

Marital Adjustment in Patients with Chronic Viral Hepatitis versus Healthy Controls

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Objective: Marital adjustment has been regarded as an important issue in chronic illnesses. Some studies have addressed the effect of viral hepatitis on patients' spouses but there is still limited information on the topic. This study has compared marital adjustment in patients suffering from different stages of viral hepatitis with that of a healthy population.

Methods: In a cross-sectional study, 176 subjects were recruited and divided into three groups: group I (57 patients with chronic active hepatitis), group II (68 carriers with non-active viral hepatitis), and group III (51 healthy subjects). Patients and controls were selected through systematic sampling from Tehran Hepatitis Center and Tehran Blood Transfusion Organization respectively. The overall score and the scores of subscale items including Dyadic Consensus, Affection Expression, Dyadic Satisfaction and Dyadic Cohesion were compared in the groups using Revised Dyadic Adjustment Scale (RDAS).

Results: There was no significant difference between the overall RDAS score, and its subscales including Dyadic Satisfaction, Dyadic Consensus, Affection Expression and Dyadic Cohesion among the study groups ($p > 0.05$).

Conclusions: It appears that marital adjustment in Iranian patients with chronic active hepatitis and carriers with non-active viral hepatitis are similar to healthy subjects. Thus, dyadic support may act as a buffer on the negative impact of the disease development on the familial lives of the patients.

Keywords:

Chronic hepatitis, Family relation, Mental health, spouses

Iran J Psychiatry 2006; 1: 153-157

The concept of health may not seem similar to all of the researchers. However, it has been defined and widely accepted as a state of physical, mental and social well-being and not merely as the absence of disease or infirmity (1). Based on this definition, marital relationships fall in the social domain of health (2), and any disturbance in marital relationships is expected to affect health and quality of life (3).

When physical health is disrupted in a chronic illness, the patients' interaction with their relatives and partners is seriously affected. Chronic diseases bring a great deal of tension to patients and the couple who is free from the disease may also undergo grave changes in dealings with the patient.

Reports indicate that most of the tension is shifted to the patients' spouses and not to the patients themselves (4).

Maintaining marital relationships at a satisfactory level is a serious concern for most patients (2, 5). It should be noted that unsatisfactory marital relationships can influence the quality of life and long term outcomes in patients (6, 7). It has been reported that family conflict can directly affect the patients' adjustment with the disease, and spousal support is considered a major source of support for patients suffering from chronic diseases (8).

A supporting family can assist the patient to face the disease outcomes and complications more effectively (9, 10).

Some previous studies have investigated the effect of viral hepatitis on the spouses of suffering patients but there is still lack of data on the issue. This study was designed to compare the state of marital adjustment in patients suffering from different stages of viral hepatitis with healthy controls.

Material and Methods

This study was a case-control. A total of 176 subjects were studied in the three following groups: patients with chronic active hepatitis (group I, $n=57$), carriers with non-active viral hepatitis (group II, $n=68$), and healthy individuals (group III, $n=51$).

Patients and controls were recruited through systematic sampling from Tehran Hepatitis Center and Tehran Blood Transfusion Organization respectively. Subjects included in the study were aged from 20 to 60, were married, had emotional attachment to their spouse, and had experienced an interval of at least three years of marriage.

Documented diagnosis of the stage of hepatitis, infection with one single hepatitis virus, and the absence of HIV virus were also among the inclusion criteria for hepatitis patients. Subjects whose spouses

suffered from viral hepatitis or a chronic disease were excluded from the study. Patients with cirrhosis, alcoholic hepatitis or liver cancer were also excluded. The diagnosis of cirrhosis was based on ultrasonographic and endoscopic records including evidence of portal hypertension and histological /or laboratory findings (11). Written informed consent was obtained from all of the subjects.

Demographic information (gender, age, occupation, educational level), data regarding marriage (number of previous marriages, duration of the current marriage, number of children, familial relation with spouse, number of previous divorces), and data about hepatic diseases (virus type, stage of disease, liver function tests, histo-pathologic findings) were recorded in checklists.

Revised Dyadic Adjustment Scale (RDAS) was used to evaluate quality of marital adjustment. This scale provides an acceptable quantitative assessment of marital satisfaction in couples with one partner suffering from the disease.

