

How to Cite:

Rasool, G., & Tareen, Z. (2022). Depression prevalence amongst patients with hepatitis C. *International Journal of Health Sciences*, 6(S8), 6710–6715.

<https://doi.org/10.53730/ijhs.v6nS8.13961>

Depression prevalence amongst patients with hepatitis C

Prof Ghulam Rasool

Professor and Executive Director of Psychiatry, Balochistan Institute of Psychiatry and Behavioral Sciences Quetta

Dr Zarmina Tareen

Assistant Professor, Balochistan Institute of Psychiatry and Behavioral Sciences Quetta

Corresponding author email: tareenzarmina@yahoo.com

Abstract---Background: Globally, hepatitis C is a serious health concern, and it is also becoming an alarming infection in our nation. The World Health Organization estimates that the hepatitis C virus infects 3% of people worldwide. Various study reported association of depression with hepatitis C virus infection. Objective: To assess the depression prevalence amongst patients with hepatitis c. Methodology: The current cross sectional study was carried out at Balochistan Institute of Psychiatry and Behavioral Sciences Quetta and Bolan Medical Complex Hospital Quetta from January 2019 to January 2020. Informed consent was taken in written from all the participants. Depressive symptomatology based on DSM 1V criteria was noted. A pre-designed proforma was then used to collect all the required information's. The SPSS version 24.0 was used to input and analyze the data. Results: In the current study, a total of 120 hepatitis C patients were enrolled. There were 66 (55%) males and 54 (45%) females. The mean age (SD) of the patients in our study was 42 (11.23) years. The overall frequency of depression amongst patients with HCV was 102 (85%). Depression distribution shows that 4 (3.92%) patients were depressed before diagnosis of HCV, 5 (4.90%) patients were depressed after diagnosis of HCV, 36 (35.29%) patients were depressed IFN therapy while 57 (55.89%) patients were depressed both before and after IFN therapy. Conclusion: Despite not being a population-based study, our research indicates that people with hepatitis C experience depression more often. The prevalence of untreated depression in people with hepatitis C is highlighted by our research, which also found substantial levels of mental disturbance in all patient categories. Additionally, it supports reports of depression in individuals who did not get any therapy, demonstrating that the illness process itself might sometimes be the cause of depression.

Keywords---depression, prevalence, hepatitis C.

Introduction

Globally, hepatitis C is a serious health concern, and it is also becoming an alarming infection in our nation (1). The World Health Organization estimates that the hepatitis C virus infects 3% of people worldwide (2). In certain regions of Pakistan, the prevalence of the hepatitis C virus (HCV) infection has been reported to be as high as 35%. (2,3). Depression and HCV have been linked in research. Patients with mental illnesses, particularly IV drug addicts, have been reported to have an increased incidence of HCV infection as compared to the general population (4). On the other hand, depression is more common in chronic hepatitis C patients than other mental problems (5). Patients with chronic hepatitis C have been proven to respond best to a combination of pegylated interferon (IFN)-alpha and ribavirin (CHC). Despite its effectiveness, one of this regimen's most frequent negative effects is depression (1). Patients often have non-specific complaints like fatigue as well as systemic symptoms like dry mouth and eyes (5,6). Typically, more than 20% of individuals using IFN for hepatitis C have psychiatric adverse effects (7,8). The primary justification for delaying or stopping interferon Alfa therapy is a psychiatric condition (9). Therefore, identifying and treating depression both prior to and during hepatitis C therapy is essential for success (6). Cognitive, behavioural, and affective neuropsychiatric symptoms that are linked to IFN- therapy can influence a patient's mental and physical health. These symptoms not only reduce the effectiveness of the therapy but are also extremely upsetting because they may affect one's ability to function at work and in social situations. Numerous theories and research have offered various descriptions of the IFN-induced depression process (10-12). Some cytokines that are strong candidates for the production of behavioural disorders are activated by INF alpha. Second, IFN alpha modifies the indolamine-dioxygenase, an enzyme that controls serotonin metabolism, in the periphery. No study have been conducted in our setting based on literature searching therefore the current study was carried out to assess the depression prevalence amongst patients with hepatitis c.

