



Research article

An observational cross-sectional study on the neuropsychiatric manifestations of covid-19 pandemic in suspected and positive patients in northern India

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ABSTRACT

Psychotherapy and grief reduction have been the mainstays of mental health care. Mental health on the other hand, is distinct from the lack of 'Mental Illness in that it encompasses psychological, social, and psychological wellbeing. The purpose of this study is to assess the Hamilton Depression Rating in COVID-19 patients in a tertiary care facility in Northern India. An observational study of Covid-19 positive individuals hospitalized to a tertiary healthcare centre in northern India was conducted. Over the course of six months, 1040 Covid-19 positive/ suspected individuals were enrolled in this study. The HDRS (Hamilton Rating Scale for Depression) was designed with hospital patients in mind, stressing the physical signs and symptoms of depression. The HAM-D scale is used to assess the severity of depression in patients with Covid-19. Despite the fact that there are 21 sections, the patient's score is based on the first 17 responses. During the six-month research period, a total of 1040 covid-19 suspected and positive patients were admitted. There were 240 covid-19 positive patients and 800 covid-19 suspicious patients out of a total of 1040. In positive patients, anxiety was present in 95.83 percent, mood change in 55 percent, and fear of death 23.33 percent; in suspected covid-19 patients, anxiety was present in 57 percent, mood alteration in 19 percent, and fear of death 13.5 percent. According to current research, severe COVID-19 may produce delirium in the acute stage of disease, followed by depression, anxiety, lethargy, insomnia, and post-traumatic stress disorder (PTSD) in the long term.

Keywords: Covid-19, Anxiety, Psychological, Depression

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INTRODUCTION

Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by the coronavirus that causes acute respiratory illness (SARS-CoV-2). The disease was first discovered in Wuhan, China's capital, in December of this year^{1, 2}. The 2019-20 coronavirus epidemic is still running strong, according to reports. Fever, cough, and shortness of breath are all common symptoms. COVID-19, a novel corona virus, is spreading over the world after infecting hundreds of thousands of people, shutting down major cities, and causing unprecedented worldwide travel restrictions in December 2019³. Long-term, the research suggests that SARS and MERS survivors are more likely to develop mental diseases such sadness, anxiety, exhaustion, and post-traumatic stress disorder (PTSD), which can linger months or years after being released from the hospital. Despite the lack of data on these diagnoses in COVID-19 patients, the authors argue that the medical community should be aware of the

high incidence of these frequent psychological issues following the current epidemic⁴. The direct effects of viral infection (on the central angiolytic system), physical impairment (e.g., low blood oxygen, immunological response), and medical intervention are all objectives that severe coronavirus infection might have psychological implications⁵. Other variables include broader social consequences, social loneliness, the psychological implications of a single severe and life-threatening condition, as well as worry and stigma for others. Despite the fact that the COVID-19 epidemic has affected a substantial portion of the world's population, little is known about its mental health implications⁶. Traditionally, mental health care has centered on grief reduction and psychotherapy. Mental health, on the other hand, is distinct from the lack of mental contamination in that it encompasses psychological, social, and psychological well-being⁷.

The purpose of this study is to assess the Hamilton Depression Rating in COVID-19 patients in a tertiary care facility in Northern India.

MATERIALS AND METHODS

An observational study of Covid-19 positive individuals hospitalized to a tertiary healthcare centre in Northern India was conducted. Over the course of six months, 240 Covid-19 positive participants were enrolled in this trial. The HDRS (Hamilton Rating Scale for Depression) was designed with hospital patients in mind, stressing the physical signs and symptoms of depression. The HAM-D scale is used to assess the severity of depression in patients with Covid-19. Despite the fact that there are 21 sections, the patient's score is based on the first 17 responses.

The research was set in motion once the ethics committee gave its approval. The Ministry of Health and Family Welfare of India assesses our hospital's isolation facility for readiness using a predefined checklist (MoHFW). All health-care workers who worked with infected patients were given thorough training and demonstrated their ability to follow infection-control procedures. For validation, nasopharyngeal and oropharyngeal swabs were screened for COVID-19 using quantitative polymerase chain reaction RTPCR. The research team looked over the patients' medical records. The study team went over all of the data. Demographic information, medical history, risk history, underlying comorbidity, symptoms, signs, and laboratory findings are all recorded, as well as a chest computed tomography (CT) scan, 2D echo, and therapeutic measures (antiviral therapy, anti-retroviral therapy, anti-malarial therapy, antibiotics and respiratory support). The HDRS (also known as Ham-D) is a depression assessment scale done by a physician. HDRS was created for hospital patients in the first place, stressing the physical symptoms of depression and depression. Depending on the version, the scoring method differs.

A score of 0-7 is generally recognized to be within the normal range (or clinical remover) for HDRS17, whereas a score of 20 or above is generally acceptable for clinical trial admission (at least moderate severity). A minimum (reference) score is required. The HAM-D scale is used to assess the severity of depression in patients with Covid-19. Calculate the patient's score based on the first 17 responses, despite the fact that there are 21 sections.

