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## SEXUAL DYSFUNCTION; PATIENTS WITH CHRONIC LIVER DISEASE

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**ABSTRACT... Objectives:** To determine the frequency of sexual dysfunction in the patients suffering from chronic liver disease. **Period:** 1 year from June 2013 to May 2014. **Study Design:** An observational study. **Setting:** Asian Institute of Medical Sciences. **Methodology:** 150 cases of chronic liver disease including patients of both genders at Asian Institute of medical sciences who had suggestive history and signs /symptoms of sexual dysfunction. **Results:** Study found 51.3% of total patients were suffering with sexual dysfunction. Out of all participating females, 52.2% were affected and among the total male patients 51% males were suffering from sexual dysfunction. Hepatitis C virus (HCV) and Hepatitis B virus (HBV) were positive in 76.7% and 11.3%, respectively. **Conclusion:** Sexual dysfunction is a common complication in the patients suffering from chronic liver disease.

**Key words:** CLD, sexual dysfunction, complication.

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### INTRODUCTION

Chronic liver disease (CLD) is a result of an inflammatory injury to the liver, which has continued for six or more months which fails to resolve completely. CLD includes variety of diseases for instance chronic hepatitis, liver cirrhosis, and HCC (Hepatocellular carcinoma).<sup>1</sup> According to the national vital statistics report, CLD was ranked as the tenth most frequent cause of death in 1998 in the United States.<sup>2</sup> Chronic liver disease patients with hepatitis C virus (HCV) infection, either as a separate disease or in combination with excessive alcohol consumption, has been found to be the most commonly identified cause (40%-60%), and hepatitis B virus (HBV) infection in small percentage of cases (15%) in population based studies.<sup>3,4</sup>

Menstruation and fertility are commonly affected in chronic liver disease. Hypogonadism (including testicular atrophy, erectile dysfunction, decreased spermatogenesis and feminization (gynecomastia, female habitus) are frequently seen in males suffering from cirrhosis, especially who are alcoholics. In patients who have chronic

liver diseases such as hemochromatosis, erectile dysfunction is a common problem.<sup>5</sup> Alcoholic liver disease<sup>6</sup> or liver transplant patients,<sup>7</sup> suffer from worsening of quality of life. In patients with advanced liver disease, erectile dysfunction may be a result of hypogonadism or protein malnutrition.<sup>8,9</sup> Erectile dysfunction in such patients may be improved by removing the causative agents like iron or ethanol or by administering testosterone.<sup>6,7</sup> In patients with chronic HCV infection, erectile dysfunction was found to be more frequent than in control subjects (39% vs 14%, respectively) most likely due to direct effect on neurovascular and hormonal systems (i.e. low testosterone levels) of HCV.<sup>10</sup> Sexual dysfunction may improve in patients with chronic HCV infection with antiviral treatment with interferon plus ribavirin successfully.<sup>11</sup> No previous study has been done on this topic in Pakistan. Purpose of the present study to determine the chronic liver disease affects on sexual system in both male and female at Asian institute of medical sciences.

### MATERIAL AND METHODES

This observational study was conducted at Asian

Institute of medical sciences in the duration of 1 year from June 2013 to May 2014. In this study, one hundred and fifty cases of chronic liver disease including both genders on the basis of history and signs/symptoms of sexual dysfunction who presented in the OPDs were selected. All the married patients were included in the study. All the laboratory investigations, physical examination and ultrasound were carried out for diagnosis of the chronic liver disease. Patients with all etiological factors of chronic liver disease as HCV, HBV, Alcohol and all others were selected in the study. Written consent was taken and complete sexual history was taken from both male and female patients. Arizona Sexual Experiences Scale (ASEX) scoring regarding sexual dysfunction in Chronic Liver disease (CLD) was used. Validity and reliability of ASEX tool has been reported by McGahuy et al.<sup>12</sup> Data was analyzed on SPSS version 16.0 (IBM corp, Chicago IL, USA). Descriptive statistics were used and percentages were calculated. Comparison was done between both genders in regards of having sexual dysfunction through chi-square test. Ethics approval was obtained from Ethics approval committee of Asian Institute of Medical Sciences hospital.