This questionnaire quantifies dyadic adjustment through four subscale items including Dyadic Consensus (scoring from 0 to 20, measuring the couple's degree of agreement on matters of importance to the relationship), Affection Expression (scoring from, 0 to 10 measuring the degree of demonstrations of affection and sexual relationships), Dyadic Satisfaction (scoring from 0 to 20 measuring the degree to which the couple is satisfied with their relationship), and Dyadic Cohesion (scoring from 0 to 19, measuring the degree of closeness and shared activities experienced by the couple). In addition, an overall score ranging from 0 to 69 is calculated with lower scores indicating poorer quality of marital relationships.

The questionnaire consists of 14 questions evaluating the couples' agreement on making appropriate decisions; marital satisfaction and marital attraction. RDAS has an acceptable internal consistency (alpha coefficient 0.90) and construct validity (12). We used the previously translated Persian version which has been formerly used in Iran (13, 14).

In order to assess the presence of any existing disorder in the patients, Ifudu co morbidity index was used. This numerical scale has been designed to evaluate the state of co morbidities in patients needing hemodialysis, and to assess 14 different types of disorders. Diseases which are assessed by Ifudu index can be listed as below:

1) ischemic heart diseases including stable angina and myocardial infarction, 2) cardiovascular diseases, including hypertension, congestive heart failure, cardiomyopathy and other non-ischemic autonomic neuropathy (gastro paresis, diarrhea, heart diseases, 3) respiratory diseases, 4)

cystopathy, obstipation, and orthostatic hypotension, 5) cerebrovascular accidents, stroke and other neurological diseases, 6) musculoskeletal disorders, 7) infections such as AIDS, 8) pancreas, liver and biliary disorders including hepatitis, hepatic disorders, pancreatic enzymatic disorders, 9) hematological diseases, excluding anemia, 10) low back pain, spine, and joint disorders including arthritis, 11) visual impairments, 12) limb amputation (from fingers to toes), 13) mental disorders including neurosis, depression and mania, and 14) genitourinary diseases. Each item is scored from 0 (absence of disease) to 3 (severe disease). An overall co morbidity score is calculated by adding 14 scores. Thus, the overall score ranges from 0 to 42, with higher scores indicating greater co morbidities (15). In this study, Ifudu forms were filled out by an internist and appropriate consultations were sought from other specialists when needed. Although, this scale has been designed for ESRD population, it has been used in renal transplantation patients (16) and not in hepatitis patients. However, using a co morbidity score which has been designed for a specific population in different patients' groups is not very rare (17).

SPSS version 13.0 was used to perform statistical analyses. Pearson correlation coefficients were applied to measure associations between RDAS total score and its sub-scores and other quantitative variables.

Results

Subjects

In the study groups, the mean age of the subjects were not significantly different ($p>0.05$). There was a significant difference between the co morbidity scores among the groups ($p=0.001$). Using ANOVA, Chi-squared and Fisher's exact tests, no significant difference was found among the groups with regard to their gender, educational level, duration of marriage, and having off springs (table 1).

Comparison of dyadic adjustment subscale items among the groups

The overall score of RDAS and all the RDAS subscales including Dyadic Satisfaction, Dyadic Consensus, Affection Expression and Dyadic Cohesion were not significantly different among the groups ($p>0.05$). (Table 2).

Discussion

This study indicates that marital adjustment and all its subscales including marital satisfaction are not

Table 1- Characteristics of 225 patients in the groups †

Group	I chronic active hepatitis (n=57)	II carriers with non- active hepatitis (n=68)	III healthy controls (n=51)
Age (mean ±SD)*	44 ±7	42 ±9	44 ±8
Male gender (%)	48 (84)	51 (75)	33 (65)
N (%) with ≥ diploma education	28 (49)	24 (35)	19 (37)
N (%) with ≥10 year duration of marriage	42 (74)	42 (62)	31 (71)
N (%) with children	47 (82)	58 (85)	40 (80)
Co morbidity score (mean ±SD)	8 ±3	8 ±2	2 ±1

† ANOVA showed a significant difference among the groups with respect to co morbidity (p=0.001), which was due to the age difference of group III with other groups (Tukey's post hoc test).

