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Research Article

DETERMINE THE FREQUENCY OF ANXIETY, DEPRESSION AND ADDICTION OF DRUG IN PATIENTS TREATED FOR CHRONIC HEPATITIS C

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Abstract:

Objective: The aim of our study was to determine the frequency of depression, addiction and induction of drug in patients who were treated for Chronic Hepatitis C.

Study Design: A descriptive observational study.

Place and Duration: This study was conducted at Nishtar Hospital, Multan for the duration of five months starting from April, 2020 to September 2020.

Methodology: In our study we registered 126 patients who were having chronic Hepatitis C and need treatment for anxiety and depression using Hospital Anxiety and Depression Scale (HAD S) questionnaire. Depending upon their treatment regimen we divide Chronic Hepatitis C patients in three groups. In these three regimens, one regimen was interferon free while the other two regimens were pegylated interferon. Treatment was completed by all the patients. At the end of treatment, we use (HADS) questionnaire to evaluate the occurrence of depression and anxiety.

Results: According to the gender distribution we registered 82 Females and 44 males. The patients that received PEG-IFN + ribavirin+ sofosbuvir were 27 patients (21.4%), who received sofosbuvir + ribavirin were 37 patients (29.4%) and those who received Pegylated interferon (PEG-IFN) + ribavirin were 62 patients (49.2%). At the end of treatment, 46 patients (36.5%) had definite depression and 40 patients (31.7 %) had definite anxiety. In sofosbuvir+ ribavirin group definite anxiety and depression was significantly low. compare

Conclusion: At the end of our study, we conclude that depression and anxiety is less common with directly acting antivirals than interferon-based regimens for the treatment of more chronic hepatitis C.

Keywords: Chronic Hepatitis C, Hospital Anxiety and Depression Scale (HAD S), Depression, Anxiety

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INTRODUCTION:

Hepatitis C virus infection is now considered a global world problem affecting all the nations worldwide. Global prevalence of hepatitis C is estimated around 2.8% representing 180 million people [1]. A recent meta-analysis reported an estimated pooled mean HCV prevalence in Pakistan at 6.2% among general population, 34.5% among high-risk clinical populations, 16.9% among special clinical populations, 55.9% among populations with liver-related conditions and 53.6% among intravenous drug abusers [2]. HCV percentage prevalence in the adult population has been 11.55% for Pakistan and HCV genotype 3a prevalence is reported as 63.45%, the highest of all genotypes [3]. Treatment of choice for chronic hepatitis C (CHC) infection till late 2015 was combination of pegylated interferon alpha (Peg-IFN) and ribavirin (RBV); which was used for 24 to 48 weeks depending on genotype of virus [4]. The most common psychiatric side effect of interferon-based treatment is depression [5]. An incidence of 42.4% for depression and/or anxiety disorders during Peg-IFN treatment has been reported [6]. Interferon- ribavirin therapy can induce a range of depressive symptoms including suicidal ideation and behavior [7]. Depressive symptoms arise during initial few weeks of treatment and are more marked between 4 to 16 weeks [8].

In a meta-analysis of 22 prospective observational studies for patients treated with interferon-ribavirin; the cumulative incidence of depression was found to be 6% at week 4, 20% at week 12, 25% at week 24 and 28% at week 48 [9]. Anxiety is a risk factor for suicide in depressive patients highlighting need of screening for anxiety in depressive patients [10]. This had been a major challenge for treatment compliance and a cause of treatment failure in the interferon era. Depression can be Hospital Anxiety and Depression Scale (HADS) is a widely used, simple and well validated tool for monitoring and assessment of symptoms of anxiety and depression [11,12]. It is used for the diagnosis of anxiety and depression and has separate subscales for both. Although direct acting antivirals (DAA) are recommended to treat CHC patients, Interferon based therapy is still used in many

Asian countries and resource limited regions [13]. It is believed that depression is less common with newer direct acting agents like sofosbuvir resulting in better compliance and treatment outcome. According to one study DAA are associated with improvement in depression scores. The objective of this study was to compare the incidence of depression and anxiety in patients treated with various regimens for CHC after approval of newer direct acting antivirals.

