

ORIGINAL ARTICLE

Sociodemographic Profile of Patients Visiting Ketamine Clinic during Covid Times in Kashmir

Marya Zahoor, Yasir Hassan Rather, Fazle Roub

Department of Psychiatry, GMC Srinagar

ABSTRACT

Introduction: Covid 19 has led to an increase in the number of people suffering from psychiatric illnesses in the form of depression and anxiety. Ketamine, an anesthetic agent as an intravenous infusion, proves to be an efficient antidepressant at sub anesthetic doses of 0.5 mg/kg body weight. Moreover, ketamine infusion can effectively manage such patients with treatment-resistant depression and active suicidality. This study assesses the sociodemographic profile of the depressive patients affected by Covid 19, attending Ketamine clinic at Institute of Mental Health and Neurosciences (IMHANS) Kashmir.

Materials and Methods: Patients aged 18 years and above visiting the ketamine clinic from April 2020 to April 2021 for treatment-resistant depression and suicidality were evaluated per a preformed proforma and divided into various socio-occupational categories status per the modified Kuppaswamy scale. Clinical diagnosis of patients was established using DSM 5 system of classification, and triggering factors for current illness was found.

Results: A total of 21 patients were included in the study (M: F = 11:10). The mean age of the patients was 41.19 ± 9.57 years. The majority of the patients belonged to the upper lower class. MDD and BPAD were seen in 10 and 9 patients, respectively. Thirteen patients were resistant to oral medication, and two were actively suicidal, while both resistances to oral medicines and active suicidality were seen in 6 patients. In 13 patients, the triggering factor for exacerbation of current illness was established as a direct or indirect effect of Covid 19. The difference between various reasons for ketamine infusion was statistically significant with a p-value of 0.012.

Conclusion: Ketamine infusion can form an effective strategy in managing patients with treatment-resistant depression and active suicidality, with the advantage of decreased risk of Covid transmission due to aerosol generation compared to ECT.

Keywords: Treatment-resistant depression; Covid 19, ketamine infusion.

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INTRODUCTION

Ketamine was synthesized by Calvin Lee Stevens, PhD, Professor of organic chemistry at Wayne University. An NMDA receptor antagonist is an anesthetic agent short-acting and has recently been used as an antidepressant and anti-suicidal agent. Ketamine has different effects at different doses. At lower doses, i.e., sub anesthetic doses, it produces an antidepressant effect. Psych mimetic effects are seen further raising the quantity, and anesthesia is produced at higher doses.¹ Two features of the antidepressant response to Ketamine make it striking: first, it can manifest itself within minutes or hours; second, its effect has mainly been shown to take place in patients with treatment-resistant depression, and since it is capable of providing immediate

relief, it removes the impetus to engage in suicidal acts as well. The response rate of Ketamine has generally been 50% in placebo-controlled trials².

Novel Coronavirus Infected Pneumonia (NCIP), caused by a coronavirus, started in Wuhan, China, in December 2019³. Currently, India is in the midst of the second wave of Covid infection. Whenever there is an epidemic, many people develop anxiety, stress, fear of getting infected by the disease, and socioeconomic manifestations of the epidemic.⁴ The primary practice of medicine changes as

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Correspondence:

Dr. Marya Zahoor
Department of Psychiatry, GMC Srinagar
Email: maryazahoor@gmail.com

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many hospital supporting facilities are stopped, and there is hesitance in doing physical examinations or any medical intervention.⁵ Presently, due to Covid 19, many people suffer from anxiety, depression, stress, insomnia, and even substance use. Covid 19 pandemic has accelerated the need for providing mental health services throughout the world.⁶ The ongoing pandemic has compounded the psychological wellbeing of the Kashmiri population that is already affected by the ongoing political turmoil existing for decades.⁷

This study assesses the sociodemographic profile of the depressive patients affected by Covid 19, attending Ketamine clinic at Institute of Mental Health and Neurosciences (IMHANS) Kashmir.

MATERIALS AND METHOD

A prospective descriptive study was conducted at IMHANS Srinagar. All the patients aged 18 years and above visiting the ketamine clinic from April 2020 to April 2021 were enrolled in the study. These patients were fulfilling the criteria of treatment-resistant depression (failure to respond to at least two different types of antidepressants for a period longer than four weeks at the maximum recommended dose)⁸ and active suicidality after. Written informed consent was also taken from patients for conducting the study. All the patients were evaluated as per a preformed proforma, including sociodemographic parameters like age, sex, marital status, and educational status. In addition, patients were divided into various categories of socio-occupational class as per the modified Kuppaswamy scale. Clinical diagnosis of patients was established using the DSM 5 system of classification. In addition, triggering factors for current illness was set. The data was evaluated using SPSS version 25.

