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Quality of Life in Chronic Hepatitis B and C Patients

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Background and Aims: **Chronic hepatitis B and C are prevalent diseases, especially in developing countries. In many of the patients they cause limitations in physical and mental functions and finally cause reduction in their life quality. We wanted to assess the quality of life in these patients.**

Methods: **This research was done on 74 chronic hepatitis B and C patients of Rasht which their diseases were confirmed by serologic and histologic methods and their hepatic enzymes including AST & ALT was two times more than normal range for at least 6 months. Cross-sectional questionnaire survey performed in October 2003 till Jully 2004 in Gastrointestinal & Liver Diseases Research Center of Rasht (north city of Iran), Razi hospital. The questionnaires consisted of 29 questions that were given to the patients and they were let free to complete it.**

Results: **The individuals under survey consisted of 15 (20.27%) chronic hepatitis B patients and 59 (79.72%) chronic hepatitis C patients. 54 (72.79%) ones were male and 20 (27.02%) were female. Total adjusted score (up to 100 points) of life quality was 54.4 ± 22.5. No meaningful difference was seen between two sexes based on total score of life quality. Also, in different fields of life quality no significant difference was seen between two genders, except the systemic signs that the average of adjusted score of females (43 ± 28) was less than males (63 ± 27) that means meaningful statistical difference (P < 0.007).**

Conclusions: **Generally, it seems that chronic hepatitis B and C have untoward life qualities which could result from concern of decrease of social support or fear of society or decrease in patronage of the family or friends and it is mandate to be concerned when furnishing services to these patients.**

Keywords: **Hepatitis B, Hepatitis C, Life Quality, Rasht**

Introduction

In 1948, WHO defined health as not only absence of illness, but also complete physical, emotional and social welfare. In recent years the manifesto has been invigorated to contain the concept of the ability to have dynamic social and economic life. The concept of life quality implies physical, emotional and social health. In other words it denotes the issues that are affected by patients' emotions or understandings about their health state or beliefs and expectancies about the illness they have [(1)]. Based on changes in illness and

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death pattern of societies in recent years millions of people are engaged with chronic illnesses which in many cases the illness with different stages can cause limitations in their physical and mental function and finally in their health. Chronic hepatitis is a disabling condition that leads to impairment of life quality [2].

Antiviral therapy appears to reduce quality of life [3-5], and improvement was observed after successful therapy in some patients [5]. Decisions concerning the initiation of antiviral therapy against HBV or HCV have to balance benefits versus risks of therapy. Treatment can suppress the viruses, but the treatments are expensive and complex, and all patients don't achieve durable viral response [6, 7]. Given the natural history of HBV, HCV and the complexities, costs, and toxicities of the currently available therapeutic regimens, quality of life considerations are of the most important for patients infected with these viruses [8]. Surveys on life quality in chronic hepatitis patients are few and future efforts are to define the issues that have negative impact on the life quality of patients, thus more attention is directed towards therapeutic or rehabilitation programs which can promote patients' total health stage causing the lessening of the effects of chronic viral hepatitis B and C on patients' lives. This study surveys the properties quality of life in chronic hepatitis patients to assess different dimensions involving these patients.

Materials and Methods

Through a cross-sectional study patients with hepatitis B or C referred to Gastrointestinal & Liver Disease Research Center (GLDRC) of Rasht (north city of Iran), Razi Hospital in October 2003 till Jully 2004 included if: 1) more than 18 years of age, 2) no present psychiatric illness, 3) no present lingual or comprehensional problem and 4) no present illness and detected cancer. The material for data collecting was a specific questionnaire for evaluation of life quality in chronic hepatic patients that was designed by Younossi *et al.* [9] for clinical survey in 1999 by means of the application of several articles and opinions of experienced and professional individuals and specific groups of people. The questionnaire consists of 29 heptachoice questions in six dimensions (systemic symptoms, activity, fatigue, emotional states, abdominal symptoms and anxiety) and the score is from 29 to 203 which are the score of the worst to best quality of life.

After translation of the questionnaire the trunk of questions were adjusted to quality of life in Iran and were verified with regard to eloquence in appearance and content by the internal and sociomedical specialists. Then its stability was tested in a pilot study and then final corrections were carried out. Total list of chronic hepatitis B and C patients was taken from admission part of Razi Hospital. The list was verified using available serologic and histologic documents including: liver enzymes, AST and ALT at least twice as much the normal range for at least 6 months, then patients were invited to GLDRC and the questionnaire were given to them. In the cases that the questions were vague to the patients, a person familiar to the questionnaire made it clear.

