

# Quality of Life in Hepatitis C

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## Abstract

Hepatitis is an ailment characterized by inflammation of the liver, usually resulting in swelling and destruction of liver tissues. The hepatitis C virus causes hepatitis C. A marked decline in the quality of life of hepatitis C patients has been revealed in a number of studies conducted worldwide. A retrospective study was carried out among hundred patients of hepatitis C and three of them were followed for a period of 3 months. The major aims of this study were to assess the quality of life of the patients suffering from hepatitis C, estimation of the patient compliance with the management methods, calculation of the end results of the therapeutic treatment, assessment of the patient satisfaction with the medicines, comparison of the quality of life of the suffering patients with their optimum health state and the comparison of the quality of life of the patients during and after the management/treatment of the disease. In order to pursue the study, a medication history/patient interview form was developed on the basis of which patients suffering from hepatitis C were interviewed. This survey was followed by the comparison of national treatment guidelines with international treatment guidelines. The study revealed that the patients were not satisfied with their quality of life during their ailment whereas many expressed that their quality of life improved after receiving a rational and well managed medical treatment.

**Key Words:** Hepatitis C, liver, quality of life, inflammation

## INTRODUCTION

Hepatitis is a disease characterized by inflammation of the liver, usually producing swelling and, in many cases, permanent damage to liver tissues.<sup>1</sup> Hepatitis C virus (HCV) is a member of Flaviviridae family and one of the major causes of liver disease.<sup>2</sup> Up to 80% of infected individuals are asymptomatic. Chronic infection with the hepatitis C virus (HCV) has a profound effect on health-related quality of life (HRQoL).<sup>3</sup> Depressive symptoms, poor quality of life, fatigue, and abdominal pain have been reported in hepatitis C patients.<sup>4</sup> Sexual dysfunction is highly prevalent in men with chronic HCV infection.<sup>5</sup> The hepatitis C virus (HCV) crosses the blood-brain barrier; biological factors are commonly blamed for the high rates of mood disturbance in HCV-infected patients.<sup>6</sup>

Parenteral and sexual transmissions increase ones risk of infection (CDC) so a significant population of pregnant patients is at risk.<sup>7</sup> Individuals who have used intravenous drugs, recipients of clotting factors made before 1987, recipients of blood or solid organs before 1992, hemodialysis patients, anyone with undiagnosed liver problems, infants born to HCV positive mothers and health care workers who have been exposed to the virus should be screened for hepatitis C.(CDC).<sup>8</sup> There are no effective measures for preventing perinatal hepatitis C transmission, but transmission rates are less than 10 percent.<sup>9</sup>

HCV is responsible for a large percentage of chronic persistent and chronic active hepatitis in the United States.<sup>7</sup> Antibody to hepatitis C virus was found in 45% of patients within 6 weeks of onset of illness.<sup>10</sup> Major HCV genotypes constitute genotype 1, 2, 3, 4, 5 and 6 while more than 50 subtypes are known and HCV has a very high mutational rate that enables it to escape the immune system.<sup>11</sup>

It causes potentially massive damage to the liver and is also associated with high levels of morbidity and mortality.<sup>12</sup> Recipients of kidneys from anti-HCV antibody positive

donors are at increased risk of mortality.<sup>13</sup> Hepatitis C infection is the commonest cause of cirrhosis worldwide<sup>14</sup> In addition to its effects in the liver, HCV infection can have serious consequences for other organ systems e.g. extrahepatic manifestations include vasculitis, lymphoproliferative disorders, renal disease, insulin resistance, type 2 diabetes; reductions in quality of life involve fatigue, depression, and cognitive impairment.<sup>15</sup> Chronicity of the disease leads to cirrhosis, hepatocellular carcinoma and end-stage liver disease.<sup>11</sup> Recurrent hepatitis C after liver transplantation is nearly universal and may even lead to death.<sup>16</sup>

Testing for antibody to hepatitis C virus is performed with the newly developed enzyme immunoassay.<sup>10</sup> Histologic evaluation of the liver is a major component in the medical management and treatment algorithm of patients with chronic hepatitis C (HCV). Liver biopsy in these patients remains the gold standard, and decisions on treatment are often predicated on the degree of damage and stage of fibrosis.<sup>17</sup> The clinical presentation of acute infection with each of hepatitis viruses is similar; thus, diagnosis depends on the use of specific serologic markers and viral nucleic acids.<sup>18</sup>

Treatments for HCV and other biopsychosocial factors can reduce quality of life and complicate management.<sup>15</sup> Currently the standard therapy for HCV is pegylated interferon (PEG-INF) with ribavirin.<sup>2</sup> Liver transplantation is currently the only definitive modality for the treatment of end-stage liver disease due to chronic hepatitis C.<sup>16</sup> Promoting effective HCV education among vulnerable populations may be an important factor in reducing the disparities in HCV disease.<sup>19</sup> Psychosocial support may be beneficial to HCV patients.<sup>6</sup> Injection drug users are at high risk for infection with several blood-borne pathogens, including hepatitis C virus.<sup>20</sup>

The study was conducted to check whether hepatitis C influences the quality of life of its victims or not & in case of

its influence, the major aspects of life which are most commonly influenced due to illness are determined. This study is very useful as it highlights the impact of this disease on most of the attributes of quality of life i.e. social, psychological, physical & economic

**MATERIAL & METHODS**

It was a retrospective study. We visited the Services Hospital, Lahore to conduct our study.

