



## AN OBSERVATIONAL STUDY ON ETIOLOGICAL AND EPIDEMIOLOGICAL PROFILE OF CHRONIC LIVER DISEASE IN TERTIARY CARE HOSPITAL

### Community Medicine

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### ABSTRACT

**BACKGROUND:** Chronic liver disease is most common in Moradabad, West Uttar Pradesh. Hepatitis C and alcohol are the main causes of Chronic Liver Disease associated with high morbidity. This study in calculated evaluated etiology and epidemiological profile on Chronic Liver Disease in tertiary care hospital. **MATERIALS AND METHOD:** The patients, who met the inclusion and exclusion criteria, were enrolled in the study. The relevant data such as demographic details, laboratory data, etiological profile, epidemiological data, and social history, were collected from the medical record of the patient and results were analyzed. **Result:** During six months of study period, a total no. 126 of patients of chronic liver disease were evaluated and from results we found that the majority of the patients were males 84(67%), female patient 42(33%) and above 41 years 69(55%) Ascites was the most common clinical presentation in Chronic liver disease (n=83; 65%) followed by jaundice (n=20; 16%) and esophageal varices (n=63;50%) in this population. Out of 126 patients 41 (33%) had a history of alcohol consumption (chronic alcoholic), 41 were male (regularly). HCV was the major cause implicated in 45% (n=57) followed by HBV+HCV 13% (n= 18) of population. HCV was major etiologic factor of chronic liver disease followed by alcohol consumption as the secondary one. Of these the ethanol HCV 57 patients (45%), Alcohol 41 (33 %), (table no.6), DM 15 (12%) is a cofactor of chronic liver disease which played a role as starting cause of CLD. **CONCLUSION:** The data obtained in this study stated that male patients were found to be much prone to the development of the disease at the age of 41-60 years. The availability of risk towards disease was found to be 67% in rural than 33% in urban areas. The aim of the study was to provide an important and essential view for social and medical infect & to make people aware of the HCV and alcohol disease. The road show and campaigning were suggested to be planned and organized for the purpose.

### KEYWORDS

Chronic liver disease, Liver cirrhosis, Non-alcoholic fatty liver disease.

### INTRODUCTION

**CHRONIC LIVER DISEASE (CLD):** Chronic liver disease can progressively cause destruction of liver tissue leading to fibrosis and cirrhosis, in many pertains to as viral hepatitis mostly B & C, and autoimmune toxic substances or drugs like alcohol abuse, acetaminophen etc. At this stage, liver loses its regenerating power.<sup>1</sup>

CLD and cirrhosis are irreversible processes and defined by organization of unusually huge quantity of scar tissues in liver, condition is called as (fibrosis). Several patients diagnosed with CLD are susceptible (predisposed) to lack of nutrition due to many reasons, including insufficient entry and abnormal absorption of nutrients from the digestive tract malabsorption<sup>1</sup>, In CLD decreased loss of appetite, nausea, vomiting, headache and obstructive feed can result in lacking of essentials of food intake. Ascites affects the amount of food, because ascites increase the intra stomach pressure which leads to soon satiety.<sup>2</sup>

Reduction or stoppage of bile flow (Cholestasis), liver cirrhosis, PHTN and pancreatic deficiency all these conditions contribute to malabsorption.<sup>2,3</sup>

**LIVER CIRRHOSIS:** Cirrhosis is the condition in which destruction and rupture of hepatic design by fibrosis of liver and the formation of regenerating nodules occur. Cirrhosis is last stage of chronic liver disease.<sup>4</sup> Chronic liver disease developed when the liver is continuously and repeatedly damaged then this is called the liver fibrosis.<sup>5</sup>

Liver cirrhosis is simply defined as scarring of the liver. Damage of the liver tissue is a worry to cause cell to die and it will be replaced by stiff scar tissue. This process develops slowly and / or irreversibly and the condition may lead to liver shrunken and hardening.<sup>4,5</sup>

