

## Original Research

### Assessment of quality of life in patients with chronic liver disease

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#### ABSTRACT

**Background:** Chronic liver disease (CLD) refers to a spectrum of progressive liver disorders that persist over a long period, typically longer than six months, and can lead to irreversible liver damage. The present study was conducted to evaluate quality of life in patients with chronic liver disease.

**Materials & Methods:** 104 patients with chronic liver disease were divided into 4 groups. Group I was group I: chronic alcoholic liver disease (ALD), group II: chronic liver disease due to viral infection (hepatitis B and hepatitis C), group III: chronic liver disease of other etiologies and group IV: cryptogenic liver disease. Each group comprised 26 patients. The CLDQ was recorded.

**Results:** Out of 104 patients, males were 64 and females were 40. Financial burden was seen in 17, 23, 6 and 8 patients in group I, II, III and IV respectively. Duration of disease was 24.5 month, 28.4 months, 36.5 months and 45.1 months. The mean MELD score was 23.1, 23.8, 13.8 and 13.7. Child's class was A seen in 1, 2, 2 and 4 patients, class B in 20, 15, 14 and 8 and class C in 5, 9, 10 and 14 patients in group I, II, III and IV respectively. The difference was significant ( $P < 0.05$ ). The mean CLDQ score in group I was 99.2, in group II was 98.5, in group III was 105.2 and in group IV was 101.3. The difference was significant ( $P < 0.05$ ).

**Conclusion:** Child's C status was associated with worse CLDQ scores. Child's status may have some role in predicting quality of life of patients with CLD. MELD score had poor predictability of quality of life.

**Keywords:** Chronic liver disease, MELD score, quality

#### Introduction

Chronic liver disease (CLD) refers to a spectrum of progressive liver disorders that persist over a long period, typically longer than six months, and can lead to irreversible liver damage. The liver, a vital organ, is responsible for numerous essential functions, including detoxification, protein synthesis, and production of biochemicals necessary for digestion. When chronic liver disease occurs, these functions can be significantly impaired.<sup>1</sup>

Numerous liver illnesses have been found to be caused by the hepatitis viruses A–G. Hepatitis B and C viruses are the main cause of chronic liver disease in India.<sup>2</sup> Hepatitis B is a common disease, estimated to affect about 350 million people worldwide, or roughly 5% of the total population. Hepatocellular carcinoma may also be more common in people with simultaneous HBV and HCV infections than in individuals with only one virus.<sup>3</sup> It seems paradoxical that an organ of such importance can hardly mend itself if injured beyond a certain point. In addition to affecting the liver's regular function, injury to the liver can also lead to abnormal behavior in other organs.<sup>4</sup>

Quality of life (QOL) is a concept that incorporates many aspects of an individual's experience, general well-being, satisfaction, social and physical function.<sup>5</sup> Assessing quality of life (QOL) allows for a more accurate assessment of how these occurrences affect the patient's overall health. Assessing the effect of treatment on a patient's daily life is also beneficial.<sup>6</sup> The present study was conducted to evaluate quality of life in patients with chronic liver disease.

#### Materials & Methods

The present study was conducted on 104 patients with chronic liver disease of both genders. All were informed regarding the study and their written consent was obtained.

Data such as name, age, gender etc. was recorded. The liver biochemistry was done. Liver biopsies, upper gastrointestinal endoscopies, and ultrasounds with Doppler studies were also done. Patients were based on the

etiology of CLD patients were divided into 4 groups. Group I was group I: chronic alcoholic liver disease (ALD), group II: chronic liver disease due to viral infection (hepatitis B and hepatitis C), group III: chronic liver disease of other etiologies and group IV: cryptogenic liver disease. Each group comprised of 26 patients. The CLDQ included 29 items in the following domains: abdominal symptoms, fatigue, systemic symptoms, activity, emotional function and worry. The response of CLDQ results in 1–7 scales: ranging from “all of the time” to “none of the time”. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

**Results**

**Table: I Distribution of patients**

Total- 104		
Gender	Males	Females
Number	64	40

Table I shows that out of 104 patients, males were 64 and females were 40.

