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THE POST COVID – 19 SYNDROMES: A REVIEW

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Abstract: The severe acute respiratory syndrome (SARS) coronavirus-2 is a novel corona virus belonging to the family Corona viridae and is now known to be responsible for the outbreak of a series of recent acute atypical respiratory infections originating in Wuhan, China. The disease caused by this virus, termed corona virus disease 19 or simply COVID-19, has rapidly spread throughout the world at an alarming pace and has been declared a pandemic by the WHO on March 11, 2020. In this review, an update on post covid syndrome and diseases has been described

Keywords: Corona Virus; COVID-19, Pandemic, Post-Infectious;

INTRODUCTION

The epidemic of the 2019 novel corona virus (severe acute respiratory syndrome corona virus 2 - SARSCoV-2), which was first identified in Wuhan, a city in the Hubei province in China, is being exported to a growing number of countries. Early efforts were focused on describing the clinical course, counting severe cases, and treating the disease[1]. More than a year after the declaration of the corona virus disease 2019 (COVID-19) pandemic, the world continues to face its devastating impact, not only on morbidity, mortality, and healthcare services, but also its tremendous societal and economic consequences, globally[2]. Although the overwhelming

body of knowledge on COVID-19 focuses almost exclusively on acute illness [3–5], it has become evident that long-term consequences occur [6-15].

Post-COVID Syndrome:

Currently, there is no universally accepted definition of post-COVID syndrome. Post- COVID syndrome was defined for the first time by Greenhalgh et al. as COVID-19 associated illness extending for more than three weeks after the onset of symptoms, and chronic COVID-19 as persistent symptoms extending beyond 12 weeks after the onset of symptoms [8, 14].

Post-acute covid-19:

In the absence of agreed definitions, for the purposes of this article we define post-acute covid-19 as extending beyond three weeks from the onset of first symptoms and chronic covid-19 as extending beyond 12 weeks. Since many people were not tested, and false negative tests are common, [15] a positive test for covid-19 is not a prerequisite for diagnosis.

Table 1: Relationship between severity & Percentage of peoples.

sStage of Severity	Rough Percentage of People With Covid-19
Mild Disease From Which A Person Can Recover	More than 80%
Severe Disease, Causing Breathlessness And Pneumonia	Around 14%
Critical Disease, Including Septic Shock, Respiratory Failure, and The Failure of more than One Organ	About 5%
Fatal Disease	2%

Symptoms of Covid 19 Syndrome

Post-acute covid-19 symptoms vary widely. Even so-called mild covid-19 may be associated with long term symptoms, most commonly cough, low grade fever, and fatigue, all of which may relapse and remit. Other reported symptoms include shortness of breath, chest pain, headaches, neurocognitive difficulties, muscle pains and weakness, gastrointestinal upset, rashes, metabolic disruption thromboembolic conditions, and depression and other mental

health conditions.[16] Skin rashes can take many forms including vesicular, maculopapular, urticarial, or chilblain-like lesions on the extremities covid toe.[17] There seems to be no need to refer or investigate these if the patient is otherwise well.

Respiratory diseases:-

Cough

The British Thoracic Society defines chronic cough as one that persists beyond eight weeks. Up to that time, and unless there are signs of super-infection or other complications such as painful pleural inflammation, cough seems to be best managed with simple breathing control. Medication where indicated.

Breathlessness

A degree of breathlessness is common after acute covid-19. Severe breathlessness, which is rare in patients who were not hospitalised, may require urgent referral. Breathlessness tends to improve with breathing exercises. Pulse oximeters may be extremely useful for assessing and monitoring respiratory symptoms after covid-19, band we could find no evidence that their use in the home leads to increased anxiety.

Pulmonary rehabilitation

Weeks after acute covid-19 and do not generally require fast-track entry into a pulmonary rehabilitation programme. Those who have had significant respiratory illness may benefit from pulmonary rehabilitation, defined as "a multidisciplinary intervention based on personalized evaluation and treatment which includes, but is not limited to, exercise training, education, and behavioural modification designed to improve the physical and psychological condition of people with respiratory disease.[18] In the context of covid-19, rehabilitation is being delivered by various virtual models, including video linked classes and home education booklets with additional telephone support.

