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A RETROSPECTIVE STUDY OF ETIOLOGY AND CLINICAL PROFILE OF CIRRHOSIS LIVER IN A TERTIARY CARE CENTER

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Abstract

Introduction: Cirrhosis is a chronic liver disease in which diffuse destruction and regeneration of hepatic parenchymal cells have occurred and in which a diffuse increase in the connective tissue has resulted in the disorganization of the lobar and vascular architecture. Liver cirrhosis has emerged as a major cause of global health burden, causing significant morbidity and mortality worldwide.

Materials and Methods: In the present study, a clinical survey of alcoholic liver disease was carried out in Gastroenterology super speciality Hospital, Govt Medical College, Jammu. The study duration was of 1 year. A case of Alcoholic liver disease is diagnosed in patients with a history of significant alcohol intake, physical signs of liver disease, and supporting laboratory investigations.

Results: In the present study, a total of 46 patients were studied. All patients were male. The most common age group was 41-50 years (49%), followed by less than 40 years (22%) and 51-60 years (18%). In ALD patients common clinical presentations were ascites (76%), jaundice (71%), melena (62%), weight loss (52%), and hepatomegaly (51%). In study patients, biochemical parameters such as serum bilirubin, AST, ALT, ALP, total protein, and serum albumin were deranged. In the study patients, common complications were chronic liver disease (29%), portal HTN (18%), hepatic encephalopathy (17%), and upper GI bleeding (10%). Other less common complications were hepatic coma (6%), renal failure (6%), psychotic syndrome (4%), and spontaneous bacterial peritonitis (3%).

Conclusion: Alcohol-related liver diseases are serious with high short-term mortality, which has early identifiable but mostly irreversible factors. Clinical interventions should focus on early detection by screening and timely treatment in the initial reversible stages.

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Key Words: Cirrhosis, vascular architecture, ascites, jaundice, renal failure.

INTRODUCTION

Cirrhosis is a chronic liver disease in which diffuse destruction and regeneration of hepatic parenchymal cells have occurred and in which a diffuse increase in the connective tissue has resulted in the disorganization of the lobar and vascular architecture.[1] Liver cirrhosis has emerged as a major cause of global health burden, causing significant morbidity and mortality worldwide. According to the Global Burden of Disease 2010 study, liver cirrhosis caused 31 million Disability Adjusted Life Years (DALYs), or 1.2% of global DALYs, in 2010, and one million deaths, or 2% of all deaths worldwide in that year.[2] It is commonly caused by alcohol, hepatitis B, hepatitis C, and Non-alcoholic fatty liver disease. Although the clinicopathological findings are the same irrespective of the etiology of cirrhosis, the clinical course and presenting symptoms can be different for each.[3]

Alcohol is one of the leading causes of death and disability globally and the same is true for our country India. A total of 3.2% of deaths worldwide are caused by alcohol every year. As per World Health Organization, one-fourth to one-third of the male population drinks alcohol in India and neighboring south Asian countries, and the use amongst women is increasing. Alcohol use is quite common in India both in rural and urban areas with prevalence rates as per various studies varying from 23% to 74% in males in general although it's not that common in females it is prevalent the rate of 24% to 48 % in females in certain sections and communities.[4] In 2005 the estimated number of people using alcohol in India was 62.5

million with 17.4 % of them (10.6 million) having alcohol use disorder and of all hospital admissions in India 20-30% are due to alcohol-related problems. Alcohol consumption is seen in almost all parts of the world, and chronic liver disease due to alcohol is on the rise. Alcohol is the most frequent cause of liver disease in western countries. Now, even in Asian countries like India, Alcohol is emerging as the commonest cause of Chronic Liver Disease.[6]

MATERIALS AND METHODS

In the present study, a clinical survey of alcoholic liver disease was carried out in Gastroenterology super speciality Hospital, Govt Medical College, Jammu. The study duration was of 1 year. A case of Alcoholic liver disease is diagnosed in patients with a history of significant alcohol intake, physical signs of liver disease, and supporting laboratory investigations.

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Inclusion criteria: Patients with a history of significant chronic alcohol intake with physical signs of liver disease (jaundice, portal hypertension, complications of portal hypertension) and positive laboratory and radiological findings.

Exclusion criteria: Patients with viral hepatitis, hepatitis B, hepatitis C, post necrotic cirrhosis, patients with documented seropositivity for HIV, Patients with any other form of chronic liver disease, Wilson's disease, Hemochromatosis, etc. Patients with other co-morbid illnesses such as cardiac, respiratory, and renal illnesses.

Patient details including occupation, socio-economic status, risk factors, clinical features, complications, and laboratory and radiological investigations were carried out. A detailed history was taken and physical examinations were done for signs of portal hypertension (ascites, splenomegaly, abdominal wall collaterals, and a venous hum), hepatic injury (cutaneous telangiectasia, palmer erythema, finger clubbing, Dupuytren's contracture, and peripheral neuropathy) and feminization (gynecomastia and hypogonadism). All laboratory investigations including a liver chemistry profile (S. albumin, Bilirubin and transaminases, AST/ALT. complete blood count, and prothrombin time) were done. Ultrasonogram, barium swallow, and upper G.I. endoscopy were done whenever required. Data were entered in a Microsoft excel sheet. Statistical analysis was done using descriptive statistics.

