

Etiologies of Cirrhosis in Qom, Central of Iran, During 2011-2016



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Received: 📅 August 28, 2018; Published: 📅 September 05, 2018

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Abstract

Background and Objectives: Liver cirrhosis is a global health problem which was the etiology of %2 of total deaths in the world in 2010. Despite the importance of this disease, no study has evaluated risk factors and etiologies of cirrhosis in central of Iran.

Materials and Methods: 90 cirrhotic patients included this cross-sectional study during 2011- 2016. Demographics, data from past medical history, drug history, underlying etiology of liver cirrhosis and endoscopic findings collected by a checklist and were analyzed using SPSS V.22.

Results: 57 (%63.3) patients were male and 33 (%36.3) were female with a mean age of 53.1 ±1.3 years. The most common etiology of cirrhosis was HBV infection with a prevalence of %40. NAFLD (%18.8), diabetes (%13.3) and HCV infection (%11.1) were other common etiologies respectively. Among all patients, 69 (%76.7) had an underlying disease from which diabetes was the most common with a prevalence of %45.6. Esophageal varices was the most common endoscopic finding.

Conclusion: As viral hepatitis is the most common etiology of cirrhosis in Qom, vaccination and public education could help in decreasing HBV infection and prevalence of liver cirrhosis.

Keywords: Liver Cirrhosis; NAFLD; Hepatitis B; Cirrhosis Complications

Background and Objectives

Liver cirrhosis has been a major contributor to deaths worldwide in recent years. Causes of cirrhosis include alcohol consumption, viral hepatitis, non-alcoholic fatty liver disease and other less common etiologies [1-4]. Fortunately, cirrhosis is a type of illness that can easily be detected by simple laboratory tests or easy radiologic studies [5,6]. The only definite treatment for this disease is liver transplant, which has a limited application in Iran [1-4]. Recent studies demonstrate that the causes of cirrhosis is different based on the regions. For example, in the United States, the prevailing causes of liver cirrhosis are: alcohol consumption, viral hepatitis and non-alcoholic fatty liver disease. The latter cause is also the second leading etiology of liver transplantation in adults [7,8]. Considering the mortality of cirrhosis, study of the prevalence and its most common risk factors seems to be necessary. The aim of

this study is to evaluate the etiology of liver cirrhosis and its related risk factors in the patients in central of Iran.

Materials and Methods

This cross-sectional study aims to detect etiologies and risk factors of liver cirrhosis in Qom, central of Iran during 2011-16. Data was extracted from patients' records by a 7-part questionnaire including demographic data, familial history, risk factors, laboratory findings, ultrasound and endoscopy as well as final diagnosis of the disease by a gastroenterologist. Finally, the data were analyzed by descriptive statistics in SPSS V22.

Results

This study was performed on 90 patients with cirrhosis, 57 (63.3%) males and 33 (36.7%) females with the mean age of 53/1

$\pm 1/3$ years. The mean BMI was $27/7 \pm 4/4$, 42.2% of patients were overweight and 28.8% were obese. Of the 90 patients, 46.6% had no family history of familial diseases and 36.6% had a family history of diabetes. The causes of hepatic cirrhosis included viral hepatitis B, non-alcoholic liver, cirrhosis, diabetes, viral hepatitis C, cryptogenic, alcoholic liver, Wilson and cirrhosis due

to congestive heart failure (CHF). (Table 1) summarizes etiologies of cirrhosis. Upper gastrointestinal endoscopy was normal in eighteen. Abnormal findings include esophagus varices and gastric varices. (Table 2) summarizes endoscopic findings according to the cirrhosis etiologies.

Table 1: Distribution of the etiologies of cirrhosis according to sex.

Diseases	Frequency (%)	
	Male (%)	Female (%)
HBV	25 (69/4)	11 (30/5)
HCV	7 (70)	3 (30)
DM	8 (66/6)	4 (33/3)
AIH	1 (50)	1 (50)
NAFLD	8 (47/1)	9 (52/9)
CHF	1 (100)	0 (0)
Wilson	1 (50)	1 (50)
Cryptogenic	6 (60)	4 (40)

Table 2: The frequency percentage of endoscopic outcome in patients according to the etiology of cirrhosis.

Diseases	Esophagus varices (%)	Gastric varices (%)	Hypertensive gastropathy (%)	Esophagus & gastric varices (%)	Normal (%)	Total
HBV	50	3-Aug	16/6	5-May	19/4	100
HCV	90	0	0	0	10	100
DM	58/3	0	3-Aug	0	33/3	100
AIH	50	0	0	0	50	100
NAFLD	35/2	41/1	7-Nov	8-May	8-May	100
CHF	0	0	100	0	0	100
Wilson	50	0	0	0	50	100
Cryptogenic	30	10	10	20	30	100

Discussion

Total prevalence of the cirrhosis in males was 1.7 times greater than females. The mean age of the patients was 53.1 ± 1.3 years and ranged from 21 to 83 years. The most frequent etiologies were viral hepatitis B, non-alcoholic fatty liver, diabetes, hepatitis C, cryptogenic, alcoholic liver, Wilson and CHF respectively. Hepatitis C was seen in only 11% of subjects, indicating early treatment and early detection of infected people. Patients with viral hepatitis B (the most common cause of cirrhosis in Iran) and those with NAFLD also had the highest rate of obesity. Due to preventable nature of liver cirrhosis and the association between the factors of HBV and cirrhosis, preventive measures and obesity prevention and control of blood glucose by preventing the onset of NAFLD reduce the risk of cirrhosis of the liver in the field of non-alcoholic fatty liver disease [9-11]. In order to prevent the occurrence of hepatitis and liver diseases, as well as to reduce their complications on the health system, general education of viral hepatitis B as well as obesity and lack of proper weight control can be very effective. Experience

showed that future studies should look at variables such as BMI and associated illnesses and then the most important cause of cirrhosis.

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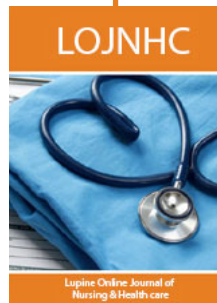


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DOI: [10.32474/LOJNHC.2018.01.000122](https://doi.org/10.32474/LOJNHC.2018.01.000122)



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