

Assessment of Etiologic Profile of Liver Cirrhosis Among Patients of Known Population at a Tertiary Care Hospital

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ABSTRACT

Background: Cirrhosis is defined as the histological development of regenerative nodules surrounded by fibrous bands in response to chronic liver injury that leads to portal hypertension and end stage liver disease. Hence; the present study was undertaken for assessing the etiologic profile of liver cirrhosis patients.

Materials & Methods: The Present study was conducted on 150 patients with confirmed diagnosis of Cirrhosis liver of varied etiologies. Physical examination was concentrated to detect stigmata of chronic liver disease. Hematological tests were carried out. All patients were screened for Hepatitis B and Hepatitis C and HIV. All the results of etiological profile were correlated. All the results were compiled and analyzed by SPSS software.

Results: Alcohol was the most common etiologic agent found to be present in 54 percent of the cases. NASH was etiologic profile in 18.67 percent of the cases while hepatitis C was the etiologic profile in 16.67 percent of the cases. Non-significant results were obtained while assessing the correlation between

etiologic profile and age and gender-wise distribution of patients

Conclusion: Alcohol was the most common etiologic factor for liver cirrhosis in the present study.

Key words: Etiologic, Cirrhosis.


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INTRODUCTION

As a major regulator of plasma glucose and ammonia levels, liver is essential for optimal function of the brain. Cirrhosis is defined as the histological development of regenerative nodules surrounded by fibrous bands in response to chronic liver injury that leads to portal hypertension and end stage liver disease. Cirrhosis has various causes. Many people with cirrhosis have more than one cause of liver damage. Alcoholism is the one of the common causes of cirrhosis. In Nonalcoholic fatty liver disease, fat builds up in the liver; however, the fat builds up is not due to alcohol use. As the liver fails, complications may develop. In some people, complications may be the first signs of the disease. Liver failure causes fluid build-up that result in edema and ascites.¹⁻³

Ascites can lead to spontaneous bacterial peritonitis, a serious infection that requires immediate medical attention. Physicians involved in the care of patients with cirrhosis recognize that the development of renal dysfunction is associated with significant morbidity and mortality. Special care should be given for the recognition of the acute or chronic character of renal disease; the

causes of renal injury; the clinical conditions leading concomitantly to acute kidney injury and liver dysfunction, and the prognostic factors associated with the progression of acute kidney injury.⁴⁻⁶ Hence; the present study was undertaken for assessing the etiologic profile of liver cirrhosis patients.

MATERIALS & METHODS

The Present study was conducted at Department of Community Medicine, Krishna Mohan Medical College, Mathura, UP (India) on 150 patients with confirmed diagnosis of Cirrhosis liver of varied etiologies. Physical examination was concentrated to detect stigmata of chronic liver disease. Hematological tests were carried out. All patients were screened for Hepatitis B and Hepatitis C and HIV. All the results of etiological profile were correlated. All the results were compiled and analyzed by SPSS software. Chi-square test, one-way ANOVA and Mann Whitney U test were used for assessment of level of significance. P-value of less than 0.05 was taken as significant.

Table 1: Age and gender wise distribution

| Parameter | | Number of patients | Percentage |
|-------------------|--------------|--------------------|------------|
| Age group (years) | Less than 40 | 52 | 34.44 |
| | More than 40 | 98 | 65.56 |
| Gender | Males | 112 | 74.44 |
| | Females | 38 | 25.56 |

Table 2: Etiologic profile of liver cirrhosis

| Etiology | Number of patients | Percentage |
|-------------|--------------------|------------|
| Alcohol | 81 | 54 |
| NASH | 28 | 18.67 |
| Hepatitis C | 25 | 16.67 |
| Others | 16 | 10.66 |

Table 3: Correlation of etiologic profile with age and gender

| Parameter | | Alcohol | NASH | Hepatitis C | Others | p- value |
|-----------|--------------------|---------|------|-------------|--------|----------|
| Age group | Less than 40 years | 28 | 10 | 10 | 4 | 0.18 |
| | More than 40 years | 53 | 18 | 15 | 12 | |
| Gender | Males | 62 | 20 | 16 | 14 | 0.76 |
| | Females | 19 | 8 | 9 | 2 | |

