elevated GGT is very common and specific for alcoholic liver disease. Hypoalbuminemia was seen in 41.6%.[13]

In the study by Chavan et al most of the patients (88%) were consuming 180 ml of alcohol/day, and 53% of alcoholics were consuming for a period of 11 to 20years.[14] In the present study, majority of the patients consumed >60 grams/24hrs (56.6%) of alcohol, 30.8% of people consumed 50- 60 gm /24 hrs and 12.6% consumed 50 gm /24 hrs. In the study by Ray et al study majority of the patients consumed 81-90 grams (30%) of alcohol per day for duration of 9-12 years (32%). Intake of poor-quality country liquor was noted among their study group.[15]

The limitation of the study is the small sample size.

CONCLUSION

Chronic alcohol consumption is more common in adult males. Chronic alcoholics consume more amount of alcohol. Alcoholic liver disease has a varied clinical presentation and is associated with deranged biochemical parameters.These biochemical parameters may help clinicians to support the diagnosis of ALD and non-ALD.

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