

Gender Differences in the Quality of Life of Patients with Liver Cirrhosis

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ABSTRACT

Background: Chronic liver disease frequently arises as a consequence of hepatitis C virus (HCV) infection, which can have detrimental effects on the quality of life for those affected. Gender may play a significant role in assessing the disease's severity and managing it. Therefore, this study was conducted to see the gender-based difference in HRQoL among patients.

Patients and methods: A cross-sectional study was conducted at the Gastroenterology Department of Allama Iqbal Medical College/Jinnah Hospital in Lahore. The study involved a total of 250 patients diagnosed with liver cirrhosis. To assess Health-Related Quality of Life (HRQoL), the researchers utilized the Chronic Liver Disease Questionnaire (CLDQ), containing 29 items categorized into six domains. Each domain is assigned summary ratings ranging from 1 to 7, with higher scores indicating a lesser degree of impairment in HRQoL. The data were analyzed using SPSS version 25.0. Gender-based comparisons of CLDQ domains were made through an independent sample t-test, and a significance level of $p < 0.05$ was considered statistically significant.

Results: In this current study, a total of 250 patients were enrolled, with 141 (56.4%) being male and 109 (43.6%) being female. The mean age of the patients was 49.52 ± 1.62 . The assessment of the patients' liver condition using the Child-Pugh Class revealed that the majority, specifically 118 (47.2%) patients, were categorized as Class B. Within this group, 55 (39.0%) were male, and 63 (57.8%) were female. It was found that females tended to have a less impaired quality of life compared to males (Male= 3.26 ± 0.81 , Female= 5.24 ± 1.02), and this difference was statistically significant (p -value < 0.05). Furthermore, in the domain of fatigue (Male= 2.93 ± 1.22 , Female= 3.05 ± 0.94) and emotional functioning (Male= 3.31 ± 0.98 , Female= 5.04 ± 1.18), there were significant differences in the scores. Notably, males had better scores in the fatigue and emotional functioning as compared to females (p -value < 0.05).

Conclusion: These findings demonstrated that the gender variable's significant impact on HRQoL of CLD patients. It was found that females tended to have a less impaired quality of life compared to males. Males had better scores in the fatigue and emotional functioning as compared to females.

Keywords:

Gender, Health-Related Quality of Life, Chronic Liver Disease Questionnaire

INTRODUCTION

Cirrhosis of the liver is a significant cause of morbidity and mortality and a serious public health issue.¹ Among the several causes of cirrhosis are prolonged exposure to toxic elements like arsenic, the parasite schistosomiasis, and repeated episodes of heart failure accompanied by liver congestion.² The diagnosis of chronic liver disease has a significant impact on the patient's life, often signifying the beginning of continuous medical monitoring and care and involving the formalities associated with being placed on the waiting list for liver transplantation. In addition to the clinical

manifestations of liver disease, ongoing monitoring and evaluation can negatively impact patients' quality of health (HRQoL).³

Chronic liver disease is often triggered by hepatitis C virus (HCV) infection, which negatively affects patients' quality of life. The patient's gender may play an important role in how serious the disease is considered to be.⁴ Research has shown that there are gender differences in the natural history of chronic liver disease. For most types of chronic liver disease, men are significantly more likely to be affected than women, with men accounting for between 55-70% of cases.⁵⁻⁷

Women were believed to have better clinical outcomes than men early on in the progression of chronic liver disease. Women are less likely than men to experience flashes and reactivation of hepatitis B,⁸ and they are more likely to spontaneously clear the hepatitis C virus.⁹ The patient's gender might play a significant role in how severe the disease is assessed to be. In

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common liver diseases, there are gender differences in incidence, presentation, disease progression, and treatment outcomes.¹⁰

These differences are critical for clinicians because they affect the likelihood that a patient will receive a particular diagnosis and the possibility that liver disease will progress. The aim of our study was to investigate gender differences in the quality of life of patients with liver cirrhosis.

PATIENTS AND METHODS

A cross-sectional study was conducted at the Gastroenterology Department of Allama Iqbal Medical College/Jinnah Hospital in Lahore. The study involved a total of 250 patients diagnosed with liver cirrhosis. To assess Health-Related Quality of Life (HRQoL), the researchers utilized the Chronic Liver Disease Questionnaire (CLDQ), which is a liver disease-specific questionnaire containing 29 items categorized into six domains. Each domain is assigned summary ratings ranging from 1 to 7, with higher scores indicating a lesser degree of impairment in HRQoL. The data were analyzed using SPSS version 25.0. Gender-based comparisons of CLDQ domains were made through an independent sample t-test, and a significance level of p -value < 0.05 was considered statistically significant.

