

## Assessment of Knowledge about Liver Cirrhosis among Saudi Population

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### ABSTRACT

**Background:** Liver cirrhosis is chronic disease associated with high mortality and morbidity rates all over the world.

**Objectives:** evaluating the knowledge of adult Saudi population toward liver cirrhosis.

**Methods:** A qualitative study was conducted in Kingdom of Saudi Arabia among 820 Saudi subjects during the period from October to December 2017.

**Results:** A total of 820 subjects were enrolled in the study. All the subjects had good knowledge regarding the definition of liver cirrhosis. The majority of subjects had moderate knowledge regarding the causes, prognosis and treatment of liver cirrhosis. More than half of the subjects (54%) had good knowledge regarding liver cirrhosis while 46% had poor knowledge. There was a positive significant association between younger age and high level education with good awareness about cirrhosis of liver

**Conclusion:** The level of awareness among Saudi population toward LC was moderate which necessitates encouraging the educational campaigns on T.V, internet and all over the whole parts of KSA.

**Keywords:** Liver cirrhosis, Knowledge, Saudi adults, KSA, Community.

### INTRODUCTION

Liver cirrhosis is defined as a progressive and chronic liver disease that cause deterioration and destruction of liver cells. The connective tissue fibroids disturb the lymph and blood flow thus interfere with the normal structure and physiology of the liver<sup>(1)</sup>.

The exact causes of liver cirrhosis can't be defined till now but many disorders could result in increasing the liver cirrhosis morbidity and mortality around the world<sup>(2)</sup>. It is also related to alcoholic liver disease and chronic viral hepatitis as hepatitis C and B<sup>(3)</sup>. The clinical symptoms differ among subjects according to the first time for diagnosis, severity and duration of the disease<sup>(4)</sup>.

The incidence of liver cirrhosis is significantly associated with older populations aged from 40 to 60 years old. In United States, it is the fifth principal of mortality among old population<sup>(5)</sup>. Also, it the most essential reason of mortality in Asia<sup>(6)</sup>. In Kingdom of Saudi Arabia (KSA), liver cirrhosis establishes a chief health disorder as about 10% suffer from HBsAg<sup>(7)</sup> and HCV represents about 1.2-2.5% among Saudis<sup>(8,9)</sup>.

To our knowledge, it is the first qualitative study conducted in KSA to assess the knowledge community Saudi population toward liver cirrhosis.

### AIM OF THE STUDY

The study aimed at evaluating the knowledge of adult Saudi population toward liver cirrhosis.

### SUBJECTS AND METHODS

#### - *Study design*

A qualitative study was conducted in Kingdom of Saudi Arabia among community population during the period from October to December 2017.

#### - *Sample size and population*

The sample size was determined using Raosoft sample size calculator<sup>(10)</sup> with 50% response rate and 95% confidence interval and 5% margin error. The sample size for this study included 820 Saudi adults. The subjects were chosen using randomized technique from different parts of KSA and were interviewed in different randomized shopping malls. The exclusion criteria were non-Saudi subjects, adolescent.

#### - *Study tools*

All enrolled subjects undergone an interview and asked to refill a questionnaire sheet to assess their knowledge regarding liver cirrhosis.

#### - *Ethical considerations*

A written approval was given by the participants and the Faculty of Medicine. **The study was done after approval of ethical board of King Abdulaziz university.**

#### - *Statistical analysis*

The data were possessed using the Statistical Package for Social Science (SPSS) program version 22. The descriptive statistical data are shown as frequency and percentage. P values < 0.05 is statistically significant.

**RESULTS**

**Socio-Demographic Characteristics:**

A total of 820 subjects were enrolled in the study. About 41.5% aged from 20-35 years, 33.8% were 36-50 years old and 24.7% were older than 50

years old. The majority of respondents were males (62.7%) and 37.3% were females. Most of the subjects had college degree (72.2%) and 27.8% had high school or primary school. 66.8% were working and the rest were retired or jobless (Table 1).

**Table (1): Demographic of included participants (n=820)**

Age (year)	Frequency	Percentage (%)
20-35	340	41.5
36-50	277	33.8
>50	203	24.7
<b>Gender</b>		
Female	514	62.7
Male	306	37.3
<b>Education</b>		
College	592	72.2
Primary or secondary school	228	27.8
<b>Working status</b>		
Working	548	66.8
Retired or jobless	272	33.2

**Knowledge of respondents**

As for the knowledge, all the subjects had good knowledge regarding the definition of liver cirrhosis. The majority of subjects had moderate knowledge regarding the causes, prognosis and treatment of liver cirrhosis. While the poor knowledge was associated with overweight and obesity as major causes of liver cirrhosis, dietary management and effect of toxins, infection and allergy on increasing the risk of liver cirrhosis (Table.2).