METHODOLOGY:

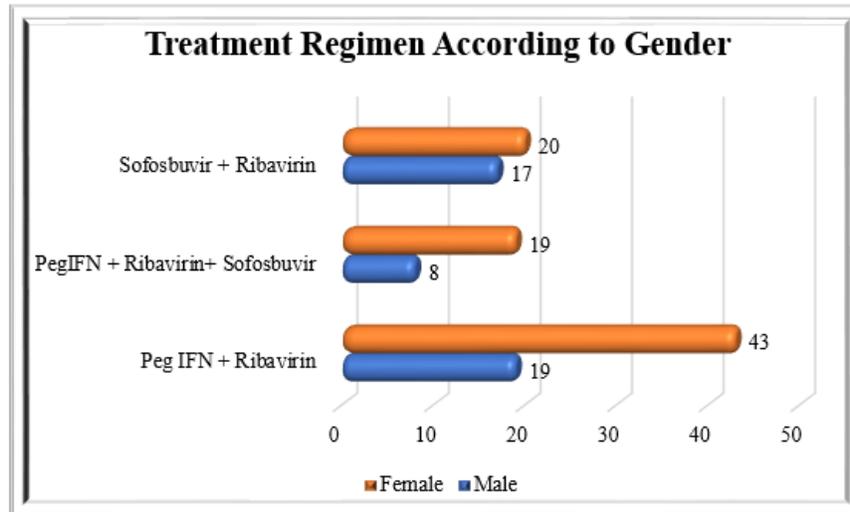
This descriptive observational study was conducted at Nishtar Hospital, Multan for the duration of five months starting from April, 2020 to September 2020. All patients of Hepatitis C, genotype 3, requiring treatment with no baseline depression or anxiety as assessed by HADS questionnaire were enrolled. Patients having chronic medical illnesses like diabetes, coronary artery disease, hypothyroidism or malignancy were excluded. Patients, of both genders, were divided in 3 groups depending upon their treatment regimen. Patients in group A received pegylated interferon with ribavirin for 24 weeks; group B received pegylated interferon, ribavirin and sofosbuvir for 12 weeks, while group C received sofosbuvir and ribavirin for 24 weeks. All patients successfully completed their treatment. Incidence of anxiety and depression was evaluated using HADS questionnaire at the end of treatment. Patients were classified as non-case, borderline case and definitive case for both anxiety and depression. The results were compared for significance by applying conventional chi-square test. p-value less than 0.05 was considered significant between anxiety and depression with treatment.

RESULTS:

A total of 126 patients were enrolled. Out of these 44 (34.9%) were males and 82 (65.1%) were females. Mean age of patients was 39.17±10.23 years. Patients were divided in 3 groups depending upon their treatment regimen. Out of total 126 patients, 62 (49.2%) received Pegylated interferon (PEG IFN) + ribavirin, 27 (21.4%) received PEG IFN + ribavirin+ sofosbuvir and 37 (29.4%) received sofosbuvir + ribavirin (Table No 01).

Table No 01: Treatment Regimen According to Gender

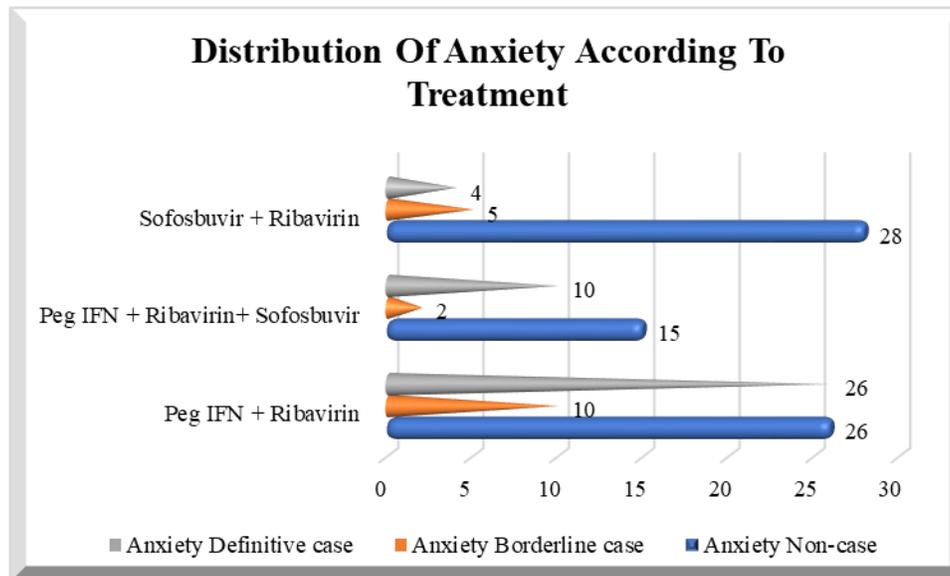
Gender	Treatment Regimen			Total
	Peg IFN + Ribavirin	PegIFN + Ribavirin+ Sofosbuvir	Sofosbuvir + Ribavirin	
Male	19	8	17	44
Female	43	19	20	82
Total	62	27	37	126