RESULTS

Total 250 patients were included in current study among which 141 (56.4%) were male and 109 (43.2%) were females. The mean age of the patients was 49.52 ± 1.62 . Majority 203 (81.2%) patients were married among which 95 (87.2%) were females and 108 (76.6%) males. Most of the patients have normal weight 156 (62.4%). The Child Pugh Class shows that majority 118 (47.2%) of patients belongs to class B among which 55 (39.0%) were male and 63 (57.8%) females. (Table 1)

Table 2 shows the comparison of HRQoL of patients using CLDQ among patients. The overall HRQoL among gender showed the significant difference. Females prone to have less impair quality of life as compared to males (Male = 3.26 ± 0.81 , Female = 5.24 ± 1.02) (p -value < 0.05). The abdominal symptoms, systemic symptoms, activity and Worry domain of CLDQ shows insignificant difference among gender (p -value > 0.05). In terms of fatigue (Male = 2.93 ± 1.22 , Female = 3.05 ± 0.94) and emotional functional (Male = 3.31 ± 0.98 , Female = 5.04 ± 1.18) there was significant difference among scores. Males have better scores in fatigues and emotional function as compared to females (p -value < 0.05).

Table 1: Baseline characteristics of patients

Variables	Male (n=141)	Female (n=109)	Total (n=250)
Age (mean \pm SD)	47.32 \pm 1.72	51.83 \pm 1.52	49.52 \pm 1.62
Marital Status			
Single	33 (23.4%)	14 (12.8%)	47 (18.8%)
Married	108 (76.6%)	95 (87.2%)	203 (81.2%)
BMI			
Underweight	22 (15.6%)	8 (7.3%)	30 (12.0%)
Normal	84 (59.6%)	72 (66.1%)	156 (62.4%)
Overweight	28 (19.9%)	18 (16.5%)	46 (18.4%)
Obese	7 (5.0%)	11 (10.1%)	18 (7.2%)
Child Pugh Class			
A	67 (47.5%)	29 (26.6%)	96 (38.4%)
B	55 (39.0%)	63 (57.8%)	118 (47.2%)
C	19 (13.5%)	17 (15%)	36 (14.4%)

Table 2: Gender based comparison of HRQoL using CLDQ among patients

Variables	Gender of patients	Mean	Std. Deviation	p-value
Total CLDQ Score	Male	3.26	0.81	0.01*
	Female	5.14	1.02	
Fatigue	Male	2.93	1.22	0.003*
	Female	3.05	0.94	
Abdominal Symptoms	Male	2.91	1.27	0.85
	Female	2.90	1.28	
Systemic Symptoms	Male	3.11	1.07	0.275
	Female	3.00	1.18	
Activity	Male	5.14	1.28	0.607
	Female	3.13	1.34	
Emotional Function	Male	3.31	0.98	0.038*
	Female	5.04	1.18	
Worry	Male	3.84	1.49	0.11
	Female	5.77	1.72	

DISCUSSION

Chronic liver disease is often triggered by hepatitis C virus (HCV) infection, which negatively affects patients' quality of life. The patient's gender may play an important role in diagnosis of severity of disease and its management. Therefore, this study was conducted to see the gender based difference of HRQoL among patients. In current study total 250 patients were included in current study among which 141 (56.4%) were male and 109 (43.2%) were females. The mean age of the patients was 49.52 ± 1.62 . Majority 203 (81.2%) patients were married among which 95 (87.2%) were females and 108 (76.6%) males. Most of the patients have normal weight 156 (62.4%). The Child Pugh Class shows that majority 118 (47.2%) of patients belongs to class B among which 55 (39.0%) were male and 63 (57.8%) females (Table 1)

The most of the patients in a study on disease-specific health-related quality of Life and its factors in liver cirrhosis were male, above 60 years old, and Child Pugh class B. These findings coincide with the findings of the recent study.¹¹ It was also reported in other study that the patients' average age was 48 ± 12 years, that there were 497 men, that 391 of the patients had compensated cirrhosis, 84 had decompensated cirrhosis,

and that 186 had received a liver transplant.¹² According to another study, cirrhosis, especially in younger patients, had an impact on all dimensions of health-related quality of life in addition to pain. They reported that gender differences did not matter, regardless of etiology. Disease severity and perceived health status were the two characteristics most closely associated with patients' adverse health outcomes (Child-Pugh score). Perceived health problems affected most areas of daily life; this was particularly problematic for men's ability to pursue employment and sex life and for women to focus on household chores and social life.¹³

In current study the overall HRQoL among gender showed the significant difference. In terms of fatigue emotional functional there was significant difference among scores. Males have better scores in fatigues and emotional function was strong in females (p -value<0.05). However, there are gender distinctions that are frequently ignored or improperly addressed, yet how disease is treated and recovered from varies from person to person.

According to study conducted on the gender based comparison of HRQoL reported that the factors relating to physical activity and perceived restrictions, "physical functioning" and "physical role functioning," were assessed more favorably by male patients. In both measures, the female patients scored lower, indicating a lower quality of life.^{4,14} Van den Berg-Emons et al. evaluated the occurrence, cause, severity, and factors influencing fatigue in liver transplant recipients in a cross-sectional study and came to the conclusion that women perceive fatigue more severely.¹⁵

CONCLUSION

These findings demonstrated that the gender variable's significant impact on HRQoL of CLD patients. It was found that females tended to have a less impaired quality of life compared to males. Males had better scores in the fatigue and emotional functioning as compared to females. Improved HRQoL may result from being able to effectively treat patients with chronic liver disease and its severity. The gender differences in the quality of life questionnaire found in this study may help to focus attention on the most problematic and often ignored aspect in patients with chronic liver disease by targeting care and interventions in the

management of CLD to an important variable such as gender.

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