The Ketamine clinic runs twice a week at IMHANS, where patients undergo ketamine therapy. Depressive patients who are resistant to oral medication or who are actively suicidal are benefitted from this therapy. Ketamine (0.5 mg/kg body weight) is given as an i.v infusion to patients for 40mins. Since it is a rapidly acting agent, patients report an improvement in depressive symptomatology and suicidal ideations within a few hours⁹

Ethical clearance was sought from the ethical committee of GMC Srinagar.

RESULTS

Twenty-one patients were included in the study, with a male: female ratio of 11:10. The mean age of the patients was 41.19 ± 9.57 years. A total of 9 patients were from urban settings, while the remaining 12 resided in rural areas. Thirteen patients were married, while eight patients were unmarried (Table 1). Only 4 out of 21 patients were illiterate, while graduation was the most common qualification amongst the remaining patients. The majority of the patients belonged to the upper lower class, while none of the patients was from the upper class (Table 2). MDD and BPAD were seen in 10 and 9 patients, respectively, while only two patients fulfilled the criteria for other psychiatric illnesses with depression as comorbidity. Thirteen patients visiting the ketamine clinic were resistant to oral medication, and two were actively suicidal.

Table 1: General characteristics of patients.

Age in years	(n)	percentage	p value
Up to 20	Nil	0	0.513
21-40	9	42.85	
41-60	12	57.14	
61-80	Nil	0	
Gender	(n)	percentage	p value
Male	11	52.38	0.827
Female	10	47.61	
Residence	(n)	percentage	p value
Rural	12	57.14	0.513
Urban	9	42.85	
Marital status	(n)	percentage	p value
Married	13	61.90	0.275
Unmarried	8	38.09	

Table 2: Clinical profile of patients.

Educational status	(n)	percentage	p value
Illiterate	4	19.04	0.656
Up to Primary School	2	9.52	
Up to Middle School	3	14.28	
Up to High School	2	9.52	
Up to Higher Secondary School	4	19.04	
Graduate	6	28.57	
Post graduate	Nil	0	
Socio-occupational status	(n)	percentage	p value
Upper class	Nil	0	0.061
Upper middle class	2	9.52	
Lower middle class	6	28.57	
Upper lower class	10	47.61	
Lower class	3	14.28	
Education	(n)	percentage	p value
Student	3	14.28	0.119
Employed	4	19.04	
Unemployed	9	42.85	
Farmers	2	9.52	
Skilled worker	3	14.28	

In comparison, both resistances to oral medication as well as active suicidality was seen in 6 patients. In 13 patients, the triggering factor for exacerbation of current illness was established as a direct or indirect effect of Covid 19, while eight patients had other factors contributing to it (Table 3). Non-parametric variables like age group, gender, residence, marital status, education, socio-occupational status, diagnosis of patient, occupation, the reason for ketamine infusion, and triggering factor for present illness were compared using the Chi-square test. The values below 0.05 were considered statistically significant for all variables. The difference between various reasons for ketamine infusion was the only variable that came out to be statistically significant with a p-value of 0.012.

Table 3: Clinical profile for ketamine infusion.

Diagnosis	(n)	percentage	p value
MDD	10	47.61	0.066
BPAD	9	42.85	
Others	2	9.52	
Reason for Ketamine	(n)	percentage	p value
Resistance to oral medication	13	61.90	0.012
Active suicidality	2	9.52	
Both	6	28.57	
Triggering factor	(n)	percentage	p value
Direct or indirect effect of covid 19 on existing illness	13	61.90	0.275
Any other factor	8	38.09	

DISCUSSION

An increase in psychiatric disorders is seen during pandemics where a large population becomes apprehensive about their wellbeing. People feel a sense of helplessness, and most perceive a moderate to severe deterioration in their psychological health because of the pandemic.^{10,11} In such circumstances, Ketamine, administered as an intravenous infusion, appeared a safer alternative to ECT as it did not involve any risk of aerosol generation and possible transmission of Covid infection. In contrast, ECT involves a greater risk of Covid transmission secondary to aerosol generation when the bag and mask ventilation and suctioning of secretions during the procedure¹².

