

# Quality of Life among Hepatitis C Patients on Interferon Therapy

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## ABSTRACT

**Background:** Hepatitis C is amongst significant causes of health related mortality and morbidity with ever increasing prevalence. Patients on interferon (IFN) therapy are assessed constantly for viral clearance but not much attention is paid on impaired health-related quality of life (HRQOL). Health-related quality of life has been helpful in measuring the effect of CHC (chronic hepatitis C) on well-being of the patient and in observing a response to treatment.

**Aim:** To know the quality of life among hepatitis C patients on INF therapy.

**Method:** This was a cross-sectional health facility based study performed in March, 2016 among 100 hepatitis C patients visiting Nishtar Hospital Multan. The data was collected through questionnaire and analyzed by SPSS 20.0.

**Results:** Out of 100 patients of hepatitis C, 44% were 31-40 years old, 59% were females and 63% were illiterate. Out of these patients, 24% had good health, 56% had average and 20.0% had poor health.

**Conclusion:** Generally the quality of life was observed satisfactory among patients because most of them had average or good health and some of them had poor health.

**Key words:** INF Therapy, Chronic Hepatitis C, Mild illness, Ribavirin, Ribonucleic acid.

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## INTRODUCTION

Hepatitis is an illness characterized by swelling of liver, mostly producing inflammation and, in most of the cases, constant damage of liver tissues. HCV (Hepatitis C virus) is a Flaviviridae family member and a leading cause of liver disease<sup>1</sup>. Hepatitis C is amongst significant causes of health related mortality and morbidity with ever increasing prevalence<sup>2</sup>. Globally, the HCV prevalence is 2.8%<sup>3</sup>. In Pakistan, the hepatitis C virus infection is common and the incidence has been raised from 4.7 to 6.8 percent during few years<sup>4</sup>.

This virus can lead to both chronic and acute hepatitis, varying the acuteness from mild illness lasting some weeks to a severe, permanent illness. As per estimation, 71 million individuals worldwide are infected with persistent hepatitis C<sup>5</sup>. Chronic HCV infection is linked with grave medical *sequelae*, comprising hepatic fibrosis, liver cirrhosis, and hepatocellular cancer<sup>6</sup>. HCV chronic infection has great impact on HRQOL. Fatigue, anxiety, depressive symptoms, insomnia, poor life quality, anorexia, abdominal pain and myalgia have been described among patients with hepatitis C<sup>7</sup>.

HRQOL is referred to the burden of hepatitis C increased through its impact on psychological, physical, cognitive and several other factors of health related quality of life<sup>8</sup>. The decrease in health related quality of life is perhaps cause by psychiatric and

physical symptoms like a direct outcome of this constant infectivity and its sequelae (for example cirrhosis). The persistent swelling is considered to signal the brain and give boost to neurovegetative symptoms (for example fatigue and malaise) and among others difficulties in concentration and depression. Probably, brain itself is contaminated through hepatitis C virus as well. Eventually, chronic HCV treatment with ribavirin and (peg) interferon-alpha further reduces health related quality of life caused by its side-effects<sup>9</sup>.

Pegylated IFN-alpha with a combination of ribavirin is very useful pharmacological therapy to treat chronic hepatitis. It causes continued reduction rates of 55 percent, with hepatitis C virus genotype being strongest predictor of results<sup>6</sup>. Length of treatment is assessed through genotype of hepatitis C virus and therapy reaction to the virus. The quantitative hepatitis C virus ribonucleic acid is used to know the treatment reaction and like a guide to continue the treatment. The antiviral therapy success rate in chronic HCV has significantly risen during current years medicine observance remains a great problem caused by number and acuteness of side effects encouraged by antiviral treatment<sup>10</sup>.