**Table: II Assessment of parameters**

Parameters	Variables	Group I	Group II	Group III	Group IV	P value
Social profile	Financial burden	17	23	6	8	0.05
Disease profile	Duration of disease	24.5	28.4	36.5	45.1	0.04
MELD score		23.1	23.8	13.8	13.7	0.01
Child’s class	A	1	2	2	4	0.02
	B	20	15	14	8	
	C	5	9	10	14	
variceal bleed		17	14	7	2	0.04
encephalopathy		161	17	5	7	0.05

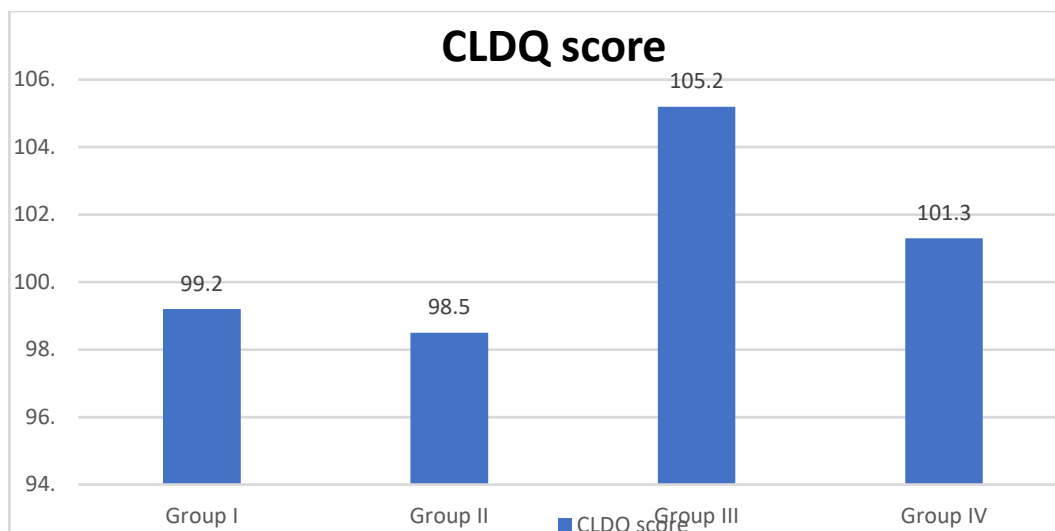
Table II shows that financial burden was seen in 17, 23, 6 and 8 patients in group I, II, III and IV respectively. Duration of disease was 24.5 month, 28.4 months, 36.5 months and 45.1 months. The mean MELD score was 23.1, 23.8, 13.8 and 13.7. Child’s class was A seen in 1, 2, 2 and 4 patients, class B in 20, 15, 14 and 8 and class C in 5, 9, 10 and 14 patients in group I, II, III and IV respectively. The difference was significant (P< 0.05).

**Table: III Comparison of CLDQ score**

Groups	CLDQ score	P value
Group I	99.2	0.79
Group II	98.5	
Group III	105.2	
Group IV	101.3	

Table III, graph I shows that the mean CLDQ score in group I was 99.2, in group II was 98.5, in group III was 105.2 and in group IV was 101.3. The difference was significant (P< 0.05).

**Graph :I Comparison of CLDQ score**



### Discussion

Chronic illnesses are becoming more common overall, and liver disorders in particular are regarded as a major worldwide public health concern.<sup>7</sup> Chronic liver disease (CLD) is a major cause of morbidity and death rates. Approximately 500 million people worldwide suffer with CLD, which is caused by a virus.<sup>8</sup> Nevertheless, non-viral etiologies of CLD also exist, such as fatty liver, autoimmune, cryptogenic, and alcoholic hepatitis, among other unknown causes.<sup>9</sup>

Because patients with chronic diseases are living longer, evaluating the quality of life (QoL) of those who suffer from them has become standard clinical practice in the last few decades.<sup>10</sup> The influence of a condition on an individual's quality of life is reflected in the term health-related quality of life (HRQoL).<sup>11</sup> It is a multifaceted, subjective idea that addresses a range of areas of the person's life, including age, gender, socioeconomic status, and type of illness, and treatment,<sup>9</sup> that should be considered during patient evaluation.<sup>12</sup> The present study was conducted to evaluate quality of life in patients with chronic liver disease.

