

To study the clinical presentation and etiological spectrum of patients with chronic liver disease

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Abstract

Background: To study the clinical presentation and etiological spectrum of patients with chronic liver disease

Methods: The study was conducted in the department of Medicine, Swami Rama Himalayan University, Swami Ram Nagar, Dehradun over a period of 12 months. Patients with chronic liver disease were recruited from medical wards after obtaining ethical clearance and written informed consent from the patient.

Result: Maximum number of patients were in the 5th decade followed by those in the 4th decade. Jaundice was the most common complaint (118 cases, 69.00%) followed by ascites (103 cases, 60.23%), hepatic encephalopathy (50 cases, 29.23%), melena (49 cases, 28.65%), hematemesis (35 cases, 20.46%) and decreased urine output (14 cases, 8.18%). Icterus (117 cases, 68.42%) and pallor (52 cases, 30.40%) were the most common signs. 88 (51.46%) cases were found in viral etiology in 51 (29.82%). Others included patients with NASH 13 (7.60%), both alcohol and viral

11(6.43%), autoimmune 7 (4.09%) and Wilson’s disease 1 (0.58%).

Conclusion: The most common etiology of chronic liver disease was alcohol followed by HBV and HCV infection. Jaundice, ascites and upper GI bleed were the most common clinical features in patients with chronic liver disease.

Keywords: HBV, HCV, Liver disease

Introduction

Liver disease constitutes significant number of patients in various countries around the world and presents serious health related as well as economic problems.¹ the pattern of liver disease varies geographically, among various ethnic groups with different practices and time period.² The major causes of diseases are alcohol, infections, autoimmune, genetic, inflammatory, drug and malignancy.³

Aetiology of chronic liver disease (CLD) varies in different geographical area of the world. Hepatotropic viruses are the major causes of CLD in most parts of the world.⁴ Alcohol constitutes an important cause in developed countries and in certain regions of India as well. With routine screening of blood and blood

products of hepatitis B (HBV) markers and vaccination during last few decades, frequency of HBV as a cause of CLD has decreased in the developed world; therefore hepatitis C virus (HCV) remains the major cause there. Scanty data on aetiological spectrum of CLD from Northern India suggest preponderance of HBV as cause of CLD and infrequency of HCV.⁵⁻⁷

Material and Methods

The study was conducted in the department of Medicine, Swami Rama Himalayan University, Swami Ram Nagar, Dehradun over a period of 12 months. Patients with chronic liver disease were recruited from medical wards after obtaining ethical clearance and written informed consent from the patient.

Study Design: Observational longitudinal follow up study.

Sample size: 171 patients.

It was calculated on the basis of formula $n = z^2 PQ/d^2$ where n is a desired sample size, P is expected proportion of accurate etiology and spectrum of chronic liver disease, Q is 1-P with the level of significance (0.05) and 15% relative error. With these assumptions calculated sample size is 171.

Selection of Subjects

Inclusion Criteria

- Patients of more than 18 years of age.
- Adult patients diagnosed with chronic liver disease.

Exclusion Criteria

- Patients with ascites due to tuberculosis or malignancy.
- Patients with malignancies other than hepatocellular carcinoma.

Data analysis

- Interpretation and analysis with comparison of obtained results was carried out and data thus collected were subjected to descriptive statistical

analysis of patients with chronic liver disease using SPSS 19, Student’s T-test was used for comparison of continuous data. p- value <0.05 was considered significant. All reported P values are two sided.

Results

The present study was carried out on 171 cases of chronic liver disease.

Age range of patients was from 20 to 80 years. Mean age of patients was 48.94 ± 12.63 years.

Table 1: Age wise distribution of the CLD patients

Age Group (years)	No. of Patients	%
20 – 30	15	8.77
31 – 40	29	16.95
41 – 50	49	28.65
51 – 60	53	30.99
61 – 70	17	9.94
71 – 80	8	4.67
Total	171	100

Male preponderance was seen in our series. Maximum number of patients of chronic liver disease were in the age group of 51 to 60 years.

Table 2: Gender wise distribution of the CLD patients

Gender	No. of Patients	%
Male	143	83.62
Female	28	16.37
Total	171	100

Male preponderance was seen in our series. Male: female ratio was 5.10:1.

Table 2: Symptomatology of CLD patients

Symptoms	No. of Patients	%
Ascites	103	18.71
Jaundice	118	69.00
Melena	49	28.65
Hematemesis	35	20.46
Hepatic Encephalopathy	50	29.23
Decreased urine output	14	8.18

Jaundice and ascites were the commonest symptoms followed by upper gastrointestinal bleed and hepatic encephalopathy.

Table 4: Signs observed among CLD patients

Stigmata of CLD	No. of Patients	%
Pallor	52	30.40
Icterus	117	68.42
Clubbing	20	11.69
Peripheral edema	32	18.71
Hepatomegaly	24	14.03
Splenomegaly	45	26.31
Parotid enlargement	41	23.97
Spider naevi	9	5.26
Duputyrens contracture	6	3.50
White nails	19	11.11
Testicular atrophy	12	7.01
Gynaecomastia	14	8.35
Alopecia	16	9.35
Palmar erythema	18	10.52

Icterus and pallor were the commonest symptoms followed by splenomegaly and parotid enlargement.

Table 5: Etiology of CLD among CLD patients

Etiology	No. of Patients	%
Alcohol	88	51.46
Alcohol + Viral	11	6.43
Autoimmune	7	4.09
Nonalcoholic steato hepatitis	13	7.60
Viral	51	29.82
Wilson's disease	1	0.58

Out of total 171 patients alcohol induced chronic liver disease was found in 88 (51.46%) cases followed by viral etiology in 51 (29.82%).

