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Pericardial effusion as a life-threatening finding in Coronavirus disease of 2019 (COVID-19)

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The SARS-COV-2 outbreak, which started in China in November 2003, resulted in a global pandemic that continues to this day. The virus can cause harmful effects on other organs, specifically the heart, in addition to lung symptoms. In some patients, Coronavirus disease 2019 (COVID-19) has been shown to develop pericardial effusion as a severe and life-threatening complication. We conducted a literature search using PubMed/Medline, Scopus, and Web of Sciences databases from their inception to 16 April 2021.

In this case report-based systematic review, we review thirty moderate to severe pericardial effusion reports associated with tamponade physiology From Pathogenesis to Management. The pathogenesis of this event is attributed to direct cardiomyocyte and pericardium invasion, inflammation, cytokine storms, and oxidative stress caused by acute respiratory distress syndrome. According to the research, pericardial effusion has a broad spectrum of expressions. It can occur as a delayed consequence, with or without myocarditis or pericarditis, isolated or in the presence of acute respiratory distress syndrome. In most patients, emergency percutaneous pericardiocentesis was performed, and fluid analysis was often exudative in three patterns of hemorrhagic, serous, and serosanguinous. The presence of severe pericardial effusion in COVID-19 patients predicts a worse prognosis. The severity of inflammation, myocardial involvement, and pulmonary involvement is not necessarily directly connected to the severity of pericardial effusion.

In the end, we write a Diagnostic and therapeutic guideline for the COVID-19 patients suspected of moderate/large pericardial effusion with tamponade physiology.

Biography

Fatemeh Kafi is a medical student in Isfahan University of medical science, School of Medicine. She is young researchers in cardiology field and active members of Isfahan Cardiovascular Research Institute. She has published about 2 papers in reputed journals and has been serving as a reviewer in World Journal of Surgical Oncology.