Results

74 patients attended the study, 15 individuals had chronic hepatitis B (20.27%) and 59 had chronic hepatitis C (79.72%). 54 ones were male (72.79%) and 20 were female (27.02%). The life quality score was totally 123.69 ± 23.39 of the 203 reference that is equal to 54 ± 22.5 after adjustment the score (up to 100 points). The most adjusted score was in abdominal symptoms dimension and was (64 ± 28) and the least one was for emotional dimension that was (54 ± 22.5). No meaningful difference in quality of life score was seen between males and females. Although in different dimensions of life quality there was no statistical meaningful difference between the two genders, but in the systemic symptoms difference between male and female was significant ($P < 0.05$), the females' score (43 ± 28) was less than males' score (63 ± 27) (Table 1 and 2). The quality of life score was higher among the literate ones but anxiety score was the same in all the patients i.e. in the literate ones it is (60 ± 23) and in illiterate ones it is (47 ± 23) (Figure 1).

Based on concomitant illnesses it was seen that 22 ones had kidney diseases and had undergone dialysis

Table 1. Quality of life score after adjustment (up to 100 points) by hepatitis type

Quality of life	Chronic hepatitis B	Chronic hepatitis C	Total
Systemic symptoms	62 ± 28	56 ± 29	57 ± 28
Activity	61 ± 26	59 ± 33	59 ± 31
Abdominal symptoms	59 ± 34	65 ± 26.5	64 ± 28
Fatigue	55 ± 30	53 ± 25	53.5 ± 26
Anxiety	54 ± 23	56 ± 23	56 ± 23
Emotional states	48 ± 30	47 ± 25	47 ± 26
Total	55 ± 25	54 ± 22	54 ± 22.5

Table 2. Quality of life score after adjustment (up to 100 points) by sex

Quality of life	Male	Female
Systemic symptoms *	63 ± 27	43 ± 28
Activity	62.5 ± 33	51 ± 26
Abdominal symptoms	64 ± 28	65 ± 31
Fatigue	55 ± 26	45 ± 25
Anxiety	56 ± 23	41.5 ± 24
Emotional states	49 ± 27	35 ± 23
Total	57 ± 26	48 ± 21

* $P < 0.05$

and 3 ones had thalassemia whose score of life quality was lower, except in anxiety dimension which had no meaningful difference i.e. it was (54 ± 23) and ones without concomitant illnesses it was (41.5 ± 17.5) (Figure 2). In another survey based on whether the patients had been treated or not it was seen that in hepatitis B there is no meaningful difference between treated or non-treated patients (Table 3); but in hepatitis C improvement in total life quality and in other dimensions was seen except in activity dimension which no improvement was seen in life quality i.e. 14.7 ± 6.1 and was 12 ± 5.1.

Analysis

The collected data were analyzed by SPSS 10.0 software using Kolmogrov-Smirnov statistical test to determine the normal distribution of achieved scores and by MANCOVA and student *t*-test to compare means of quality of life scores. The meaningful value of the tests was considered 0.05 and the results were presented in mean ± standard deviation.

Table 3. Quality of life score after adjustment (up to 100 points) in treated and non-treated patients

Quality of life	Chronic hepatitis B		Chronic hepatitis C	
	Treated (n = 7)	Non-treated (n = 8)	Treated (n = 29)	Non-treated (n = 24)
Systemic symptoms	69 ± 32	66 ± 16	71 ± 25	55 ± 20
Activity	69 ± 26	64 ± 19.5	73 ± 27	58.5 ± 24.5
Abdominal symptoms	70 ± 30.5	60 ± 30	76 ± 24	65 ± 20
Fatigue	69 ± 33	55 ± 17	70 ± 22.5	50 ± 14
Anxiety	65 ± 26.5	57 ± 12.5	72 ± 20	51 ± 14
Emotional states	68 ± 32	56 ± 20	68 ± 26	52 ± 16
Total	67 ± 28	57 ± 13	69 ± 20	52 ± 13

