

Post COVID-19 Symptoms: In Moderate to Severe Hospitalised Patients in COVID Hospitals

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Abstract

Although most people with COVID get better within weeks of illness, some people experience post COVID conditions. Post COVID conditions are a wide range of new, returning, or on-going health problems people can experience four or more weeks after first being infected with the virus that causes COVID. Post Coronavirus Disease (COVID) syndrome includes persistence of symptoms beyond viral clearance and fresh development of symptoms. Symptoms that can last weeks or months after first being infected with the virus that causes COVID. These conditions can have different types and combinations of health problems for different lengths of time. Unlike some of the other types of post COVID conditions that only tend to occur in people who have had severe illness, these symptoms can happen to anyone who has had COVID, even if the illness was mild, or if they had no initial symptoms. People commonly report experiencing different combinations of the following symptoms: Difficulty breathing or shortness of breath, tiredness or fatigue, symptoms that get worse after physical or mental activities, difficulty thinking or concentrating (sometimes referred to as brain fog) dry cough frequent chest or stomach pain headache, fast beating or pounding heart also known as heart palpitations, joint or muscle pain. All these post COVID symptoms are studied closely in patients hospitalised in different COVID hospitals for moderate to severe illness of COVID in the second wave in Kanpur city. Effects of hospitalization can also include Post-Intensive Care Syndrome (PICS), which refers to health effects that begin when a person is in an Intensive Care Unit (ICU) and can remain after a person returns home. These effects can include severe weakness, problems with thinking and judgment, and Post-Traumatic Stress Disorder (PTSD). PTSD involves long-term reactions to a very stressful event.

Introduction

Coronavirus Disease (COVID) is an infectious disease caused by a newly discovered coronavirus. Around 50%-70% of patients may experience minor or even major symptoms up to 3 months-6 months after recovering from COVID and is observed more in those patients who had moderate or severe form of the infection. ^[1] Most people infected with the COVID virus will experience mild to moderate respiratory illness and recover without requiring special treatment. ^[2] Older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness. ^[3,4]

The epidemiological and clinical characteristics, pathogenesis, and complications of patients with COVID at acute phase have been explicitly described, but the long-term consequences of the illness remain largely unclear. Post COVID persisting symptoms such as fatigue and dyspnoea, impaired pulmonary function, and chest image abnormalities were reported in patients following hospital discharge, but the full spectrum of post-discharge characteristics is still unknown.

We aimed to describe the consequences of COVID in patients after hospital discharge and identify the potential risk factors, including disease severity, associated with these consequences. Majority of COVID patients recover in 2 weeks to 4 weeks. However, in some patients, the COVID symptoms persist beyond four weeks a condition known as acute post COVID

syndrome. If the symptoms remain even after 12 months, it is known as post COVID syndrome. Most common post COVID symptoms are weakness/fatigue, difficulty in breathing palpitation, high sweating, joint and muscle pain, loss of taste and smell, sleep disturbances and psychological symptoms post COVID are depression and anxiety.

Study Design and Data Collection

Total 100 patients were selected from three different hospitals between 35 years to 60 years of age group. Those are hospitalised for the treatment of COVID with moderate to severe symptoms. All these study patients have no comorbid condition and before COVID infection these were healthy persons. Mean age of the patients were 56.5 (SD, 14.6) range 35 years to 65 years there were 37 females (37%). Mean length of hospital stay was 13.5 days. 15% receives non-invasive ventilation and 8% requires invasive ventilation.

All the hospital data were collected from the COVID hospitals of Kanpur during the period of July, August and September

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2020 in COVID hospitals Kanpur.^[5] In this study all the 100 patients were enquired for the post corona symptoms for the 2 months. All 100 patients were enquired for the post corona symptoms after discharge from the hospitals for two months. We included all patients with laboratory confirmed COVID who were discharged after seronegative report and complete recovery from corona symptoms. Majority of COVID patients recover in 2 weeks to 4 weeks.^[6] However, in some patients, the COVID symptoms persist beyond four weeks a condition known as acute post COVID syndrome. If the symptoms remain even after 12 months, it is known as post COVID syndrome.^[7,8]

Discussion

Effects of hospitalization can also include PostIntensive Care Syndrome (PICS), which refers to health effects that begin when a person is in an Intensive Care Unit (ICU) and can remain after a person returns home. These effects can include severe weakness, problems with thinking and judgment, and Post-Traumatic Stress Disorder (PTSD). PTSD involves longterm reactions to a very stressful event.