Patients were classified as non-case, border line case and definitive case for both anxiety and depression. Out of 126 patients, 69 (54.8%) patients had no anxiety, 17 (13.5%) had border line anxiety while 40 (31.7%) patients had definite anxiety at end of treatment. Out of 126 patients, 59 (46.8%) patients had no depression, 21 (16.7%) had border line depression while 46 (36.5%) had definite depression at end of treatment. Incidence of definite anxiety and depression was significantly low in sofosbuvir+ ribavirin group (Table No 02).

Table No 02: Distribution of Anxiety and Depression According to Gender

Variables		Treatment Regimen			Total	P-value
		Peg IFN + Ribavirin	Peg IFN + Ribavirin+ Sofosbuvir	Sofosbuvir + Ribavirin		
Anxiety	Non-case	26	15	28	69	0.010
	Borderline case	10	2	5	17	
	Definitive case	26	10	4	40	
Depression	Non-case	22	10	27	59	0.001
	Borderline case	10	4	7	21	
	Definitive case	30	13	3	46	



DISCUSSION:

Treatment induced anxiety and depression is common in patients treated with pegylated interferon and ribavirin-based treatment for hepatitis C and remains a major cause of treatment failure and non-compliance with treatment. Newer direct acting antivirals are believed to improve treatment associated anxiety and depression. This study compared incidence of anxiety and depression in different treatment groups. Incidence of definite anxiety and depression was found much less in sofosbuvir+ribavirin group as compared to PEG-IFN + ribavirin group alone. Similarly, incidence of definite anxiety and depression decreased in PEG-IFN+ ribavirin+ sofosbuvir group as compared to PEG-IFN + ribavirin group which suggests that direct acting antivirals may help in reducing anxiety and depression. Depression is common in patients treated for Hepatitis C who receive interferon and ribavirin. This has been a major challenge in past for treatment compliance. Depression is believed to be less common with newer direct acting antivirals. These findings are comparable with the study of Tang and coworkers which showed that treatment with DAA based therapies in patients with mental health disorders is safe and that sofosbuvir based therapy is associated with improvement in depression score [14].

However, this was a retrospective cohort study while our study is prospective cohort study, they used 3 different sofosbuvir based regimens while we used 2 sofosbuvir based regimens; one regimen containing both inventory (BDI) while we used HADS questionnaire for assessing depression and anxiety, they studied patients with genotype 1 while we had all patients with genotype 3. Younossi and coauthors

reported that patients treated with sofosbuvir and ribavirin had significant improvement in patient reported outcomes, including depression and anxiety [15]. Similar observations have been reported by Youssef and colleagues who concluded that interferon-based treatment required more nursing and physician attention due to increased anxiety levels [16]. Limitations of this study are small sample size, lack of controls, failure to assess simultaneous presence of HIV and its impact on final HADS score, failure to correlate outcome measures like SVR with anxiety and depression scores. However, the main aim of our study was to assess onset of new depression and anxiety and its relevance to adherence with DAA containing treatment regimen.

CONCLUSIONS:

At the end of our study, we conclude that depression and anxiety is less common with directly acting antivirals than interferon-based regimens for the treatment of more chronic hepatitis C.

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