Cirrhosis is the final and end stage caused by various chronic liver disease progressing slowly after years and decades that this condition occur. In early stage it could be measured in early stages and be preventive and treat this disease.<sup>6</sup> In most cases of cirrhotic liver, hepatocellular carcinoma occurs. So prevention of cirrhotic liver, is a matter of fact also HCC prevention. The higher risk of developing liver carcinoma depends on the underlying disease CLD, NAFLD.<sup>7</sup>

**ALCOHOL LIVER DISEASE (ALD):** Alcohol liver illness is a worldwide disorder; more intake of alcohol affects the liver and damages the liver cell. Excessive consumption of alcohol causes the alcoholic liver disease. Liver is primary site of metabolism of the ethanol and thus excess amount of alcohol causes the liver injury.<sup>8,9</sup> Alcohol abuse is the major reason for acute and chronic alcoholic liver disease. Major alcoholic use damages the liver and decreases its metabolic property. Alcoholic liver disease increases morbidity and mortality rates and causes life threatening condition.<sup>9,10</sup> Alcoholic cirrhosis is increasingly in many countries like Japan, US, India etc. In recent years, alcohol use has increased in this country that could cause liver cirrhosis.<sup>8,9,10</sup> Histopathological changes developed in ALD and NAFLD, are more significant in liver. It decreases the metabolic activity and loss of regenerating power.<sup>10,11</sup>

**NON ALCOHOLIC FATTY LIVER DISEASE (NAFLD):** Non alcoholic fatty liver disease (NAFLD) is now a day's most common and generally chronic in nature. The exact causes are unknown and heterogeneous in origin NAFLD, now a day is most widely spreading liver disease in developed and developing countries. Obesity is a major factor in a developed country and this disease increases morbidity and mortality of chronic liver diseased patients.<sup>11</sup> Non-alcoholic fatty liver disease (NAFLD) represents wide and broad compass of clinical entities from symptomatic increased and buildup of fat in liver (steatosis).<sup>12</sup> Non alcoholic steatohepatitis is a severe and dangerous

shape for liver disease, it is distinct by liver inflammation, which may be the result of scarring & destruction and damage of the liver tissue and this process is an irreversible process.13

**HEPATITIS C:** Hepatitis C virus is the most common factor for chronic liver disease. Hepatitis virus can be found in both types chronic and acute hepatitis. Hepatitis is the condition causing inflammation of liver. This is most susceptible to harmful effects. The virus is attack the liver cell and produces harmful effects like liver swelling and decreased hepatic functions.14 Chronic infection with HCV a leading and major and reason of end stage of liver problem such like as abnormal growth of liver cell, chronic liver disease, liver encephalopathy, liver cirrhosis and liver cancer, now that is demonstrate in Asian countries.15 Virus is starting and leading cause factor of much disease related to liver because virus is causes deformities of liver cell and liver enzyme.16

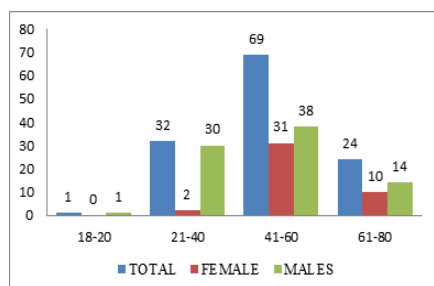
**RESULTS:** During six months of study period, a total no.126 of patients of chronic liver disease were evaluated and from results we found that the majority of the patients were males 84(67%), female patient 42(33%) and above 41 years 69(55%). Ascites was the most common clinical presentation in Chronic liver disease (n=83; 65%) followed by jaundice (n=20; 16%) and esophageal varices (n=63; 50%) in this population. Out of 126 patients 41 (33%) had a history of alcohol consumption (chronic alcoholic), 41 were male (regularly). HCV was the major cause implicated in 45% (n=57) followed by HBV+HCV 13% (n= 18) of population. HCV was major etiologic factor of chronic liver disease followed by alcohol consumption as the secondary one. Of these the ethanol HCV 57 patients (45%), Alcohol 41 (33 %), (table no.6), DM 15 (12%) is a cofactor of chronic liver disease which played a role as starting cause of CLD.