Discussion

The life quality concept and more especially, Health Related Quality of Life (HRQOL), implies physical, emotional and social health, i.e. it defines the issues affected by patients' experiments, their expectancies or beliefs and understandings [1]. Several chronic diseases cause discomfort and pain for the families, health care system and society. HRQOL is a concept that is made in need of

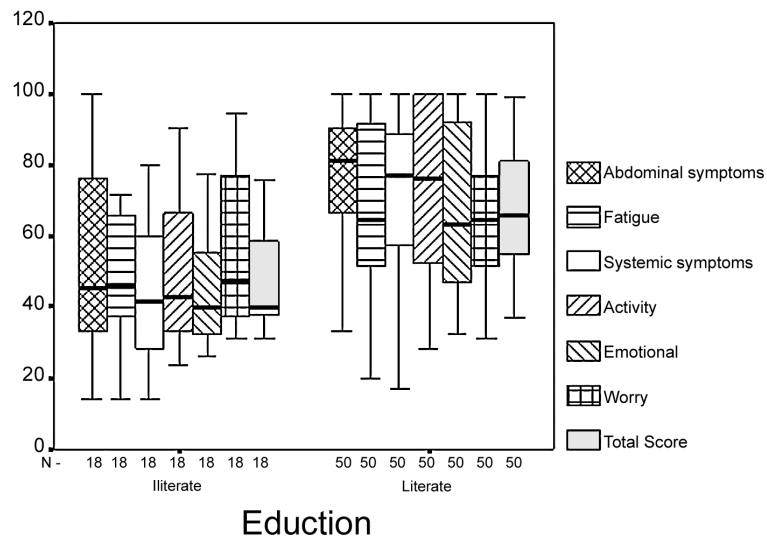

Figure 1. Qualities of life mean scores in chronic hepatitis B and C

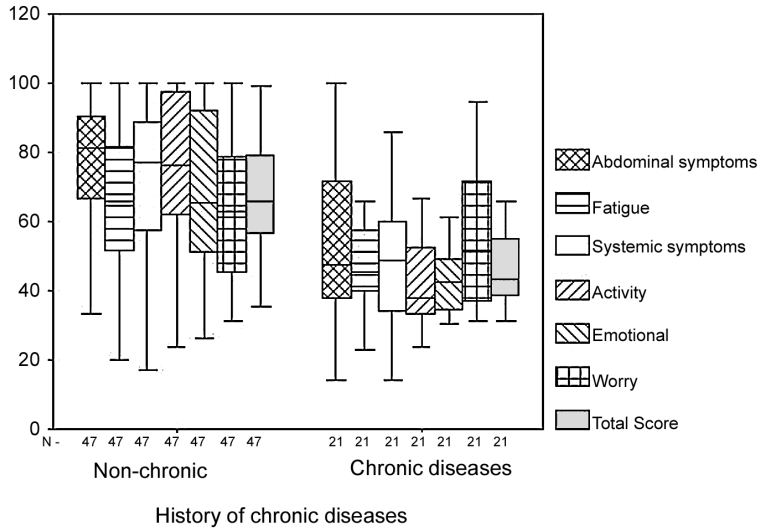

Figure 2. Qualities of life mean scores in chronic hepatitis B and C

surveying these issues i.e. it tries to assert daily activity and feeling of well being, based on their own opinions and their physical proficiency, social function and emotional health. The survey of HRQOL in clinical researches is frequently done by means of different questionnaires to assess patients' daily functions.

The factors that affect HRQOL are divided into two types: 1) disease-related and 2) non-related to diseases. For example, physical signs are disease-related, but social and psychiatric effects are non-related. Thus, assessment of HRQOL is a significant criterion to survey the states that a patient undergoes treatment and also the assessment of illness effects and assessment of optimum financial programs that are applied. HRQOL asserts the patients' health conditions based on their own opinions and is a powerful instrument to survey the results of a disease. For example, two chronic hepatitis B patients may have the same intensity and treatment, but one may have a full-time job with considerable family and social life, but the other is a depressed unemployed and lives on his paralysis pension. In other words, in gastrointestinal and liver diseases, physical signs are related to the disease, but social and psychiatric effects are not related to the disease, but related to understanding function, knowledge, socioeconomic state, literacy, culture and one's beliefs.

