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Letter

Complications of Coronavirus 2019 (COVID-19): A Call for Action

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Dear editor,

COVID-19 is a new coronavirus began in 2019 in Wuhan, China, and soon spread worldwide (1, 2). There are diffrent varieties of complications associated with the coronavirus (3). Depending on the onset, these complications may also be very rapid or emerge in the future (4, 5).

Cardiovascular complications

Various studies have reported a wide range of cardiovascular complications such as heart attacks and arterial thrombosis caused by blood clots (3). In previous studies, Huang's et al. reported the rate of shock to be 7%, and Huang et al. reported 16.7%, 8.7%, 7.2% for the rates of arrhythmia, shock, and acute cardiac injury. In Zhou's et al. study, the heart failure rate was also reported to be 23% (6-9).

Respiratory complications

Another remarkable side-effect in COVID-19 disease patients is related to respiratory complications. Most individuals infected with the coronavirus suffer from respiratory problems such as shortness of breath and may continue to have problems after recovery. According to previous studies, COVID-19-induced respiratory complications may persist for a while; however, we cannot comment on this with certainty since our information in this regard is limited to a few months. Some studies have suggested the need for rehabilitation measures such as respiratory physiotherapy after partial recovery from the disease, which improves individuals' respiratory function (10).

Skin complications

Growing evidence indicates that the coronavirus affects almost all body organs, including the skin. A study in Italy described some information about the skin, and the findings of this study on 88 patients demonstrated that about 20% of the participants had some form of skin inflammation. Various skin inflammations, from red areas on the limbs to widespread urticaria and one case of chickenpox-like blister, have been reported in previous studies (11). New York City's intensive care unit (ICU) patients recently detected another type of skin symptom, which may be due to increased blood clotting in patients with acute conditions. The inflammation of the skin tissue in these patients is associated with small blood clots under the skin (12). Another skin complication associated with the coronavirus is severe hair loss, especially in men. According to a study in Spain, men, especially Caucasians, suffered from more hair loss. This was more likely to have a genetic effect on the severity of COVID-19 complications. The researchers attributed this finding to the role of androgens. Epidemiological studies have also confirmed that its higher prevalence in men and the elderly are caused by genetic factors (13).

Gastrointestinal complications

Another problem with COVID-19 disease is its effect on the digestive system. Gastrointestinal complications in patients were rare and limited to diarrhea observed in $< 10\%$ of the participants; however, in the following months, gastrointestinal problems, including nausea and reflux, were reported in $> 25\%$ of the participants (14, 15). A recent study in this field illustrated the higher rates of inflammatory bowel disease (IBD) during the COVID-19 period (16).

Psychological complications

In addition to inducing various problems in diffrent body tissues, COVID-19 also poses severe psychological complications, which may occur during or long after the epidemic. Relevant studies have addressed a large number of psychological problems, including depression, anxiety, stress, obsessive-compulsive behaviors, and insomnia. A meta-analysis study on medical staff reported

the prevalence rates of anxiety, depression, and insomnia to be 23.2%, 22.8%, and 38.9%, respectively (17).

A large number of complications are associated with COVID-19 disease, most of which are still unknown. Regarding the COVID-19 epidemic and limited knowledge about its various dimensions, a community-based study with a long follow-up period is recommended to detect such complications (both short-term and long-term) and their consequences.

Footnotes

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