Materials and Methods

The current cross sectional study was carried out at Balochistan Institute of Psychiatry and Behavioral Sciences and Bolan Medical Complex Hospital Quetta. The study duration was one years from January 2019 to January 2020. The study approval was taken from IRB of the institute. The calculated sample size based on WHO sample size calculator was 140. The inclusion criteria of our study were all the patients of both the gender and age range of 18-60 years diagnosed with hepatitis c antibodies and willing to participate in our study. The exclusion criteria were all the patients with cirrhotic hepatic illness, complicated diabetes, and patients with renal failure, patients with liver failure, heart failure patients and patients with hypothyroidism. Informed consent was taken in written from all the participants. Depressive symptomatology based on DSM IV criteria was noted. A pre-designed proforma was then used to collect all the required information's. "Some of the patients had no treatment for their hepatitis C, while others received

interferon medication that was still being administered. In this research, we looked at three patient groups: Before using IFN, the first group—which had already been pre-diagnosed as having hepatitis C—was evaluated to see if the virus itself was a contributing cause of their depression. It has been shown in some studies that the virus itself can be a factor in causing some pathology that leads to depression. 2- After interferon therapy with ribavirin, the second group was post-treatment. In order to determine the prevalence of depression during medication treatment, the third group received interferon therapy”. The SPSS version 24.0 was used to input and analyze the data. Frequencies and percentages were used to represent qualitative variables. In terms of Mean SD, quantitative variables were represented.

Results

In the current study, a total of 120 hepatitis C patients were enrolled. There were 66 (55%) males and 54 (45%) females. The mean age (SD) of the patients in our study was 42 (11.23) years. In our study, 18 (15%) patients did not use any medicine for hepatitis C, 84 (70%) patients were under treatment for hepatitis C, 4 (3.33%) were Post treatment IFN while 14 (11.67%) patients were Post treatment IFN + ribavirin. The overall frequency of depression amongst patients with HCV was 102 (85%). Depression distribution shows that 4 (3.92%) patients were depressed before diagnosis of HCV, 5 (4.90%) patients were depressed after diagnosis of HCV, 36 (35.29%) patients were depressed IFN therapy while 57 (55.89%) patients were depressed both before and after IFN therapy.