Some symptoms that can occur after hospitalizations are similar to some of the symptoms that people with initially mild or no symptoms may experience many weeks after COVID.^[5,6] It can be difficult to know whether they are caused by the effects of hospitalization, the long-term effects of the virus, or a combination of both all these post COVID symptoms are asked to all selected patients after discharge from the hospital for the study of effects of COVID illness or hospitalization [Table 1].

Presence of Post Corona Symptoms in Study Participants

Testing negative after recovering from COVID is only half the battle won. As recovery rates continue to rise in India, doctors

Table 1: Presence of post CORONA symptoms in study participants.

Symptoms	Symptoms		Symptoms	
	Present	Absent	present	present
			M	F
Change in taste and smell	62(62%)	38	50	12
Weakness	82(82%)	18	58	24
Tiredness/Fatigue	57(57%)	43	40	17
Difficulty in breathing or shortness of breadth	43(43%)	57	33	10
Palpitation/Chest pain	21(21%)	79	16	5
Stomach pain	19(19%)	81	13	6
Diarrhoea	7(7%)	93	6	1
Headache	16(16%)	84	6	10
Pins and needles feeling	17(17%)	83	14	3
Joint and muscle pain	53(53%)	47	37	16
Fever	18(18%)	82	16	2
Sweating	58(58%)	42	39	19
Dry cough	24(24%)	76	18	6
Sleep disturbance	52(52%)	48	35	17
Dizziness on standing(light headedness)	28(28%)	72	20	8
Depression	38(38%)	62	29	9
Anxiety	42(42%)	58	31	11
Mood changes	22(22%)	78	16	6
Changes in period cycle	8(8%)	(27) F	nil	8

are now warning that people who have fought and recovered from the coronavirus are at the risk of certain infections and chronic ailments, which could sometimes, last for a few weeks, or even months. A feeling of uneasiness, frequent fatigue, and exhaustion can be symptoms to battle after the body has fought off the virus. Doctors also say that a viral infection of such a magnitude can also cause lingering symptoms like joint aches, muscle pain, headaches until a couple of months after testing negative.

Post-traumatic stress disorder, especially amongst hospitalized COVID patients could also be concerning. Recovered COVID patients, who may have suffered from a mild or severe form of COVID can also have a troubling time concentrating or carrying out daily tasks, experience cognition faults, brain fog and memory impairment weeks after recovery. Many patients suffering from moderate to severe COVID may also continue to face some respiratory complications, including lightheadedness, experiencing a sudden rise of breathlessness.

There are also some COVID recovered patients who are battling a deluge of poor sleep problems, stress and sleep impairment issues. Not only can COVID be increasing your insomnia risk, but recovered patients may also face trouble recording good sleep and even experience insomnia.

Conclusion

All the patients were enquired for the 60 days after the discharge from the hospital out of all 100 patients 15% were suffered from the severe symptoms of the COVID and 85% patients were suffered from the moderate symptoms. Table shows that high proportion of individuals reported change in taste and smell (62%) generalised weakness in almost all the patients (82%) fatigue 57%, joint and muscle pain 53%, dyspnoea 43%, chest pain 21%. Another major post COVID infection is chronic cough or post infection cough (24%). Dry cough can persist after recovery due to infection in our airways and resultant inflammation. Cough can persist also due to stiffness of lungs when recovery process begins. Deep breathing exercises for patients experiencing dry cough is recommended. Hospitalizations and severe illnesses for lung-related diseases, including COVID, can cause health effects like severe weakness and exhaustion during the recovery period, stomach and chest pain (19% and 21%), headache (16%) sweating (58%). Neuropsychiatric and cognitive issues are a huge risk factor that could affect post COVID recovery. Not only could a COVID infection impact the brain profoundly, but experts also say that they expect to see a rise in mental health problems amongst the recovered patients. Psychological problems sleep disturbance (52%), depression (38%), anxiety (42%) are also in large proportion of COVID patients. Stress, anxiety, prevailing situations and looming survivor's guilt could also be making many lose out on sleep, experts say. These conditions might also be complicated by other effects related to the COVID pandemic, including mental health effects from isolation, negative economic situations, and lack of access to healthcare for managing underlying conditions.

Prevention

The best way to prevent post COVID conditions is by getting

vaccinated against COVID as soon as you can. COVID vaccination is recommended for all people ages 12 years and older, including if you had COVID or a post COVID condition.

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