

Prevalence of depression among Hepatitis-C patients in tertiary care hospital

Sanha Sarwar, Waseem Babur, Saba Mahwish, Ishtiaq Anwar

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Abstract:

Objective: To determine frequency and severity of depression among hepatitis C patients in tertiary care hospital.

Study Design: Cross sectional study

Place & Duration of study: Study was conducted in Department of Medicine, Shifa International Hospital, Islamabad. Study duration was 6 months (January 2017 to June 2017).

Material & Methods: A sample size of 178 patients was calculated using WHO calculator. Simple random sampling was used for recruitment of participants. Hamilton Depression rating scale was used for assessment of depression and its severity grading. Ethical approval and consent forms were taken. Data was analyzed using SPSS version 22.0. Chi-square test was applied for measuring associations.

Results: Total 178 patients were included in study. Mean age of patients was 38.4 ± 3.2 SD. There were 60 (34%) males and 118 (66%) females. Frequency of depression in hepatitis C patients is 56%. Depression is associated with hypertension ($p=0.001$) and monthly income ($p=0.000$). Severity of depression is associated with age ($p=0.00$), gender ($p=0.00$) and monthly income ($p=0.00$).

Conclusion: High prevalence of Depression in Hepatitis C patients was reflected in study. Severity of depression was associated with age, gender and monthly income of patients.

Keywords: Depression, Hepatitis C, Hamilton depression rating Scale, poverty

Allama Iqbal Memorial
Hospital, Sialkot
S Sarwar

Kingdom of Saudia
Arabia, Tabuk
W Babur

Shifa International
Hospital, Islamabad
S Mahwish

Eye Donors Organization,
Wah Cantt
I Anwar

Correspondence:
Dr Ishtiaq Anwar,
A-53, Madni Street, Lala
Rukh, Wah Cantt, Punjab.
Cell: + 92-301-5038267
Email: sulehrionline99@
hotmail.com

Introduction:

Hepatitis-C is a major challenge faced by health sector in Pakistan. Worldwide, 170 million individuals are affected with hepatitis-C.¹ However, the prevalence of hepatitis C in localities of Pakistan is 16%.² It is estimated that 3-4 million new cases are reported each years due to un-availability of hepatitis-C vaccination and this trend is increasing day-by day.³

Depression is defined as "low mood state or restlessness that can affect an individual's feelings, behaviors, thoughts and sense of well being". Depression in hepatitis-C patients is an emerging issue in both developing and developed world.⁴ Depression is perceived as an important complication in 70% of HCV patients

followed by fatigue and irritability. Prevalence of depression is high in hepatitis C (70%) patients as compared to general population (10%).⁵

Hazaveh et al reported that prevalence of depression is higher in HCV (35%) patients than HCB (19%) patients.⁶ Lucaci et al, reported patients with HCV had high frequency of psychiatric disorders. However psychiatric co morbidities are highly associated with HCV as compared to controls. Psychosocial impact, history of disease and stigmatization are important contribution factors for development of depression in HCV patients.¹

Alavi et al. reported 36% of Hepatitis C patients had major depressive disorder while 18% are at

Table-1: Association between Depression & Diabetes, Hypertension and Monthly Income

Diabetes Mellitus	Depression		Total	Chi-square value	P value
	Yes	No			
Yes	35(50%)	35(50%)	70(39%)	4.789	0.667
No	65(60%)	43(40%)	108(61%)		
Hypertension					
Yes	20(67%)	10(33%)	30(17%)	17.99	0.001
No	80(54%)	68(46%)	148(83%)		
Monthly income					
≤5,000-15,000/-Rs	60(75%)	20(25%)	80(45%)	23.45	0.000
16,000-30,000/-Rs	30(52%)	28(48%)	58(33%)		
>30,000/-Rs	10(25%)	30(75%)	40(22%)		
Total	100(56%)	78(44%)	178(100%)		