We found that out of 104 patients, males were 64 and females were 40. Financial burden was seen in 17, 23, 6 and 8 patients in group I, II, III and IV respectively. Souza et al<sup>13</sup> assessed the health-related quality of life of patients with chronic liver disease. A cross-sectional survey was conducted on 133 chronic liver disease patients, using three instruments: a demographic questionnaire, the Chronic Liver Disease Questionnaire, and Model for End-Stage Liver. The mean age of included subjects was 50.5±13.3 years. The majority were male (66.2%), Caucasian (70.7%), and had a family income of US\$329–US\$658.2. Over half of the patients (56.4%) were infected by hepatitis C virus and 93.2% had low Model for End-Stage Liver Disease scores. Model for End-Stage Liver Disease score was related to age ( $r=0.185$ ;  $p=0.033$ ). Higher mean Chronic Liver Disease Questionnaire scores were obtained for emotional function (39.70/SD±12.98) and while lower scores were obtained for abdominal symptoms (16.00/SD±6.25). Fifty-two patients (39.1%) presented overall low (<5) Chronic Liver Disease Questionnaire scores. Furthermore, Chronic Liver Disease Questionnaire score was related to family income.

We observed that duration of disease was 24.5 month, 28.4 months, 36.5 months and 45.1 months. Ray et al<sup>14</sup> in their study Bengali CLDQ was administered to 100 patients with CLD. Cronbach's alpha of overall scores was 0.90 and test-retest correlation coefficient of average CLDQ was 0.86 ( $P<0.001$ ). Patients with history of decompensation (96.51 vs. 109.61;  $P=0.039$ ) and Child's C status (92.24 vs. 105.71;  $P=0.028$ ) had significantly lower CLDQ scores. CLDQ scores showed a moderate inverse correlation with Child's status ( $r=-0.35$ ) and a poor correlation with MELD score ( $r=-0.09$ ).

The mean MELD score was 23.1, 23.8, 13.8 and 13.7. Child's class was A seen in 1, 2, 2 and 4 patients, class B in 20, 15, 14 and 8 and class C in 5, 9, 10 and 14 patients in group I, II, III and IV respectively. The mean CLDQ score in group I was 99.2, in group II was 98.5, in group III was 105.2 and in group IV was 101.3. Gazineo D et al<sup>15</sup> evaluated if the CLD severity may affect the HRQOL and the development of depressive symptoms. HRQOL was measured with Short Form 12 (SF-12) and Nottingham Health Profile (NHP) questionnaires; depressive symptoms were measured with Beck Depression Inventory-II (BDI). CLD severity was measured using the MELD score and the sample was stratified into five classes according to it. Two hundred and fifty-four patients were included. Mean age was 62.84 years (SD 11.75) and 57.9% were male. Most participants were affected by compensated cirrhosis (140.2%) and chronic hepatitis (40.2%), with a disease duration  $\geq 5$  years (69.3%). Regarding the MELD score, 67.7% of patients belonged to Class I, 29.9% to Class II, and 2.4% to Class III. There were not patients belonging to the Classes IV and V. No statistically significant differences were found in all SF-12 and NHP domains between the MELD classes, except for CLD

impact on sexual life and holidays ( $p=0.037$  and  $p=0.032$ , respectively). A prevalence rate of 26% of depressive symptoms was reported, no statistically significant differences were found in BDI-II total scores between the three MELD classes.

The shortcoming of the study is small sample size.

### Conclusion

Authors found that child's C status was associated with worse CLDQ scores. Child's status may have some role in predicting quality of life of patients with CLD. MELD score had poor predictability of quality of life.

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