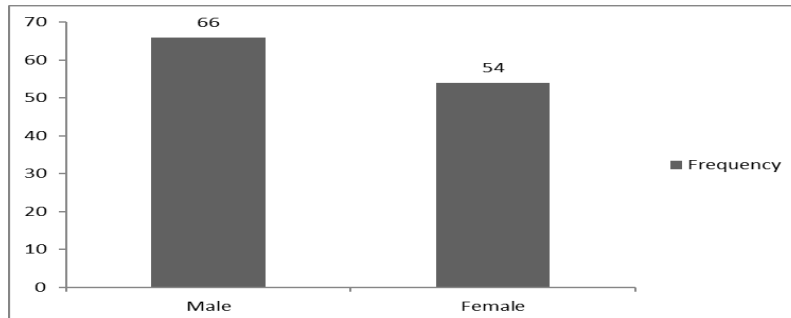


Figure 1: Gender wise distribution of patients

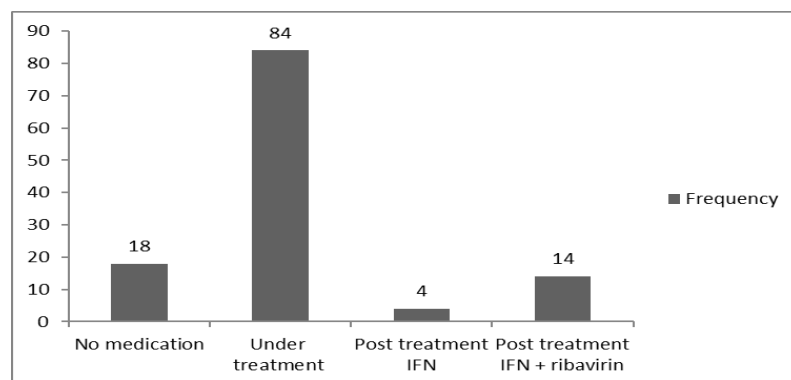


Figure 2: Distribution of patients based on treatment

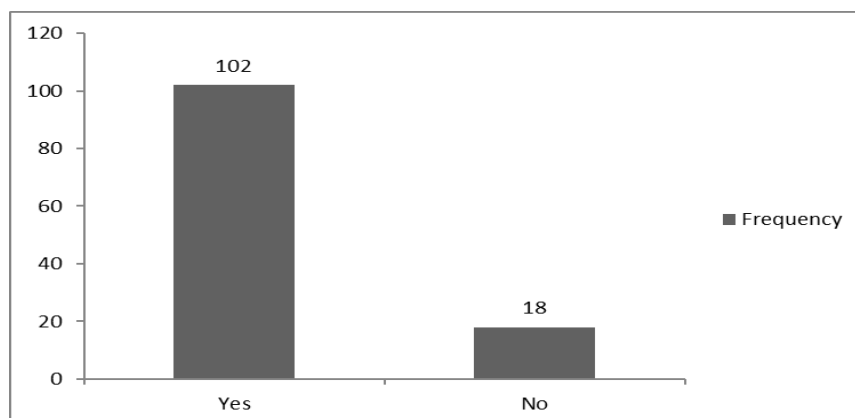


Figure 3: Overall frequency of depression amongst patients of HCV

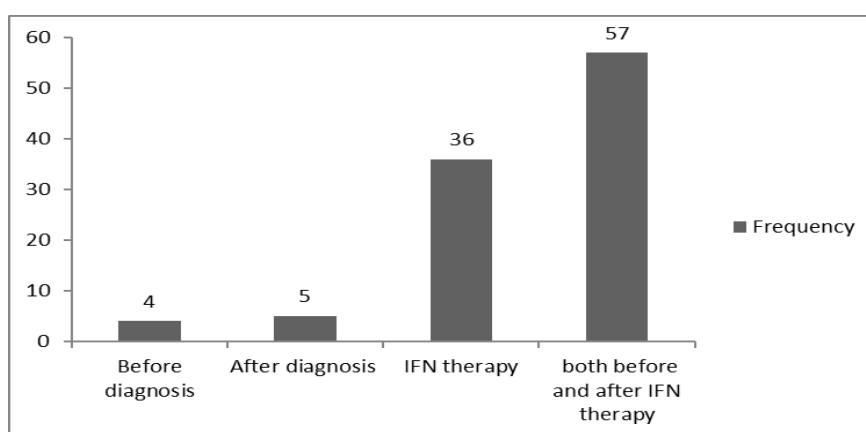


Figure 4: Depression distribution amongst enrolled patients

Discussion

Hepatitis C patients have greater rates of psychosocial symptoms and a worse quality of life than the general population, much as those who have other serious medical conditions (3). In the current study, a total of 120 hepatitis C patients were enrolled. There were 66 (55%) males and 54 (45%) females. The mean age (SD) of the patients in our study was 42 (11.23) years. In our study, 18 (15%) patients did not use any medicine for hepatitis c, 84 (70%) patients were under treatment for hepatitis c, 4 (3.33%) were Post treatment IFN while 14 (11.67%) patients were Post treatment IFN + ribavirin. The overall frequency of depression amongst patients with HCV was 102 (85%). Depression distribution shows that 4 (3.92%) patients were depressed before diagnosis of HCV, 5 (4.90%) patients were depressed after diagnosis of HCV, 36 (35.29%) patients were depressed IFN therapy while 57 (55.89%) patients were depressed both before and after IFN therapy. There have been reports of varied incidence rates of depression amongst HCV patients across the globe. In HCV patients, Fattovich et al. observed an incidence of depression as low as 1%. (13). However, they have only documented severe depression instances. Depression prevalence was 14.8%, according to Lee et al (14). In HCV patients, higher incidences of depression have been observed at

37.3% (15) and 44%. (16). This stark variation in the incidence rates of depression amongst HCV patients might be attributed to the varying depression diagnostic techniques that different authors have employed. In clinical settings, a number of scales are available for the diagnosis of depression. Additionally, the prevalence of depression may vary across different ethnic groups. The fact that our research was carried out in a hospital context, which may not be typical of the general population, is another crucial consideration. The accurate picture of the illness burden will need a well executed population-based investigation.