Patients with chronic HCV explain constant and considerable decrease in quality of life despite in the absence of clinical important liver illness or difficulties. During last decade, a considerable improvement occurred regarding treatment of chronic hepatitis C virus infections. Side effects caused by interferon based treatment are frequently so strong

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and can compel upto 30 percent of those experiencing treatment to disrupt the therapy momentarily or to decrease its quantity. The most important sides effect comprise sleep alteration, depression, malaise, anorexia, fatigue and musculoskeletal pain that significantly affect quality of life of the patients.<sup>[6]</sup> Such events can have harmful impact on patients' social interaction, vitality, work performance ability and other activities and can compel to discontinue the treatment<sup>11</sup>.

Patients on interferon (IFN) therapy are assessed constantly for viral clearance but not much attention is paid on impaired health-related quality of life (HRQOL). Health-related quality of life has been helpful in measuring the effect of CHC (chronic hepatitis C) on well-being of the patient and in observing a response to treatment<sup>8</sup>. In this view, present study was performed to assess the quality of life among hepatitis C patients on interferon therapy at Nishtar Hospital Multan.

## MATERIAL AND METHODS

This was a cross-sectional health facility based study performed among 100 hepatitis C patients visiting Nishtar Hospital Multan. The data was collected through questionnaire and analyzed by SPSS 20.0. Frequencies and percentages were calculated and data was shown in tables and graphs. Confidentiality of the data was ensured and proper consent was obtained before data collection.

## RESULTS

Table 1 describes that out 100 patients of hepatitis C, 31(31%) were  $\leq 30$  years old and 44(44%) were 31-40 years while 25(25%) were above 40 years old. Among the patients, 41(41%) were males and 59(59%) were females. Most of the hepatitis C patients 63(63%) were of illiterate, 21(21%) were below matric and 16(16%) were matric and above.

Table 2 asserts that out of 100 patients of hepatitis C, 42(42%) had no problem in participating energetic activities like running and heavy objects lifting during past 30 days while 13(13%) patients had such problem between 1-10 days, 4(4%) between 11-20 days and 41(41%) between 21-30 days. Out of 100 hepatitis C patients, 43(43%) had no problem in participating moderate activities like carrying foodstuff, moving table and pushing of the vacuum cleaner during past 30 days while 1 (13%) had such problem between 1-10 days, 8(8%) between 11-20 days and 37(37%) between 21-30 days. Among hepatitis C patients, 15(15%) had no problem in climbing stairs during past 30 days while 17(17%)

had such problem between 1-10 days, 21(21%) between 11-20 days and 47(47%) between 21-30 days. Out of 100 hepatitis C patients, 16(16%) had no problem in walking during past 30 days while 17(17%) had such problem between 1-10 days, 19(19%) between 11-20 days and 48(48%) between 21-30 days. Out of these patients, 21(21%) had no problem in performing job or activities or it needed additional efforts during past 30 days while 12(12%) had such problems between 1-10 days, 11(11%) between 11-20 days and 56(56%) between 21-30 days.

Result shows that out of 100 hepatitis patients, 9(9%) had no feelings of stress and physical health issues during past 30 days while 26 (26.0%) felt such issues between 1-10 days, 21(21%) between 11-20 days and 44(44%) between 21-30 days. Out of 100 patients of hepatitis C, 19(19%) had no body pain during past 30 days that disrupted their outside and domestic work while 10(10%) had body pain between 1-10 days, 23(23%) between 11-20 days and 48(48%) between 21-30 days. Among these patients, 89(89%) were not required the help of other person in personal care i.e., bathing, eating and dressing during past 30 days while 2(2%) required other person help between 1-10 days, 2(2%) between 11-20 days and 7(7%) between 21-30 days. Out of 100 hepatitis C patients, 16(16%) never felt sad and blue during past 30 days while 33(33%) had such feelings between 1-10 days, 18(18%) between 11-20 days and 33(33%) between 21-30 days. Among the patients, 19(19%) got enough rest / sleep during past 30 days while 25(25%) did not get enough rest / sleep between 1-10 days, 22(22%) between 11-20 days and 34(34%) between 21-30 days.