**Study Design:**

Important parameters of quality of life which are most commonly affected by illness in acute and chronic infection by Hepatitis C virus were identified and a Performa was designed keeping in view these parameters. Case histories of 100 patients were taken on this predesigned Performa and significant and relevant factors were noted such as age, sex, duration of hospitalization, causes, clinical diagnosis, treatment and quality of life throughout the disease and after the therapeutic measures have been taken.

**PROTOCOL:**

The following procedure was adopted:

- Developed a medication history/patient interview form including important questions regarding the impact of Hepatitis C on the patients' quality of life
- Randomly selected 100 patients with Hepatitis C were interviewed
- National treatment guidelines were compared with international treatment guidelines.

**Inclusion Criteria**

- Males and females 18 years and older
- Chronic hepatitis C Genotype 1
- Treatment naive

**Exclusion Criteria:**

- BMI <36
- Females of childbearing potential

- Co infection with HBV and/or HIV
- Other significant disease including liver disease history of drug or alcohol dependence or addiction within the past 6 months

**Study Parameters:** The Quality of Life parameters were used to measure the relationship between a patient's quality of life and other behaviors or afflictions, such as financial state, physical health, psychological health etc. The following attributes of quality of life were studied:

1. **Economic impact:**
  - Financial cost of illness and treatment
  - Job loss due to disease
2. **Physical impact:**
  - Other physiological systems affected concurrently
  - Side effects of therapy
  - Routine activities affected
  - Life expectancy
3. **Psychological impact:**
  - Mental distress
  - Unstable mood patterns
  - Altered behavior as irritability and lack of patience
  - Deficiency of confidence
4. **Social impact:**
  - Altered interpersonal relations
  - Influence on sexual life

**RESULTS**

Data of 100 patients with Hepatitis C was studied in a specialized hospital setting. There is a marked decline in the quality of life of patients suffering from hepatitis C, majorly due to the extra hepatic effects and common symptoms of this disease. Common symptoms and their occurrence in patients are given in figure 1. Quality of life reduces further in chronic condition. The parameters analyzed during the study along with their percentage are given in table 1.