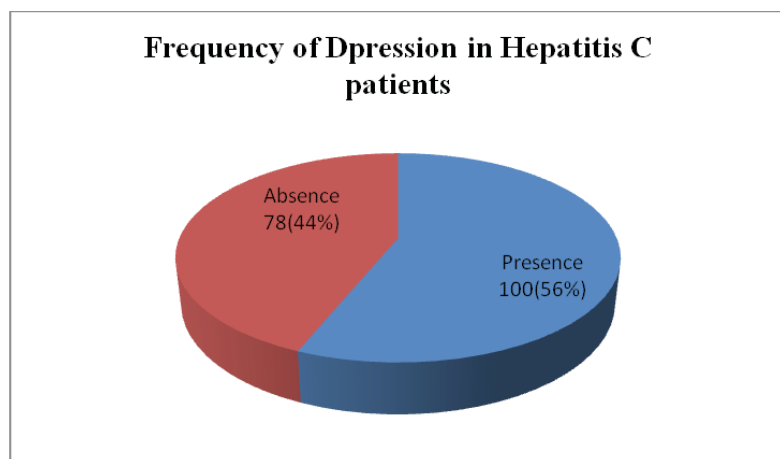


Figure-1: Frequency of Depression in Hepatitis C patients

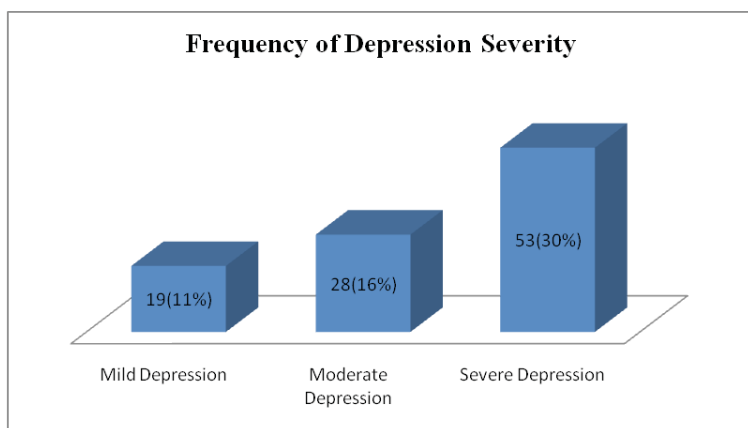


Figure-2: Frequency of severity of Depression

suicidal risk. Limited social activity, drugs injection and unstable employment are contributing issues that leads hepatitis c patients towards depression.² Schafer et al. reported that 35% of cases (Hepatitis C patients) had moderate to severe level of depression while 15% controls had moderate to severe level of depression. Similarly,

64% of cases had minimum to mild depression while 85% of controls had minimum to mild depression. Frequency of depression was relatively high in hepatitis C patients even before interferon therapy.⁷

Pakistan is a developing country with limited resources in health sector. A limited data is available on this topic in Pakistan. Present study aims to determine frequency and severity of depression among hepatitis C patients in tertiary care hospital.

Material & Methods:

A cross sectional study was conducted in Department of Medicine, Shifa International Hospital, Islamabad. Study duration was 6 months (January 2017 to June 2017). A sample size of 178 patients was calculated with 95% confidence interval (z), 35% prevalence (p) and 7% margin of Error (d) using WHO calculator. Patients age 20-65 years, both genders, newly diagnosed with hepatitis C and patients getting treatment of hepatitis C from last 1 month were included in study. Exclusion Criteria was based upon history of mania, hypomania (including anti-depressant-induced), psychotic symptoms or seizure disorder, patients with clinical symptoms or signs of cirrhosis or portal hypertension, patients having co-infection with human immunodeficiency virus (HIV) and HBV, patients using oral contraceptives, anti-convulsants and lithium. Non probability consecutive sampling was used for recruitment of participants. Patients who fulfill inclusion criteria were undergone a pre structured questionnaire. Hamilton rating scale was used for measuring depression in hepatitis C patients. it covered 17 items (depression mood, feeling of guilt, suicide, insomnia early, insomnia middle, insomnia late, work and activities, retardation psychomotor, agitation, anxiety psychological, anxiety somatic, anxiety psychological, somatic symptoms general, genitalial symptoms, hypochondriasis, loss of weight, insight), aiming to identify the presence of depression and its severity. Ethical approval was taken from ethical review board Hospital and consent forms were taken from participants. Data was collected

through pre tested questionnaire. Reliability of questionnaire was assessed after a pretest exercise of 10 questionnaires. Data was analyzed using SPSS software version 20. A chi-square test was applied for observing association between variables. P-value ≤ 0.05 was considered significant.