Table 3 explains quality of life among patients with hepatitis C virus and found that 24(24%) patients had good health, most of them 56(56%) had average health and 20(20%) had poor health.

Table 1: Socio-demographic characteristics

	Frequency	%age
<b>Age</b>		
Upto 30 yrs	31	31.0
31-40 yrs	44	44.0
Above 40 yrs	25	25.0
Total	100	100.0
<b>Sex</b>		
Male	41	41.0
Female	59	59.0
<b>Educational status</b>		
Illiterate	63	63.0
Below matric	21	21.0
Matric & above	16	16.0

Table 2: Quality of life indicators

	No. of Days			
	0	1-10	11-20	21-30
How many days you felt problems in participating energetic activities like running, heavy objects lifting during past 30 days	42 (42%)	13 (13%)	4 (4%)	41 (41%)
How many days you felt problems in participating moderate activities like carrying foodstuff, pushing of vacuum cleaner and moving table during past 30 days	43 (43%)	13 (13%)	8 (8%)	37 (37%)
How many days you felt problems in climbing stair during past 30 days	15 (15%)	17 (17%)	21 (21%)	47 (47%)
How many days you felt problems in walking during past 30 days	16 (16%)	17 (17%)	19 (19%)	48 (48%)
How many days you felt problems in performing job/activities and it required more efforts during past 30 days	21 (21%)	12 (12%)	11 (11%)	56 (56%)
How many days you felt stress and physical health issues during past 30 days	9 (9%)	26 (26%)	21 (21%)	44 (44%)
How many days you had body pain during past 30 days that exacerbated your domestic and outside work	19 (19%)	10 (10%)	23 (23%)	48 (48%)
How many days you required other person help in personal care i.e. eating, bathing, dressing etc. during past 30 days	89 (89%)	2 (2%)	2 (2%)	7 (7%)
How many days you felt sad and blue during past 30 days	16 (16%)	33 (33%)	18 (18%)	33 (33%)
How many days you did not get enough rest or sleep during past 30 days	19 (19%)	25 (25%)	22 (22%)	34 (34%)

Table 3: Quality of life with interferon therapy among patients with hepatitis C

	Frequency	%age
Good health	24	24
Average health	56	56
Poor health	20	20

Good health = 1-100 days, Average health = 101-200 days, Poor health = 201-300 days

## DISCUSSION

Present study was carried out to assess the quality of life among patients with Hepatitis C on interferon therapy. During study one hundred patients visiting Nishtar Hospital Multan participated. Most of the patients (75%) were  $\leq$  40 years old and only 25% were above 40 years old. A similar study performed by Sajjad and colleagues (2012) showed different situation that most of the elderly people were affected by disease as large numbers (75.4%) of patients were above 40 years old<sup>12</sup>. Study showed that majority (59%) of the females were victim of hepatitis C. Similar results were also obtained from the study carried out by Pojoga and coworkers (2006) who also reported that major proportion (60%) of females were patients of hepatitis C<sup>13</sup>.

Imperative role of education can never be overlooked because education is associated with healthy lifestyle and timely treatment. It is appalling to note that massive portion (63.0%) of hepatitis C patients had no education and rest of the patients studied upto matric or above. The findings of the study done by Metwally and teammates (2013) exhibited better scenario that merely 29.8% hepatitis

patients were illiterate and remaining proportion studied upto matric or above<sup>14</sup>.

During study quality of life of patients on interferon therapy was assessed and found that more than half of the patients felt problems in running, lifting heavy weights, carrying foodstuff and moving tables etc. while remaining portion had no such problems. Similarly among the patients, significant majority had problems in climbing stairs, walking, performing job/activities during past thirty days that exacerbated their quality of life while a few of them had no such problem. Likewise major proportion of patients felt stress, physical problems, body pain, felt sad, blue and did not get enough sleep or rest during past thirty days that disrupted them in performing home and outside works. There were a few patients who had no such problems. But it is important to mention that significant majority of patients had no need other person help in bathing, dressing and eating etc. during past 30 days.