The survey of HRQOL is important for patients, researchers, physicians and social authorities. Its potential applications are: 1) introducing the problems that involve person or society, 2) assessment of the quality of services given by health executors and 3) assessment of therapeutic efficacy or the results of the treatment. It is also a significant part of medical economic surveys. Among the chronic diseases, hepatitis is a non-symptomatic disease, but with many systemic complications such as fatigue, nausea, prurience, icter, anorexia, behavioral changes. Despite this, exclusively saying the sentence "You have chronic viral hepatitis" would directly affect patients' HRQOL. Since until now treatment for eradication of the virus was not useful adequately, thus it is advised that the issues which affect patients' life qualities during or after treatment be told to the patient prior to the treatment [10]. Survey of life quality during chronic diseases is possible by application of standard questionnaires [11]. In this study, it is defined, by means of specific questionnaire of chronic hepatic diseases, that the scores of life quality in hepatitis B and C patients was not favorable. Nevertheless, the patients were generally referred to the hospital by physicians and hygienic and therapeutic centers, and other patients were under survey as outpatients, and many of them were unrecognized. So it is very difficult to collect all the patients.

Based on the data gained from this study, it seems that in different dimensions of the two genders, life quality scores have no meaningful differences. But it is considered that life quality score in systemic symptoms dimension has a meaningful difference in females in comparison with males, i.e. its score in males is (63 ± 27) and in females (43 ± 28) that shows better life quality in males in systemic dimension ($P < 0.007$) that is probably a reason for their physical structure that the issue needs more survey and research. Also by survey of the data based on literacy, it seems that the life quality score has

meaningful relationship with literacy in all its dimensions i.e. it is seen that the score in literate people is more than the illiterate ones. But in anxiety dimension it's seen that the difference was not meaningful and the score of anxiety dimension is approximately the same in literate and illiterate groups. In literate group, it is 23 ± 6.83 and in illiterate 19.19 ± 7 that this issue is probably, a result of misinforming of the physicians and (hygienic and therapeutic) centers about this disease and also because of the fear of the patients from social shame or poor support of society and also because of excommunicating them by society and acquaintances.

In the dimension of concomitant disease it's seen again that in anxiety dimension in two groups that have concomitant chronic illnesses or the ones that just have chronic hepatitis, no meaningful difference was seen and the score in the group without chronic disease is 22.85 ± 6.83 and in the group with chronic disease was 19.4 ± 6.57 that is probably because of that anxiety of the illness is so much that affects all other issues. In survey of life quality in two groups of hepatitis B and C no meaningful difference was seen in any of the dimensions of life quality. In two groups of treated and non- treated patients no meaningful difference was seen among hepatitis B patients, but in hepatitis C patient group, meaningful difference was seen between treated and non-treated groups, except in the activity dimension that no meaningful difference was seen where the value in treated group was 14.7 ± 6.1 and in untreated group was 12.04 ± 5.1. In other words, the activity dimension score in these two groups has no difference in statistical aspect which is probably because of inadequate support of society of these patients where their daily activities and their relationship with acquaintances has decreased that is generally because of the limitations that made society and acquaintance for these patients.

The reason that in chronic hepatitis B patients no sensible difference in life quality score was seen after treatment has the value of more discussion and perseverance. Generally, it seems that these patients are faced with decreasing social support or fear of society or the lessening of the family and friends' support where this issue results in lessening of life quality and their emotional state. Majority of these people are greatly concerned with the relation between the disease and consumption of the narcotics and thus try to hide the illness. So it is highly significant that the usage of the term healthy carriers be strongly observed, otherwise, it would be too slang or incorrect [12]. Younossi in 2001 showed that HRQL in patients with chronic liver disease was lower than the normal population [13]. Compared with the control group, patients with chronic viral hepatitis or cirrhosis showed substantial impairment of HRQOL, studied by Park in Korea in 2003 [14]. Pojoga in 2004 found no significant correlation between the level of transaminases and any item of the health-related quality of life in hepatitis B patients [2]. Kanwal and colleagues in 2005 found no significant differences in disease burden as assessed by a generic HRQOL instrument between patient with HIV monoinfection and HIV-HCV or HIV-HBV co-infection [15]. Kramer in 2005 assessed the relative impact of fatigue on the impairment of HRQL in HCV infection and they were independently associated with impaired HRQL [16]. In this research it is tried to make ways for further researches by means of survey of life quality and scoring it in different dimensions in hepatitis patients to determine effective factors in regulation of life quality.

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