## RESULTS

150 proformas were filled at Asian institute of medical sciences from June 2013 to May 2014. Patients belonging to both genders were included in the study. Almost 104(69.3%) male and 46(30.7%) females participated. According to Arizona Sexual Experiences Scale (ASEX) scoring regarding sexual dysfunction in Chronic Liver disease (CLD) patient, 77(51.3%) had sexual dysfunction and 73(48.7%) did not have sexual dysfunction. When comparison done between both genders, 24(52.2%) females out of total participating female patients were having sexual dysfunction and 53(51%) males out of total participating male patients had sexual dysfunction which shows that females had more sexual dysfunction as compared to males. The patients who were included in our study had different etiologies so we compare them to check to which etiological factor sexual dysfunction

is more prevalent and our results showed that HCV positive patient had 115(76.7%) sexual dysfunction next to that is HBV positive patient they were 17(11.3%) with sexual dysfunction, remaining had HBV+HCV positive 4(2.7%) and HBV+HDV positive 2(1.3%). Patient with HDV positive, HBV+HCV+HDV positive, alcohol, alcohol +HCV positive 1(0.7%) had sexual dysfunction each and 8(5.3%) people had sexual dysfunction due to other etiological factor Figure-1. 46(59.7%) patients of child class B were suffering from sexual dysfunction and 29(37.7%) and 2(2.6%) patients of child class C and child class A, respectively. Figure-2.

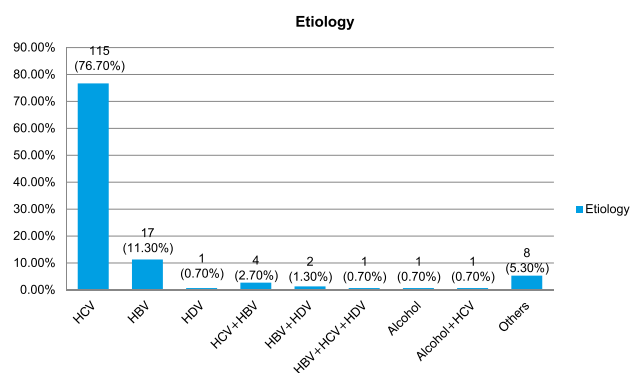


Figure-1. Etiological factors.

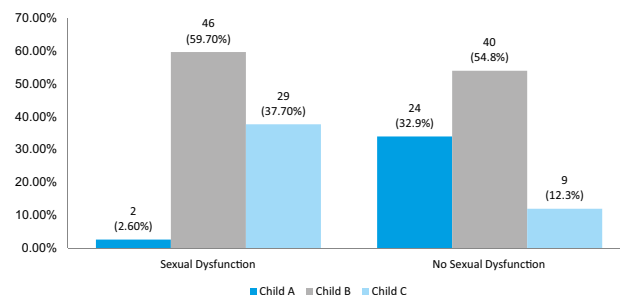


Figure-2. Comparison between sexual dysfunction and child class.

## DISCUSSION

In the present study carried out at Asian Institute of Medical Sciences Hospital, over 150 patients which included both genders 69.8% male and 30.2% females, 51.3% had sexual dysfunction and 48.7% did not have sexual dysfunction according to ASEX scoring regarding sexual dysfunction in chronic liver disease (CLD) patients. Similar high prevalence of sexual dysfunction and

dissatisfaction with sexual life was reported by Fábregas BC et al.<sup>13</sup> When comparison was done in our study between both genders, 52.2% females were found to be experiencing sexual dysfunction and 51% male were having sexual dysfunction which shows that female were having more sexual dysfunction as compared to male. In another study related to sexual dysfunction before and after liver transplantation showed that males were more affected as compare to female.<sup>14</sup> In another similar study, compared to 43% in the general population, 50% female patients experienced sexual dysfunction.<sup>15,16</sup>