Study assessed the quality of life among hepatitis C patients on interferon therapy and found that most of the patients (56%) had average health, 24% had good health and 20% had poor health. The results of our study are better than the study undertaken in 2012 by Ijaz and collaborators who asserted that 95% hepatitis C patients had poor health and only 5% had good health<sup>1</sup>.

## CONCLUSION

Generally the quality of life was observed satisfactory among patients because most of them had average or good health and some of them had poor health.

There is need to boost the knowledge not only the hepatitis C patients but also the general public to prevent them from transmission. In this association health education programs are required to be held at community level. Further studies are required to be conducted on large scale.

## REFERENCES

1. Ijaz K, Omer B, Mahmood KT, Amin F. Quality of life in hepatitis C. *J Pharm Sci Res.* 2012; 4(11): 1982-5.
2. Sarwar S, Khan AA. Sofosbuvir based therapy in hepatitis C patients with and without cirrhosis: Is there difference? *Pak J Med Sci.* 2017; 33(1): 37-41.
3. Youssef NFA, El Kassas M, Farag A, Shepherd A. Health-related quality of Life in patients with chronic hepatitis C receiving Sofosbuvir-based treatment, with and without interferon: a prospective observational study in Egypt. *BMC Gastroenterol.* 2017; 17: 18.
4. Riaz S, Iqbal A. A review of hepatitis C in the general population in Pakistan. *Viral Hepat J.* 2016; 22(3): 74-81.
5. World Health Organization (2017). Hepatitis C. Available at: <http://www.who.int/mediacentre/factsheets/fs164/en/>
6. Conversano C, Carmassi C, Carlini M, Casu G, Gremigni P, Dell'Osso L. Interferon  $\alpha$  therapy in patients with chronic hepatitis C infection: quality of life and depression. *Hematol Rep.* 2015; 7(1): 5632.
7. Parveen M, Naveen M, Vani M, Ajay C, Ishita S, Chaturvedi A, et al. Impact of hepatitis C on quality of life. *Adv Res Gastroentero Hepatol.* 2016; 1(4): 555569.
8. Abd El-Wahab EW. Health-related quality of life among chronic HCV patients: measuring disease and treatment response impacts. *Ann Trop Med Public Health.* 2016; 9: 152-8.
9. Bezemer G, Gool ARV, Verheij-Hart E, Hansen BE, Lurie Y, Esteban JI, et al. Long-term effects of treatment and response in patients with chronic hepatitis C on quality of life. An international, multicenter, randomized, controlled study. *BMC Gastroenterol.* 2012; 12: 11.
10. Shaikh MN, Bawany MA, Liaquat J, Bohio R, Pirzada L. Frequency of depression; during pegylated interferon therapy for chronic hepatitis C. *Professional Med J.* 2016; 23(3): 328-35.
11. Chang SC, Yang SS, Chang CC, Lin CC, Chung YC, Li TC. Assessment of health-related quality of life in antiviral-treated Taiwanese chronic hepatitis C patients using SF-36 and CLDQ. *Health Qual Life Outcomes.* 2014; 12: 97.
12. Sajjad SF, Ahmed WU, Arif A, Alam SE, Waquar J. Weight loss with interferon and ribavirin therapy in chronic hepatitis C patients. *J Pak Med Assoc.* 2012; 62(11): 1229-32.
13. Pojoga C, Dumitracu DL, Pascu O, Grigorescu M. The effect of interferon alpha plus ribavirin on health-related quality of life in chronic C hepatitis: the Romanian experience. *J Gastrointest Liver Dis.* 2006; 15(1): 31-5.
14. Metwally AM, Abdel-Latif GA, Fouad WA, Rabah TM, Mohsen A, Shaaban FA et al. Impact of hepatitis C virus chronic infection on quality of life in Egypt. *Int J Med.* 2013; 7(12): 512-8.