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"Post- COVID-19 syndrome": Rising from the dead?

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Abstract

A significant percentage of critically ill COVID-19 patients after recovery of acute phase of the disease, will face physical, cognitive and psychological consequences which stand for long period and are troublesome. These heterogenous signs and symptoms are constitute "post-COVID syndrome". This syndrome has no definite pathophysiology and the main compliant is fatigue. The most important differential diagnosis of this syndrome is, "post-intensive care syndrome". There are increasing reports about "post-COVID-19 syndrome" worldwide which means it is a considerable consequence of COVID-19, especially severe types.

Key words: COVID-19, post-COVID-19 syndrome, post- intensive care syndrome

Irrespective of COVID-19 severity, a large proportion of patients suffer from persistent wide range of symptoms usually up to 6 months after acute phase of infection. Currently, there is no consensus definition for this condition but usually is mentioned as "Post-COVID syndrome" (1-3)

"Post- covid-19 syndrome" sounds to be a multisystem disorder, (4) which presents with one or constellation of symptoms such as, cough, low grade fever, fatigue, shortness of breath, chest pain, headache, neurocognitive difficulties, body pain, fatigue, weakness, gastrointestinal upset, metabolic disruption (such as uncontrolled diabetes), thromboembolic events, depression and other mental health conditions. (5,6)

An important differentiation should be made between symptoms of chronic inflammation (convalescent phase), sequelae of organs damage (such as pulmonary fibrosis and chronic kidney disease), and nonspecific problems about hospitalization and social issues. (7,8) Persistent viremia, reinfection,

chronic inflammation, and mental disorder all could be responsible in the pathogenesis of “Post-COVID-19 syndrome”. (9-14)

For better understanding, it is wise to evaluate only mild COVID patients. because this group is unlikely to have chronic organ dysfunctions. In evaluation of the causes of fatigue in these patients, some correctable etiologies have been found including, anemia, vitamin D deficiency, hypothyroidism and cortisol insufficiency. (15,16)

Conversely, patients with severe forms of COVID-19 often progress toward acute respiratory distress syndrome (ARDS) which cause permanent lung parenchyma damage, including lung fibrosis. (17) In addition, Patients experiencing post intensive care syndrome (PICS) generally report higher incidences of cognitive and physical dysfunctions, which often persist long-term. (18)

Patients with COVID-19 might be not receive the appropriate physiotherapy during admission due to fear about COVID-19 transmission or staff shortage, resulting in following considerable disability. (19) There are a few studies in medical literature about rate of post-COVID-19 symptoms:

Claudia Carvalho-Schneider et al. conducted a descriptive clinical follow-up study of 150 non-critical patients with COVID-19and watched that two-thirds of adults experienced persistent symptoms up to 2 months after symptom onset, primarily anosmia/ageusia, dyspnea or asthenia. (20)

Similarly, Eve Garrigues et al. studied patients with COVID-19 discharged from the hospital and interviewed over 3 months post diagnosis and showed the majority of patients experienced continued symptoms, most commonly including fatigue and dyspnea. (21)

In another study by Angelo Carfì et al. patients with COVID-19 discharged from the hospital with SARS-CoV-2 RNA clearance by RT-PCR and interviewed approximately 2 months after diagnosis, the majority of patients experienced continued symptoms, with the most common symptoms being fatigue and dyspnea. (22)

Also, Halpin et al. conducted a study on patients with COVID-19 discharged from the hospital at least 4 weeks prior to study enrollment, the majority of patients experienced continued symptoms, with the most common symptoms being fatigue and dyspnea. (23)

Finally, In the study of Tenforde, patients who were diagnosed with COVID-19 in the outpatient setting, primarily had mild disease and were interviewed a median of 16 days post diagnosis, the majority had continued symptoms. The most common symptoms included cough and fatigue. (24)

Survived COVID-19 patients, have just escaped from the first stage (25) and they are predisposed to long-term physical and psychological dysfunctions. Long-term psychological problems and post-traumatic stress disorder (PTSD) can develop in more than half of survived patients. (26) follow up and management of these patients warrants multidisciplinary team at least including, internal medicine physician, physiotherapist, occupational therapist and psychologist (27,28)

In conclusion, more studies are needed to better understand the “Post-COVID syndrome”. Clinicians should update patients about the potential long-term consequences of COVID-19 prior to discharge from the hospital.

Conflicts of interest

The authors declare no competing interests

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