RESULTS

In the present study, a total of 150 patients with cirrhosis of liver were enrolled. Mean age of the patients was 53.8 years. Majority of the patients belonged to the age group of more than 40 years. 74.44 percent of the patients were males while the remaining were females. Alcohol was the most common etiologic agent found to be present in 54 percent of the cases. NASH was etiologic profile in 18.67 percent of the cases while hepatitis C was the etiologic profile in 16.67 percent of the cases. Non-significant results were obtained while assessing the correlation between etiologic profile and age and gender-wise distribution of patients

DISCUSSION

The etiology of cirrhosis can usually be identified by the patient's history combined with serologic and histologic evaluation. Alcoholic liver disease and hepatitis C are the most common causes in the Western world, while hepatitis B prevails in most parts of Asia and sub-Saharan Africa. After the identification of the hepatitis C virus in 1989 and of non-alcoholic steato-hepatitis (NASH) in obese and diabetic subjects, the diagnosis of cirrhosis without an apparent cause (cryptogenic cirrhosis) is rarely made. It is important to know the etiology of cirrhosis, since it can predict complications and direct treatment decisions. It also allows the discussion of preventive measures, e.g., with family members of patients with alcoholic cirrhosis or chronic viral hepatitis, and consideration of (genetic) testing and preventive advice for relatives of patients with genetic diseases, such as hemochromatosis or Wilson's disease. Frequently multiple etiological factors contribute to the development of cirrhosis, as exemplified in epidemiological studies that identified regular

(moderate) alcohol consumption, age above 50 years, and male gender as risk factors in chronic hepatitis C, or older age obesity, insulin resistance/type 2 diabetes, hypertension and hyperlipidaemia (all features of the metabolic syndrome) in NASH.⁷⁻⁹

In the present study, a total of 150 patients with cirrhosis of liver were enrolled. Mean age of the patients was 53.8 years. Majority of the patients belonged to the age group of more than 40 years. 74.44 percent of the patients were males while the remaining were females. Alcohol was the most common etiologic agent found to be present in 54 percent of the cases. Fibrosis and cirrhosis are often used as a synonym and this causes obvious confusion. In particular, this problem often emerges in the description of the favourable effects of antiviral therapy when a significant reduction of fibrosis is often defined as 'cirrhosis reversal'.⁸

In the present study, NASH was etiologic profile in 18.67 percent of the cases while hepatitis C was the etiologic profile in 16.67 percent of the cases. Non-significant results were obtained while assessing the correlation between etiologic profile and age and gender-wise distribution of patients Wang X et al identified 6719 (83.16%) male patients and 1361 (16.84%) female patients. The average age of all of the patients was 50.5 years at the time of diagnosis. The distribution of etiological agents was as follows: viral hepatitis, 80.62%; alcohol, 5.68%; mixed etiology, 4.95%; cryptogenic, 2.93%; and autoimmune hepatitis, 2.03%; whereas the other included etiologies accounted for less than 4% of the total. Infantile hepatitis syndrome Liver Cirrhosis patients were the youngest (2.5 years of age), followed by the metabolic liver cirrhosis group (27.2 years of age). Chronic hepatitis C and

alcohol-related liver disease was found to be the most common causes of cirrhosis, the incidence of cirrhosis caused by non-alcoholic fatty liver disease is rising due to increasing rates of obesity.^{8,9} The etiological profile and seroprevalence of anti-HAV IgG was evaluated in cirrhosis of liver patients. Screening should target young chronic liver disease patients in view of reports of decreasing seroprevalence across Asia as compared to one- or two-decade's back.¹⁰ Another author in 2015 observed alcohol (62.9%) is now being consider most common cause of cirrhosis. Other etiologist includes viral, non-alcoholic fatty lever disease, autoimmune, metabolic.¹¹ Solanke D et al studied the etiology, clinical profile, and prognostic factors related to maternal and fetal health in pregnant patients with liver disease in Western India. Liver disease was most common in the third trimester of pregnancy. Hepatitis E was the most common cause of liver disease in pregnant women in western India with significant maternal mortality, predicted by high MELD score.¹²

CONCLUSION

It can be concluded that alcohol was the most common etiologic factor for liver cirrhosis in the present study.

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