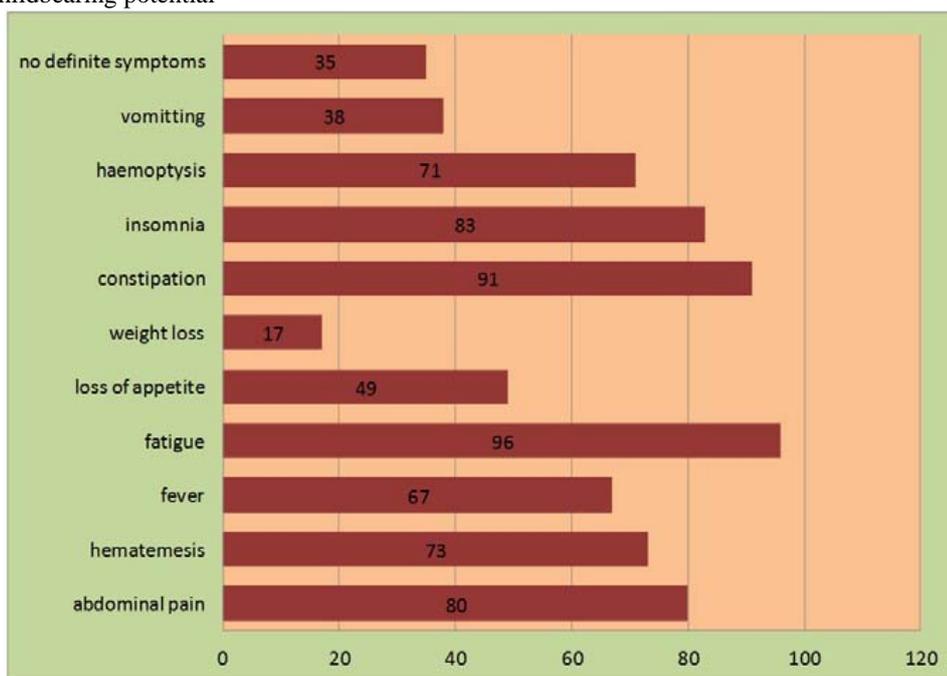


Fig. 1: Percentage of Patients with Various Symptoms

**Table 1: Study parameters of Hepatitis C patients**

Assessment	Determinates	Percentage
Hospital Admission Channel	Emergency	43%
	OPD	57%
Symptoms Relieved With Medications	Yes	83%
	No	17%
Satisfaction With The Current Therapeutic Measures Being Taken	Satisfied	76%
	Unsatisfied	24%
Present Quality Of Life	Good	5%
	Bad	87%
	Poor	8%
Financial Distress Increased Due To Illness	Yes.	76%
	No	24 %
Prolonged Depression	Yes	84%
	No	16%
Interest In Maintaining Health	Yes	58%
	No	42%
Illness Lead To Withdrawal from Job	Yes	99%
	No	1%
Stability In Emotional/Mental State	Stable	69%
	Unstable	31%
Increase In Irritability And Stress	Irritability	91%
	Stress	55%
Negative Impact On Interpersonal Relationships	Yes	66%
	No	34%
Satisfaction With Sexual Life	Yes	9%
	No	91%
Spouse Of The Patient Either Healthy Or Suffering From Hepatitis C	Healthy	95%
	Infected	5%
Difficulty In Performing Household Tasks And Other Physical Activities	Yes	100%
	No	0%
Increased Lack Of Confidence And Patience In Oneself	Confidence	44%
	Patience	82%
Improvement In Quality Of Life Subsequent To Treatment	Improved	50%
	Not Improved	50%
Patient Compliance With Prescribing Treatment	Good	75%
	Poor	25%
Prescribing Treatment In Accordance With Criteria Given In Standard Treatment Guidelines	Rational	98%
	Irrational	2%
Mortality	Yes	27%
	No	73%

### DISCUSSION

Hepatitis C affects not only liver but has many extra hepatic symptoms. The virus results in inflammation and cirrhosis of liver, thereby influencing the quality of life of the HCV patients. Assessment of the quality of life in patients in various chronic diseases is becoming significant. The physician and pharmacist can help the patient by counselling them to improve their quality of life in Hepatitis C. The most common symptoms of hepatitis C e.g. fatigue, abdominal pain, GI abnormalities exacerbate the quality of life of patient.

Though Hepatitis C rarely results in early death of patient but complications due to attack of virus on liver and subsequent systematic effects are very common. Quality of life is influenced majorly due to the latter complications. In worse

cases where hematemesis and haemoptysis are detected; quality of life is severely deteriorated.

Quality of life is also affected by the patient's personal perception regarding his condition. Patients assume that their imperfect health state is responsible for disconnecting them from enjoying their normal life and daily activities which ultimately leads to poor psychological and social behaviour. This impression of patient not only influences patient but also the people around him. Patients are reluctant to participate in social gatherings. They start building gaps from their own family. One of the reasons is the fear of transmitting their disease to others.

Depression is very common among the HCV patients. Hepatitis C virus is reported to cross blood-brain barrier and causes mood disturbances (Wilson MP, 2010). Irritability and stress associated with HCV patients has a negative impact on

their interpersonal relationships. HCV patients lack confidence and patience. Conclusively, many behavioral changes are observed in the HCV patients.

Financial state of patients is also contracted. Patient is unable to perform not only routine work but his ill health also deprives him from his ability to perform various tasks at their employment centres or educational institutes. Also, the treatment of this disease is expensive and not affordable by a majority of the population in developing countries, disturbing the patients psychologically.

Hepatitis C is rarely found to be transmitted through sexual contact yet patients are reluctant to maintain their normal sexual activities due to the fear of infecting their partners. Some cases are also found in which spouse of patient is also found to be infected with hepatitis C so physicians and pharmacists are required to advise their patients about ways to perform safe sex and keep their relations healthy.

Hepatitis is usually treated with interferon, which has some serious side effects, affecting quality of life adversely. Quality of life, though poor during treatment with interferon, usually improves greatly after the completion of the treatment. Thus, the patients are usually satisfied with the treatment. It is the duty of pharmacist to inform patient about the common side effects of interferon before the initiation of therapy so that the compliance of patient is appreciable.

#### CONCLUSION

There is a marked decline in the quality of life of patients suffering from hepatitis C. This decline is majorly due to the extra hepatic effects and common symptoms of this disease. Interferon therapy is another reason. It is not only the health but social, financial, sexual and family life of the patients is adversely affected due to the virus. Quality of life reduces further in chronic condition. People with hepatitis C report less confidence in their current health and more concern about their health in the future. It is the duty of physicians and pharmacists to assess the effects of hepatitis on the quality of life of patients and counsel them so that they can improve their quality of life. They should design guidelines which can assist patients to maintain their quality of life.

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