

CASE REPORT

COVID-19 constrictive pericarditis

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COVID-19 has been reported to affect a variety of organs. We report a case of constrictive pericarditis in a patient who had contracted the SARS-CoV-2 virus. Other possible causes such as tuberculosis and metabolic causes were considered, but excluded by special investigations.

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The vast majority of patients infected by the SARS-CoV-2 virus experience upper respiratory symptoms, headache, myalgia and fatigue.^[1] However, the virus is able to affect a vast array of organs, and the cardiovascular system is no exception.^[2] Several cases of pericarditis have been reported as a result of COVID-19.^[3-5] We report a case of constrictive pericarditis following SARS-CoV-2 infection.

Case report

A 32-year-old woman presented to her local clinic in June 2021 with symptoms of a non-productive cough, shortness of breath and lethargy. She tested positive for COVID-19 and was discharged on analgesics. Shortly thereafter, she experienced peripheral oedema and increasing dyspnoea. She returned to the clinic, where she was started on conventional antituberculosis therapy and diuretics. Her symptoms persisted, and in September she was referred to Tygerberg Hospital. She had signs of right heart failure and a pleural effusion, and over a litre of fluid was tapped. A GeneXpert test for tuberculosis was negative. An echocardiogram revealed constrictive pericarditis, and she underwent a successful pericardiectomy with alleviation of her symptoms. Histological examination revealed an inflammatory pattern with predominantly lymphocytes and plasma cells. There were areas of necrosis and a fibrous exudate. There were no signs of bacterial or fungal infection. Metabolic causes such as uraemia were excluded. The conclusion was that she had an acute-on-chronic inflammatory process with areas of necrotising granulomas. This pattern has been noted in biopsies from cardiac tissue from patients with proven COVID-19.^[2]

Discussion

Pericarditis can be induced by a variety of conditions ranging from infections (bacterial, viral and fungal) to malignancy and

inflammatory conditions.^[6] In Africa, the vast majority of cases of pericarditis are due to tuberculosis (69%), with only 2.1% being caused by other septic agents.^[7]

All the evidence suggests that this patient's pericarditis was due to COVID-19. A review of the literature revealed numerous cases of pericardial involvement, but no cases of constrictive pericarditis were noted,^[8] suggesting that this is a rare manifestation of COVID-19.

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