Conclusion

Despite not being a population-based study, our research indicates that people with hepatitis C experience depression more often. The prevalence of untreated depression in people with hepatitis C is highlighted by our research, which also found substantial levels of mental disturbance in all patient categories. Additionally, it supports reports of depression in individuals who did not get any therapy, demonstrating that the illness process itself might sometimes be the cause of depression.

References

1. Asnis GM, De La Garza R 2nd. Department of Psychiatry and Behavioral Sciences, Albert Einstein College of Medicine, Montefiore Medical Center, Anxiety and Depression Program, Klau Basement, 111 E. 210th Street, Bronx, New York 10467, USA. asnisarts@aol.com
2. Aziz S, Memon A, Tily HI, Rasheed K, Jehangir K, Quraishy MS. Prevalence of HIV, hepatitis B and C amongst health workers of Civil Hospital Karachi. *J Pak Med Assoc* 2002; 52: 92-4.
3. Dwight MM, Kowdley KV, Russo JE, Ciechanowski PS, Larson AM, Katon WJ. Depression, fatigue, and functional disability in patients with chronic hepatitis C. *J Psychosom Res* 2000; 49(5): 311-7.
4. Farkkila M, Iivanainen M, Harkonen M, Laakso J, Mattson K, Niiranen A, Larsen TA, et al. Effect of interferon-gamma on biogenic amine metabolism, electroencephalographic recordings, and transient potentials. *Clin Neuropharmacol* 1988; 11: 63-67.
5. Fattovich G, Giustina G, Favarato S, Ruol A and Investigators of the Italian Association for the Study of the Liver. A survey of adverse events in 11241 patients with chronic viral hepatitis treated with alfa interferon. *J Hepatol* 1996; 24: 38-47.
6. Khattak MF, Salamat N, Bhatti FA, Qureshi TZ. Seroprevalence of hepatitis B, C and HIV in blood donors in northern Pakistan. *J Pak Med Assoc* 2002; 52: 398-402.
7. Lee DH, Jamal H, Regenstein FG, Perrillo RP. Morbidity of chronic hepatitis C as seen in a tertiary care medical center. *Dig Dis Sci* 1997; 42: 186-91.
8. Maddrey WC. Safety of combination interferon alpha-2b/ribavirin therapy in chronic hepatitis C-relapsed and treatment-naïve patients. *Semin Liver Dis* 1999;19(Suppl 1):67-75.
9. McHutchinson JG, Poynard T. Combination therapy with interferon plus ribavirin for the initial treatment of chronic hepatitis C. *Semin Liver Dis* 1999;19(Suppl 1):57-65.

10. Miyaoka H, Otsubo T, Kamijima K, Ishii M, Onuki M, Keiji M. Depression from interferon therapy in patients with hepatitis C. *Am J Psychiatry* 1999; 156: 1120.
11. Otsubo T, Miyaoka H, Kamijima K, Onuki M, Ishii M, Mitamura K. Depression during interferon therapy in chronic hepatitis C patients- a prospective study [Article in Japanese]. *Seishin Shinkeigaku Zasshi* 1997; 99: 101-27.
12. Valentine AD, Meyers CA, Kling MA, Richelson E, Hauser P. Mood and cognitive side effects of interferon- α therapy. *Semin Oncol* 1998; 25(Suppl 1): 39-47.
13. Vignau J, Karila L, Costisella O, Canva V. Hepatitis C, interferon α and depression: Main physiopathologic hypothesis. Article in French. Service d'Addictologie, CHRU de Lille.
14. Woodfield DG, Harness M, Rix-Trott K, Tsuda F, Okamoto H, Mayumi M. Identification and genotyping of hepatitis C virus in injectable and oral drug users in New Zealand. *Aust N Z J Med* 1994; 24: 47-50.
15. Yates WR, Gleason O. Hepatitis C and depression. *Depress Anxiety* 1998; 7(4): 188 -93.
16. Zdilar D, Franco-Bronson K, Buchler N, Locala JA, Younossi ZM. Hepatitis C: interferon alfa, and depression. *Hepatology* 2000;31(6):1207-11.