RESULTS

In the present study, a total of 46 patients were studied. All patients were male. The most common age group was 41-50 years (49%), followed by less than 40 years (22%) and 51-60 years (18%).

Age in years	No of patients	Percentage
Less than 40	10	22%
41-50	23	49%
51-60	8	18%
61-70	4	9%
>70	1	2%

Table 1: Age distribution

In ALD patients common clinical presentations were ascites (76%), jaundice (71%), melena (62%), weight loss (52%), and hepatomegaly (51%).

Presentation	No of patients	Percentage
Ascites	35	76%
Jaundice	33	71%
Melena	29	62%

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Weight loss	24	52%
Hepatomegaly	23	51%
Anorexia	19	42%
Pedal edema	16	34%
Hepatic Encephalopathy	15	33%
Hematemesis	11	24%
Oliguria	7	16%
fever	6	12%
Spider naevi	1	2%

Table 2: Clinical presentation of cirrhosis liver disease

In study patients, biochemical parameters such as serum bilirubin, AST, ALT, ALP, total protein, and serum albumin were deranged.

S.No	Biochemical parameter	Mean ± SD
1	**Serum bilirubin**	4.940 ± 5.12
2	**AST**	121.2 ± 102.3
3	**ALT**	69.91 ± 45.34
4	**ALP**	245.19 ± 131.35
5	**Total protein**	6.13 ± 0.91
6	**Serum albumin**	2.94 ± 0.81

Table 3: Biochemical parameters of the cases

In the study patients, common complications were chronic liver disease (29%), portal HTN (18%), hepatic encephalopathy (17%), and upper GI bleeding (10%). Other less common complications were hepatic coma (6%), renal failure (6%), psychotic syndrome (4%), and spontaneous bacterial peritonitis (3%).

Complication observed	Number	Patients
Chronic liver disease	14	29%
Portal HTN	8	18%
Hepatic Encephalopathy	8	17%
Upper GI bleed	4	10%
Hepatic coma	3	6%
Renal Failure	3	6%
Psychotic syndrome	2	4%
Spontaneous Bacterial Peritonitis [SBP]	2	3%

Table 4: Complications observed in ALD patients

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DISCUSSION

Alcoholic liver disease has a varied spectrum of complications ranging from liver steatosis to severe liver cirrhosis. Chronic and excessive alcohol abuse is the most commonly known cause of chronic liver disease worldwide. Chronic alcohol abuse can result in a spectrum of liver injury that ranges from mild fatty infiltration to cirrhosis and hepatocellular carcinoma.[7] The prognosis of patients with alcoholic liver disease depends on the degree of pathologic injury, the patient's nutritional status, the presence of complications, the presence of other comorbid conditions, and the patient's ability to discontinue destructive patterns of drinking.[8]

The proportion of global deaths attributable to alcohol differs based on gender, with 7.6% of deaths among males and 4.0% of deaths among females attributable to alcohol. The factors predisposing to this development may include the amount, type, and duration of alcohol consumed along with certain less obvious facts like a person's genetic predisposition, race sex, and other comorbid conditions. Alcoholic cirrhosis is diagnosed in patients with H/o alcohol consumption > 80 g/dl in men and 40 g/dl in female and at least one clinical sign of hepatocellular failure and one of the signs of portal hypertension along with at least three ultrasound findings of cirrhosis of the liver.[9]

This rising trend of alcohol-related cirrhosis of the liver has been explained by an earlier age of acquiring alcoholism, an increasing per capita intake of alcohol, and increasing trends of “at risk” drinking. Singh et al. in a study from eastern India reported that 50% of the patients with the alcoholic liver disease started drinking before the legal age of drinking. Ray from Kolkata also noted a similar rise in the rate of alcohol-related CLD in his study – from 22% in 2003 to 42% in 2011. Nand N et al. studied 149 patients (74%) who had been drinking for ≤20 yrs. which further consolidates the fact that Indians develop liver disease in a lesser duration than the Western population.

All patients had raised SGPT, SGOT, S.AlPO4, and S. bilirubin suggesting liver damage. Prolonged PT and reduced S. albumin suggested reduced protein synthesis because of liver disease. Alcoholic hepatitis was in24% of cases, while 40% had fatty liver and 36 % had alcoholic cirrhosis. The overall mortality rate was 20 %. the most common cause is encephalopathy (40%), coagulopathy leading to DIC (40%), and hepatorenal syndrome (20%). Alcoholic liver disease was seen among the productive age group with high morbidity and mortality. Similar findings were noted in the present study. Ashish Joshi studied 50 patients presenting with alcoholic liver disease. The mean age at presentation was 42.6 years with a minimum age of 20 years and a maximum of 70 years. Only one patient was a female. The average duration of alcohol intake was 12.4 years.[10]

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CONCLUSION

Alcohol-related liver diseases are serious with high short-term mortality, which has early identifiable but mostly irreversible factors. Clinical interventions should focus on early detection by screening and timely treatment in the initial reversible stages. Urgent measures need to be taken to curb this rising menace.

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