**Table 2: Awareness of respondents toward liver cirrhosis (820):**

	Correct	Incorrect
<b>Cirrhosis is the final stage attained by various chronic liver diseases</b>	820 (100%)	0 (0%)
<b>Cirrhosis can arise from exogenous/toxic.</b>	276 (33.7%)	544 (66.3%)
<b>Cirrhosis can arise from infectious, allergic and immunopathological/autoimmune.</b>	311 (37.9%)	509 (62.1%)
<b>The most common causes of cirrhosis are alcoholic and non-alcoholic fatty liver disease and viral hepatitis (B or C).</b>	589 (71.8%)	231(28.2%)
<b>Overweight and obesity can raises the risk of liver fibrosis progression</b>	128 (15.6%)	692 (84.4%)
<b>Cirrhosis can be prevented through early screening and management of chronic liver diseases</b>	454 (55.4%)	366 (44.6%)
<b>Chronic liver diseases do not usually cause any symptoms till become severe</b>	637 (77.7%)	183 (22.3%)
<b>Treatment of the underlying disease can often stop or even reverse the progression of early-stage cirrhosis</b>	534 (65.1%)	286 (34.9%)
<b>Liver cirrhosis has bad prognosis especially during irreversible state</b>	754 (92%)	66 (8%)
<b>Dietary management and medications could help in increasing the quality of life</b>	364 (44.4%)	456 (55.6%)

**Level of awareness**

More than half of the subjects (54%) had good knowledge regarding liver cirrhosis while 46% had poor knowledge (Fig.1) (Table. 3).

**Table 3: Respondents' awareness toward liver cirrhosis**

Level of awareness	Frequency	Percent (%)
Poor	378	46
Good	442	54
Total	820	100.0



**Figure 1: Level of awareness**

**Association of the subjects' knowledge with socio-demographic variables**

There was a positive significant association between younger age and high level education with good awareness about cirrhosis of liver (Table. 4).

**Table 4: Association between level of knowledge and demographic of the participants**

	Good knowledge (442)	Poor knowledge (378)	
<b>Age</b>			
20-35	229 (51.8%)	111 (29.4%)	0.001
36-50	109 (24.7%)	168 (44.4%)	
>50	104 (23.5%)	99 (26.2%)	
<b>Gender</b>			
Female	277 (62.7%)	237 (62.7%)	0.76
Male	165 (37.3%)	141 (37.3%)	
<b>Education Level</b>			
College	417 (94.3%)	175 (46.3%)	0.001
High School	25 (5.7%)	203 (53.7%)	
<b>Employment</b>			
Employed	294 (66.5%)	254 (67.2%)	0.921
Jobless	148 (33.5%)	124 (32.8%)	

## DISCUSSION

This study is a qualitative study conducted among 820 adult Saudi subjects who were evaluated about their knowledge regarding liver cirrhosis. There is no previous studies conducted in KSA to study the knowledge of community population but not the patients regarding liver cirrhosis.

The cirrhosis of liver cirrhosis (LC) is a serious phase of chronic liver disease with poor prognosis and increased morbidity and mortality rates<sup>(11)</sup>. The knowledge about LC around the world is limited however the high prevalence of the disease and its risk factors including all hepatic diseases<sup>(12)</sup>.

The knowledge regarding LC definition was good among all the participants and this could be attributed to that LC and hepatic disorders have drawn the attention of the researchers and health authorities around the world<sup>(13)</sup>. The knowledge about the risk factors was good among most of the participants regarding the hepatitis virus and fatty liver disease. On the other hand most of the subjects underestimated the effects of obesity, infection, toxicity and autoimmune conditions. These results could be attributed to that most of the studies showed that alcoholic liver disease and chronic viral hepatitis as hepatitis C and B are the leading risk factors for LC around the world<sup>(3, 14, 15)</sup>.

The knowledge of community population regarding the prevention, prognosis and treatment options were moderate among most of the participants and this could be attributed to that the prevalence in KSA is not very high thus the whole Saudi subjects may not be aware of the consequences and management of LC.

The higher educational degree and younger age were significantly associated with good knowledge. This could be due to that the younger and highly educated subjects have good access to new technology from which they could gain a lot of information regarding this disorder. However, many studies showed that older population are more vulnerable to LC thus they may have good knowledge than younger subjects<sup>(5, 13)</sup>.

## CONCLUSION

The level of awareness among Saudi population toward LC was moderate which necessitates encouraging the educational campaigns on T.V, internet and all over the whole parts of

KSA. Also, further studies should be conducted in KSA to study the knowledge of Saudi subjects and patients toward LC.

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