**Table 1: Age distribution of patients:**

S.NO.	Age Interval (years)	Male N (%)	Female N (%)	Total N (%) of Patient
1	18-20	1(1%)	0(0%)	1(1%)
2	21-40	30(24%)	2(2%)	32(25%)
3	41-60	38(30%)	31(25%)	69(55%)
4	61-70	14(13%)	10(8%)	24(19%)

A total 126 patients between the age group 18- 70 years, were included in this study. The maximum no falling in the age group 41-60 years conformed to 38 (males) and 31 (females).

**Figure 1: Age distribution of patients:**



**Table 2: Comorbidities with CLD:**

S.NO.	Disease	TOTAL	% of Patients
1	DM	15	12%
2	HTN	6	5%
3	TB	1	1%
4	COPD	7	6%
5	ANEMIA	8	6%
6	CKD	3	2%
7	UTI	2	2%
8	DCM	1%	1%
9	PNEUMONIA	2	2%

Out of a total 126 patients, on chronic liver disease co-morbidities, with DM (12%), HTN (5%), TB (1%), COPD (6%), Anemia (6%), CKD (2%), UTI (2%), DCM (1%), Pneumonia (2%).

**Table 3: Etiology of chronic liver disease. Distribution of patients according to etiology:**

S.NO.	ETIOLOGY	MALE	FEMALE	Total	% of etiology
1	HCV	37	20	57	45%
2	HBV	13	8	21	17%
3	ALCOHOL+HCV	18	0	18	13%
4	HBV+HCV	11	7	18	13%
5	ALCOHOL	41	0	41	33%

The etiology of CLD, included HCV, 57 (45%), HBV 21 (17 %), Acohol+HCV, 18 (13 %), HBV+HCV 18 (13%), Alcohol 41 (33 %) is a total of 126 patients.

**DISCUSSION:** The current study was designed to detect diagnostic, etiological and accessibility facilities related to chronic liver disease in Moradabad, India. These had been relevant in addressing the issue of allocation of preparations for the disease of liver and preparation of health system in India. An overview of this study showed that 12 (10%) final phase of chronic liver disease (cirrhosis) was found in the population of 126 patients. Chronic liver disease could be preventable by identifying and controlling over the endangering factors. The various etiologies of CLD included, alcohol, HCV, HBV, NAFLD, autoimmune reactions including hemochromatosis, Wilson disease may also finally underline the cause of chronic liver. In our observational study, we found that HCV was the main leading factor inducing of chronic liver disease in 57 (45%). The second cause was chronic liver disease alcohol which was mostly prevalent in 41 patients (33%). The third observations revealed HVB, HVB+HCV in 18 patients (13%).

Liver illness rates had been continuously rising over the consumed years in India. The recorded alcohol per capita (15+ ages in years) consume (in a liter of pure liquor) was reported by WHO. Alcohol consumption account for 3.8% of the whole world mortality and 4.60 % of DALYs. Now even in Asian countries like India, alcohol appeared as the prevailing cause of chronic liver disease. According to WHO 0.33 crore deaths in India were alleged to liquor consume. In the year 2014 WHO released its world report on alcohol and its status as 38.3 % global population consuming alcohol regularly. According to WHO (30%) of Indian community, just less than a 1/3 of the nation, (11%) were reported as medium to severe drinkers respectively.

In our study we found that mostly rural patients were diagnosed with chronic liver disease, i.e. in 84/126 patients constituting (67%). And alcohol consumer were 41, (33%) comparable to urban (24%) higher in rural area. In Uttar Pradesh mostly population took local brews and toddy and country liquor consumption per capita per week 34 ml which was a main health risk for the people Alcoholism also figured as one of the biggest common causes of pauperism in the state (UP). The study focused on the etiology of CLD and various factors of liver disease. Now a day's mostly liver problem had increased on day to day basis and, rural population not worried of the future and health. Mostly rural population had been unaware, of the disease. We could prevent the problems by awareness campaign in the public in general.

**CONCLUSION:** The data obtained in this study stated that male patients were found to be much prone to the development of the disease at the age of 41-60 years. The availability of risk towards disease was found to be 67% in rural than 33% in urban areas.

The aim of the study was to provide an important and essential view for social and medical infect & to make people aware of the HCV and alcohol disease. The road show and campaigning were suggested to be planned and organized for the purpose.

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