Results:

Total 178 patients were included in study. Mean age of patients was 38.4 ± 3.2 SD. There were 60(34%) males and 118(66%) females. out of all patients 178(100%), 78(44%) patients had metric, 60(34%) intermediate, 30(17%) bachelors and 10(5%) had masters level of education. Among all the patients, 30(17%) patients were teachers, 40(22%) business man, 20(11%) shop keepers, 30(17%) engineers, 58(33%) had others occupation. There were 80(45%) patients who had $\leq 5000-15000/-$, 58(33%) had $>15000-30000/-$, 40(22%) had $>30,000/-$ monthly income. Among all the patients, 70(39%) patients had diabetes mellitus while 108(61%) did not have diabetes mellitus. There were 30(17%) patients who had hypertension while 148(83%) did not have hypertension. Frequency of Depression in Hepatitis C patients is shown in figure 1.

Among all the males 60 (34%), 10(17%) had mild depression, 20(33%) had moderate depression while 30(50%) had severe depression. Among all the females 118(66%), 60(51%) had mild depression, 30(25%) had moderate depression and 28(24%) had severe depression ($\chi^2 = 29.799$, $p=0.00$, $df=2$). Among all the patients who were in age group 20-40 years 100(56%), 60(60%) had mild depression, 30(30%) had moderate depression and 10(10%) had severe depression. Similarly among all those who were in age group 41-65 years 78(44%), 40(51%) had mild depression, 20(26%) had moderate depression and 18(23%) had severe depression ($\chi^2 = 14.116$, $p=0.00$, $df=2$). Among all those who had monthly income Rs. $\leq 5000-15000/-$, 20(25%) had mild depression, 30(38%) had moderate depression while 40(37%) had severe depression. Among all those who had monthly income 16,000-30,000/-Rs 58 (33%), 20(34%)

had mild depression, 30(52%) had moderate depression and 8(14%) had severe depression. Among all those who had Rs. $>30,000/-$ monthly income 40(22%), 25(63%) had mild depression, 10(25%) had moderate while 5(12%) had severe depression ($\chi^2 = 30.110$, $p=0.00$, $df=3$).

Association between depression and diabetes mellitus, hypertension, monthly income is shown in table 1.

Discussion:

Depression is most common psychiatric disorder in hepatitis C patients. Depression due to hepatitis C is associated with high suicidal risk leading towards high proportion of morbidity and mortality in Pakistan. Present study found prevalence of depression as high as 56% in hepatitis C patients. Reichenberg et al. reported that among all CHC patients prevalence of major depression was 82%.⁸ Another similar study reported prevalence of depression in hepatitis C patients was 35% using depression anxiety stress scale.⁹

Present study found out that among all those patients who had depression 100(56%), 19(11%) had mild depression, 28(16%) had moderate depression and 53(30%) had severe depression using HAM-D scale. A local study reported that 35% of cases had moderate to severe range of depressive disorder while 15% controls had moderate to severe range of depressive disorder.¹⁰

Present study reported that monthly income is strongly associated with Depression in Hepatitis C patients. Patients having $\leq 5,000$ to 15,000 monthly income 37% of them have severe depression ($\chi^2 = 30.110$, $p=0.00$, $df=3$). Evon et al. reported that incidence of depression in HCV patients was 26%. However, low level of education, younger age and unemployment are contributing factors in development of depression among HCV patients.¹¹

Present study reported that a significant association was found between severity of depression and gender. Among all the males, 50% had severe depression while among all females 24%

had severe depression ($\chi^2 = 29.799$, $p = 0.00$, $df = 2$). Golden et al reported that after age and sex adjustment, depression is strongly associated with social stigma, poor work, poor concentration and anxiety.¹²

Limitation: Study had small sample size. It was conducted at single centre that limits its generalizability.

Conclusion:

High prevalence of Depression in Hepatitis C patients was reflected in study. Severity of depression was associated with age, gender and monthly income of patients.

Conflict of interest: None

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Role and contribution of authors:

Dr Sanha Sarwar, designing, data management & analysis

Dr Waseem Babur, conception & acquisition of data

Dr Saba Mahwish, data collection and analysis

Dr Ishtiaq Anwar, final revision and critical evaluation of intellectual content

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