Neurological sequelae

Ischemic stroke, seizures, encephalitis, and cranial neuropathies have been described after covid-19, but these all seem to be rare.[19] a patient suspected of these serious complications should be referred to a neurologist. Common non-specific neurological symptoms, which seem to co-occur with fatigue and breathlessness, include headaches, dizziness, and cognitive blunting "brain fog".[15] Until evidence based guidance appears on how to manage or when to refer such symptoms, we recommend supportive management and symptom monitoring in primary care.

Cardiopulmonary complications, assessment and management

Perhaps 20% of patients admitted with covid-19 have clinically significant cardiac involvement [24]; occult involvement may be even commoner.[20] [21] Cardiopulmonary complications include myocarditis, pericarditis, myocardial infarction, dysarrhythmias, and pulmonary embolus; they may present several weeks after acute covid-19. They are commoner in patients with pre-existing cardiovascular disease, but they have also been described in young, previously active patients[18] various pathophysiological mechanisms have been proposed, including viral infiltration, inflammation and micro thrombi, and down-regulation of ACE-2 receptors. [22, 23]

Chest pain

Chest pain is common in post-acute covid-19. The clinical priority is to separate musculoskeletal and other non-specific chest pain for example, the symptom described by a large patient-led survey as "lung burn" from serious cardiovascular conditions. Clinical assessment of the post-acute covid-19 patient with chest pain should follow similar principles to that for any chest pain: a careful history, taking account of past medical history and risk factors, a physical examination, backed up as indicated by investigations info graphic.[18] Where the diagnosis is uncertain, or the patient is acutely unwell, urgent cardiology referral may be needed for specialist assessment and investigations (including echocardiography, computed tomography of the chest, or cardiac magnetic resonance imaging).

Thromboembolic

Covid-19 is an inflammatory and hyper coagulable state, [24] with an increased risk of thromboembolic events.[25] [26] Many hospitalised patients receive prophylactic anticoagulation. Recommendations for anticoagulation after discharge vary, but higher risk patients are typically discharged from hospital with 10 days of extended thromboprophylaxis.[25] If the patient has been diagnosed with a thrombotic episode, anticoagulation and further investigation and monitoring should follow standard guidelines.[27] It is not known how long patients remain hyper coagulable following acute covid-19.

Ventricular dysfunction

Left ventricular systolic dysfunction and heart failure after covid-19 can be managed according to standard guidelines.[28] Intense cardiovascular exercise must be avoided for three months in all patients after myocarditis or pericarditis; athletes are advised to take three to six months of complete rest from cardiovascular training followed by specialist follow-up, with return to sport guided by functional status, biomarkers, absence of dysarrhythmias, and evidence of normal left ventricular systolic function.[29]

Social and cultural considerations

Covid-19 is more common and has a worse prognosis in the acute phase in people who are poor, elderly, and from certain minority ethnic groups notably black, south Asian, and Jewish [30]. It is too early to say whether these socio demographic patterns persist in post-acute covid-19. Our own experience suggests that patients with post-acute covid-19 are from diverse social and cultural backgrounds. Many have co morbidities including diabetes, hypertension, kidney disease, or ischemic heart disease. Some have experienced family bereavements as well as job losses and consequent financial stress and food poverty. Strain on many carers has been high. For an important few, lockdown has worsened safeguarding concerns such as the risk of child or intimate partner abuse. A detailed discussion of all these issues is beyond the scope of this article, but there are strong arguments for working with other agencies to develop local, system-level solutions. Provides some links to covid-19 advice from specialist social care, lay care, and faith organizations.

Conclusion

This is an overview of published information on post-COVID syndrome. Patients with COVID-19 require long-term follow-up even after recovery for observation and management of their post-COVID ailments during the ongoing COVID-19 pandemic, most health facilities are overloaded. Hence, arranging follow-up for patients can be a challenge. However, a significant population in the post-COVID state needs continuous monitoring. Female patients, patients presenting with respiratory distress, patients with lethargy, and patients with a disease for a prolonged duration require special attention in the post- COVID-19 state.

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