Table 6: Distribution of viral etiology among CLD patients

	No. of Patients	%
Hepatitis B	42	24.56
Hepatitis C	16	9.35
Hepatitis B+A	1	0.58
Hepatitis B+C	3	1.75

Majority of patients had chronic hepatitis B followed by hepatitis C

Discussion

Chronic liver disease is a growing cause of morbidity and mortality with the majority of preventable cases attributed to excessive alcohol consumption, viral hepatitis, or nonalcoholic fatty liver disease. Single or multifactorial insults to liver lead to cirrhosis, the most common being alcohol abuse, chronic Hepatitis C and obesity with concomitant nonalcoholic fatty liver disease.⁸

The onset and the progression of chronic liver disease involve many different factors, such as environmental and genetic factors.⁹

Shrestha SM et al¹⁰ conducted a study in tertiary care centre of Nepal, 130 cases of diagnosed liver disease were analysed in which maximum number of cases were in the range of 41-50 years of age followed by 31-40 years of age and 21-30 years of age.

Our findings are in agreement with the findings of this study as maximum number of patients were in the 5th decade followed by 4th decade. The age range of patients was from 20 years to 80 years and the mean age was 48.94±12.63 years. This suggests that liver diseases are more common after fourth decade.

Males are more frequently affected by CLD. It was surprising to find out that 51.46% accounted for alcoholic liver disease. In the United States, Alcohol

accounts for 80% of Cirrhosis. Jun et al¹¹ found that Hepatitis B is predominant cause of Cirrhosis in China, Southeast Asia and Africa.

A study conducted in Madhya Pradesh by Trimukhe et al¹² to evaluate etiology in patients with chronic liver disease showed alcoholic liver disease in 33.3% (all were males), hepatitis B in 40.6% and chronic hepatitis C in 3.3% cases. Others included nonalcoholic fatty liver disease (2.2%) and Wilson's disease (1.1%).

In our study has the most common cause of chronic liver disease is Alcohol (51.46%) followed by HBV (24.56%) And HCV (9.35%) infection.

Others included nonalcoholic fatty liver disease (7.60%), autoimmune (4.09%) and Wilson's disease (0.58%). There were 3 cases of hepatitis B coinfecting with hepatitis C (1.75%) and 1 case of hepatitis B coinfecting with hepatitis A (0.58%). Vento et al. followed prospectively 163 patients with chronic hepatitis B and 432 patient with hepatitis C. Their study showed a substantial risk of fulminant hepatic failure and death with hepatitis A superinfection, in particular in those with chronic hepatitis C. HCV is reported to be a common cause of CLD all over the world and is the commonest cause of post transfusion chronic hepatitis.

Conclusion

The most common etiology of chronic liver disease was alcohol followed by HBV and HCV infection. Jaundice, ascites and upper GI bleed were the most common clinical features in patients with chronic liver disease.

References

1. Cortez PH, Marques VP, Monteiro E. Liver disease related admissions in Portugal: Clinical and demographic pattern. *Eur J Gastroenterol Hepatol.* 2004;16(9):873-7.
2. Shrestha SM. Liver disease in Nepal. *Kathmandu Univ Med J.* 2005;3(2):178-80.
3. Ghany MG, Hoofnagle JH. Approach to a patient with liver disease. In :Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo DL, Jameson JL, Loscalzo J eds. *Harrison's Principles of Internal Medicine.* 17th ed. USA: McGraw Hill Companies;2008. P. 1809.
4. Cacciola I, Pollicino T, Squadrito G, Cerenzia G, Orlando ME, Raimondo G. Occult hepatitis B virus infection in patients with chronic hepatitis C liver disease. *New Engl J Med.* 1999;341:22-6.
5. Sarin SK, Chari S, Sundaram KR, Ahuja RK, Anand BS, Broor SL. Young vs. Adult cirrhotics: a prospective comparative analysis of the clinical profile, natural course and survival. *Gut.* 1988;29:101-7.
6. Alter MJ, Kruszon MD, Nainan OV, Mequillan GM, Gao F, Moyer LA et al. The prevalence of hepatitis C virus infection in United States. *N Engl J Med.* 1999;341:556-62.
7. Alter JM, Margolis HS, Krawczynski. The natural history of community acquired hepatitis C in the United States. *N Engl J Med.* 1992;327: 1899-905.
8. Seengler U, Nattermann J. Immunopathogenesis in hepatitis C virus cirrhosis. *Clin Sci (Lond).* 2007;112:141-55.
9. Centers for Disease Control and Prevention. CDC vital and health statistics: United States life tables by Hispanic origin. Available at:http://www.cdc.gov/nchs/data/series/sr_02/sr02_152.pdf Series. 2010; 2(152). [Accessed January 20, 2021].
10. Shrestha SM, Shrestha S, Tsuda F. Molecular investigation of hepatitis E virus infection in

- patients with acute hepatitis in Kathmandu, Nepal J Med Virol 2003;69:207-14
11. Jun D, Muheng Z, Yuling Y. Relationship between viral hepatitis B and liver cirrhosis and carcinoma. Chinese Medical Journal 1980;93(10):712-6.
12. Trimukhe R, Rai R, Narayankar S M, Shewale S, Jagtap N, Rai S, Parashar MK. Epidemiological spectrum of chronic liver disease in eastern Madhya Pradesh India. J. Association of Physicians of India 2011;59:549-59.