The mean age of the patients in our study was 41.19 ± 9.57 years which nearly corroborates with that of 35.3 ± 13.56

years reported in pre-Covid times in Kashmir valley by Dar et al.¹³ Majority of the patients in our study belonged to the age group of 41-60 years (57.14%) followed by 21-40 years (42.85 %). In contrast, the findings of the two studies conducted by Ahmad et al. and Shoib et al. in which the majority of the patients belonged to the age groups of 18-29 years and 31-40 years, respectively.^{14, 15} This could be explained by the fact that this age group usually shoulders the family's financial responsibilities in our society. The pandemic has led to an increase in joblessness. Also, acceleration in midlife crisis due to the pandemic may have contributed to the increased prevalence of depressive disorders in this age group. In our study, males and females constituted 52.38 % and 47.61 % of the total patients, respectively. Our study included 57.14 % of patients from rural areas, while 42.85 % were from urban areas, as our hospital is a referral center and receives patients from both settings. Similar results were found by Ahmed et al. in their study, where 52.9% of patients belonged to rural areas, and 47.10 % were from urban areas.¹⁴ Majority of our patients (61.9 %) were married, while 38.09 % were unmarried. Similar results were documented by Dar et al. in their study.¹³ The increase in the problems of married people by the ongoing pandemic, who are already overwhelmed by social and financial responsibilities probably, explains this finding. Also, most of the patients in our study belonged to 41-60 years, who are usually married in our society. The percentage of illiterate patients (19.04%) in our study was less as compared to that reported by Ahmad et al. (51.3%) and Dar et al. (37.7%).^{13,14} Many private clinics that educated people usually visit were not functioning during the pandemic, giving rise to the increased number of educated patients in our study. It is pretty evident from previous studies that depression is more prevalent in patients belonging to lower socioeconomic status. Mental disorders share a symbiotic relation with poverty and unemployment, where each contributes to the growth of the other.^{16,17,18} In our study, too lower socio-occupational status was seen to be a significant accompaniment of depression where 47.61% and 14.28% of the people belonged to upper lower (class 2) and lower classes (class 1) of socioeconomic status respectively. Dar et al. found (48.2%) of patients in their study belonged to socioeconomic class 2. While only 1.8% of patients belonged to classes 1 and 5.¹³, Shoib et al. also

reported 65.44 % of the patients in their study belonged to lower socioeconomic status.¹⁵. As government hospitals provide treatment at nominal charges, it's pretty common for the unemployed section of society to seek treatment. In our study majority of the population was unemployed (42.85%). Ahmed et al. also reported an unemployment rate of 41.4% in their studied population.¹⁴

Various studies have shown the efficacy of Ketamine in treatment-resistant depression and suicidality. (19)(20) Treatment-resistant depression was the primary cause for which Ketamine was administered (n=13). In 2 patients, it was explicitly administered for active suicidality. Six patients had treatment-resistant depression compounded with active suicidality.

During a pandemic, preexisting mental disorders have been seen to relapse at an increased rate due to confinement, loneliness, and treatment noncompliance.²¹ An increased prevalence of moderate to severe depressive symptoms (30%) was seen in Kashmir valley too during Covid times as reported by Bhat et al. in their study compared to the pre-Covid era during which only 10% of the population met the criteria for severe depression as per another study carried out in 2015.^{22,23} In our study also Covid 19 infections formed the direct/indirect triggering factor for illness in the majority of the patients visiting our ketamine clinic (n=13) as compared to non- Covid causes (n=9). As the surge in the number of Covid cases led to restrictions in travel and business, an increasing number of patients suffering from various psychiatric illnesses could not follow up in the hospitals and procure their medicines promptly, leading to delay/ discontinuation in the treatment regimen. In addition, restriction of people to their homes, loss of employment, fear of the unknown, and deaths of close associates could also give rise to/aggravate their psychiatric illnesses

CONCLUSION

Covid 19 pandemic, like any other disaster, has expectedly led to an increase in the prevalence of depressive disorders in the Kashmiri population. In our study, depressive symptoms were more common in the married people of lower socioeconomic status aged 41-60 years. This section of the population was more vulnerable to bear the emotional and financial brunt of the pandemic. As the pandemic is likely to continue in the future, we need to focus more

attention and resources on the patients' psychological health and address the other visible aspects of the pandemic. People are likely to suffer more from depressive disorders during the pandemic because of loneliness, financial instabilities, loss of life, and uncertainties about the future. In this perspective, Ketamine infusion can form an effective strategy in managing patients with treatment-resistant depression and active suicidality, with the advantage of decreased risk of Covid transmission due to aerosol generation compared to ECT.

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