In a study conducted by Nolte et al. reported that in seventeen male patients, those who underwent (transjugular intrahepatic port systemic stent shunting), 30% - 70% erectile dysfunction increased.<sup>17</sup> In another study by James H et al also showed partial sexual dysfunction in the 20.6% and complete dysfunction in the 34.3% of the cases.<sup>14</sup> Similar prevalence of sexual dysfunction in male patients 22% was seen in the study conducted by El-Atrebi KA et al.<sup>18</sup>

Sorrel JH et al reported that in his study females were having more sexual dysfunction as compared to males.<sup>19</sup> Fábregas BC et al also showed association of female gender with sexual dysfunction.<sup>13</sup> Similarly Elshimi E et al also reported negative impact of chronic liver disease over sexual function of females.<sup>20</sup>

In this study patient who were included in our study had different etiologies so we compared all etiologies to check to which etiological factor sexual dysfunction is more related and our results show that HCV positive patients had 76.7% sexual dysfunction.

Male sexual dysfunction prevalence may range up to 47% and erectile dysfunction up to 39% in patients with chronic HCV infection.<sup>19,21</sup> In a research, men suffering from chronic hepatitis C reported some extent of impairment in sexual desire, erectile and ejaculatory function and dissatisfaction with their sexual life 37%, 26%, 22% and 44% respectively.<sup>22</sup>

Soykan et al. reported that sexual dysfunction was in (21%) of the cases with chronic HCV.<sup>15</sup> Further more Danoff et al. and Foster reported in accordance with our results strong association between sexual dysfunction and advanced hepatic fibrosis or cirrhosis.<sup>23,24</sup> HBV positive patients 11.8% reported sexual dysfunction, remaining had HBV+HCV positive 2.9%, HBV+HDV positive 1.5%. Patient with HDV positive, HBV+HCV+HDV positive, alcohol, alcohol +HCV positive 0.7% had sexual dysfunction, sexual functioning in patients with end stage, these results can be compared with the study of James et al.<sup>14</sup>

## CONCLUSION

This study concludes that the sexual dysfunction is the common complication in the patients having chronic liver disease and there is a strong correlation between sexual dysfunction and chronic liver disease. Females are more commonly affected as compare to males.

## ACKNOWLEDGEMENT

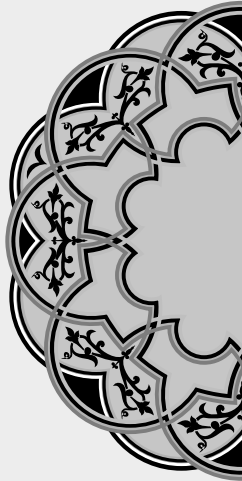
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*“Never hate your enemies,  
if affects your judgement.”*

**The God Father**

### AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Dr. M. Adnan Bawany	Principle investigator, conceptualization of design of the research work, Data collection, questionnaire design, literature search, statistical analysis and interpretation, drafting, revision and writing of manuscript and final approval.	
2	Dr. Abdul Aziz Sahito	Conceptualization and design of the research work, data collection, questionnaire design, literature search, statistical analysis and interpretation, drafting revision and writing of manuscript and final approval.	
3	Dr. Falak Naz	Conceptualization and design of the research work, data collection, questionnaire design, literature search, statistical analysis and interpretation, drafting revision and writing of manuscript and final approval.	
4	Dr. Adnan Ali Khahro	Conceptualization and design of the research work, data collection, questionnaire design, literature search, statistical analysis and interpretation, drafting revision and writing of manuscript and final approval.	
5	Dr. Rabail Bohio	Conceptualization and design of the research work, data collection, questionnaire design, literature search, statistical analysis and interpretation, drafting revision and writing of manuscript and final approval.	
6	Dr. Farrukh Bohio	Conceptualization and design of the research work, data collection, questionnaire design, literature search, statistical analysis and interpretation, drafting revision and writing of manuscript and final approval.	
7	Dr. Syeda Fiza Nasir	Conceptualization and design of the research work, data collection, questionnaire design, literature search, statistical analysis and interpretation, drafting revision and writing of manuscript and final approval.	