RESULTS

During the covid-19 outbreak, a total of 1040 covid-19 suspected and positive patients were admitted over a six-month period, according to our findings. There were 240 covid-19 positive patients and 800 covid-19 suspicious patients among them. In suspected cases, 112 patients were normal and 128 patients were moderately depressed on the Hamilton depression rating scale, whereas 560 patients were normal and 240 patients were moderately depressed on the HDRS (Table 1).

Table 1: Hamilton depression rating scale in Positive and suspected Covid-19

HDRS	patients	
	Positive patients (N=240)	Suspected patients (N=800)
0-7 (Normal)	112	560
More than 20 (Moderate severity)	128	240
Total	240	800

Table 2 shows that 80 of the 240 positive individuals were symptomatic patients. There were 28 patients with severe HDRS (35%) and 160 patients with no symptoms. In our study, 62.5 percent of the patients had severe HDRS.

Table 2: Hamilton depression rating scale in Positive Covid-19 patients

HDRS	Symptomatic without comorbidity	Symptomatic with comorbidity	Asymptomatic without comorbidity	Asymptomatic with comorbidity
0-7 (Normal)	40	12	44	16
More than 20 (Moderate severity)	20	8	96	4
Total	60	20	140	20

In positive patients, anxiety was present in 95.83 percent, mood change was 55 percent, and fear of death was 23.33 percent; in suspected covid-19 patients, anxiety was present in 57 percent, mood alteration was 19 percent, and fear of death was 13.5 percent.

Table 3: Major psychological symptoms observed

Symptom	Positive	Suspected
Anxiety	95.83%	57%
Change in mood	55%	19%
Fear of death	23.33%	13.5%

DISCUSSION

During the outbreak, a total of 1040 Covid-19 suspected and positive patients were hospitalized to our study over a six-month period. Although there is limited evidence that typical mental illnesses other than short-term amnesia are a symptom of COVID-19 infection, physicians should keep an eye out for sadness, anxiety, exhaustion, and post-traumatic stress disorder (PTSD)⁸. As witnessed with SARS and MERS, weeks to months of recovery are required after a major infection. The direct impact of viral infections (including the central nervous system), the extent of physical impairment (eg, low blood oxygen), immunological responses, and medical treatments are all psychological implications of acute coronavirus infections. Other social aspects include social isolation, the psychological impact of a new serious and life-threatening condition, anxiety, and the stigma of infection among others⁹. In our study, anxiety was present in 95.83 percent of positive patients, 55 percent of change in mood, and 23.33 percent of fear of death, while anxiety was present in 57 percent of suspected covid-19 patients, 19 percent of change in mood, and 13.5 percent of fear of death. In the Lancet, Dr. Kamal Kant Kohli referred to a study that analyzed data from two studies systematically analyzing the general features of hospitalized SARS and MERS patients, finding that 28% (36/129) of patients experienced bewilderment, implying that forgetting was widespread during acute illness^{10, 13}. Low mood (42/129; 33 percent),

anxiety (46/129; 36 percent), decreased memory (44/129; 34 percent), and sleeplessness (34/208; 12 percent) were all reported often during the acute period. Twelve studies discovered forgetfulness on COVID-19 (26/40 disorientation in ICU patients, 65 percent), 40/58 anxiety in ICU patients, 69 percent, and a similar picture with indications of altered consciousness in 17/82. Patients who died later were critically unwell (21 percent). After recovering from an initial infection, patients with SARS and MERS exhibited poor mood (35/332 patients, 11%), insomnia (34/208, 12%), anxiety (21/171, 12%), and irritability, according to six investigations¹¹. Over a follow-up time spanning from 6 weeks to 39 months, participants experienced memory loss (44/233, 19%), weariness (61/316, 19%), and traumatic recollections (55/181, 30%). According to the researchers, the prevalence of PTSD among SARS and MERS survivors was 33% at an average of 34 months (121/402 cases in four studies), while rates of depression and anxiety disorders were around 15% at an average of 23 months (77/517 cases from five studies) and one year (42/284 cases from three studies) after the acute stage of illness¹².

CONCLUSION

According to current research, severe COVID -19 may produce delirium in initial stages of the disease, followed by sadness, anxiety, lethargy, insomnia and post-traumatic stress disorder (PTSD) in the long term.

Considering increasing number of people exposed to COVID-19, we believe that it's urgent to provide mental health targeted at prevention of PTSD and other psychological problems emanating from COVID infection.

Psychological support, counselling and health education to the patients, as well as early intervention, including psychological support, psychotherapy and pharmacological intervention to vulnerable and high risk patients is important.

Well designed and systematic intervention trials with strict evaluation of outcome could shed some light on the development of strategies and model of prevention of psychological problems especially PTSD among people affected with COVID and other infections.

The goal of the current study is to determine the influence of the pandemic situation on the psychological well being of patients with COVID-19 infection.

Our findings were identical to those reported by a number of other researchers around the world.

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