**Table 2- Scores of different subscale items of Revised Dyadic †
Adjustment Scale (RDAS) in the groups**

Subscale items of RDAS	I, chronic active hepatitis (n=57)	II, carriers with non- active hepatitis (n=68)	III, healthy controls (n=51)
Dyadic Consensus	18 ±3	17 ±3	17 ±3
Affection Expression	9 ±2	9 ±2	9 ±2
Dyadic Satisfaction	16 ±3	15 ±4	17 ±3
Dyadic Cohesion	14 ±3	13 ±4	14 ±3
Overall score	56 ±8	54 ±9	56 ±7

† ANOVA did not show a significant difference among the groups with respect to overall score of marital relationship and its sub scores.

markedly disrupted in patients with viral hepatitis. There was also no significant difference between asymptomatic carriers and patients with active viral hepatitis. Although the mechanism of lacking any difference is not clear, we make two hypothesizes that each, solely or mutually, may explain why marital relationships in patients with viral hepatitis do not deteriorate.

Firstly, the lack of impairment in the patients' marital relationships may be due to physicians' consultations, informing them about the disease's low rate of spread through their marital lives (18-21). In one study, thirty-five percent of the respondents reported changes in their sexual practices. Decreased frequency of kissing and sexual intercourse was reported in 20% and 27% of the individuals respectively. Almost half of the single subjects reported increased use of condoms compared with only 20% among the married couples. The majority of the subjects endured financial insecurity, internalized shame, and social rejection. Only 39% reported health impairment. Education level did not influence the behavioral change. The majority of HCV subjects altered common behaviors and reported financial insecurity, internalized shame, and social rejection, regardless of the method of HCV acquisition or socioeconomic status. These findings indicate that at the time of the diagnosis, all of the HCV individuals were counseled and encouraged to participate in educational programs to improve the quality of their lives and to reduce unnecessary behavioral changes and stigmatization perceptions (21).

Secondly cultural issues may be the cause in some countries. There are reports that the development of the disease does not increase the risk of maladaptation. The parents' adaptation to their problems because of their children, may to some extent explain their behavior.

Thirdly, the patients' good marital relationships in this study may be explained by the fact that the end stage liver disease was not developed. Undoubtedly, end stage liver disease gives rise to loads of worries and agonies both in patients and their partners, filling them with concerns that they are dealing with an untreatable end stage liver disease. It has been reported that disease progression is the most important concern in patients with viral hepatitis (22). Naturally, the patients' and their family's distress and morbidity increase as symptoms such as esophageal bleeding, muscular cramps, edema, ascites and severe fatigue appear. We should also consider the pressure of imposed costs which patients and their families endure following the end stage liver disease development (23).

The impairment of marital relationships has been observed in several families when one spouse is afflicted by sexual dysfunction accompanying a chronic disease. However, it is known that end stage liver diseases lead to gonadal dysfunction and reductions in testosterone levels in men (24-26). Such reports in early phases of the disease are not clear. Thus, we can hypothesize that sexual function of our patients may be disturbed and further studies are needed in this regard. One study indicated that reductions in sexual intercourse to less than ten times a year could significantly decrease marital satisfaction and survival of a marriage (27).

Although some believe that most hepatitis viruses are blood-borne and can be sexually transmitted, several physicians recommend continuation of normal sexual relationship of the spouses. It is possible that a spouse of an infected person wishes to terminate the marriage (28, 29). Nevertheless, many uninfected spouses carry on saving the marriage due to emotional attachment to their sick spouses. It is worth mentioning that healthy

spouses have been reported to donate liver to their sick partners afflicted by an end stage liver disease (30, 31). It has been reported that maintaining family and social support may improve health outcomes and promote a higher health-related quality of life for patients with chronic viral hepatitis (32).

We think this study is of high importance. To the best of the authors' knowledge, the current study is relatively unprecedented and is the first report which compares marital relationships in patients with different stages of viral hepatitis. It should be noted that the prevalence of viral hepatitis is high in eastern countries like Iran. In general, future studies with concurrent assessment of mental health, including the presence of anxiety and depression, and sexual dysfunction can unveil more facts on the issue.

Conclusion

Considering the importance of marital relationships and family supports, our study reports a good marital support by the patients' spouses. Further studies may show the possible effects of cultural determinants on this issue. This finding also highlights the role of hepatologists and gastroenterologists who care mostly for chronic viral hepatitis patients and encourage them to look after their marital relationships.

Acknowledgement

The study was approved by Baqiyatallah Ethical Board, and was fully supported and funded by Baqiyatallah Medical Sciences University

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