Article

PanAfrican Medical Journal

Images in clinical medicine

Pulmonary fibrosis secondary to COVID-19

Muhammad Saadiq Moolla, Ilhaam Fredericks

Corresponding author: Muhammad Saadiq Moolla, Division of General Medicine, Department of Medicine, Faculty of Medicine and Health Sciences, Stellenbosch University and Tygerberg Hospital, Cape Town, South Africa. saadiq.moolla@gmail.com

Received: 26 Sep 2020 - **Accepted:** 19 Oct 2020 - **Published:** 07 Dec 2020

Keywords: SARS-CoV-2, COVID-19, pulmonary fibrosis, long-term complications

Cite this article: Muhammad Saadiq Moolla et al. Pulmonary fibrosis secondary to COVID-19. Pan African Medical Journal. 2020;37(323). 10.11604/pamj.2020.37.323.26263

Available online at: https://www.panafrican-med-journal.com//content/article/37/323/full

Pulmonary fibrosis secondary to COVID-19

Muhammad Saadiq Moolla[1,&], Ilhaam Fredericks[1]

[1]Division of General Medicine, Division of General Medicine, Department of Medicine, Faculty of Medicine and Health Sciences, Stellenbosch University and Tygerberg Hospital, Cape Town, South Africa

[&]Corresponding author
Muhammad Saadiq Moolla, Division of General Medicine, Department of Medicine, Faculty of Medicine and Health Sciences, Stellenbosch University and Tygerberg Hospital, Cape Town, South Africa

Image in medicine

While death is the most feared outcome of COVID-19, other serious complications are increasingly being described. A 74-years-old man with hypertension, diabetes mellitus and a Modified Medical Research Council (mMRC) dyspnoea score of 1 was admitted to our institution with a 1-week history of dyspnoea, cough and severe hypoxia. Initial chest radiograph (A) showed bilateral, peripheral, lower lobe-predominant ground glass opacities. A diagnosis of COVID-19 was confirmed with positive SARS-CoV-2 reverse transcription-polymerase chain reaction (RT-PCR) on nasal swab. He received oral steroids and therapeutic doses of heparin. He initially required

60% facemask oxygen, which was weaned to nasal prong oxygen over two weeks. Seven weeks after admission and despite normalisation of all inflammatory markers, he remained dyspnoeic at rest and oxygen-dependent. Follow-up chest radiograph (B) demonstrated worsening diffuse reticulonodular shadowing. Chest high-resolution computed tomography (C, D) demonstrated confluent pulmonary fibrosis with an apicobasal gradient bilaterally, diffuse peripheral inter- and intra-lobular septal thickening and significant traction bronchiectasis without honeycombing. Total lung capacity and diffusing capacity of the lungs for carbon monoxide were not performed due to infective risk but are expected to be decreased. The patient was given a trial of steroids and will be followed up in 6 weeks. He will likely require domiciliary oxygen. Due to the mMRC of 1 and short history, it is assumed that the fibrosis was not present prior to the COVID-19 diagnosis. The early use of antifibrotics may prevent this devastating complication, but it is difficult to predict who is likely to progress to pulmonary fibrosis.

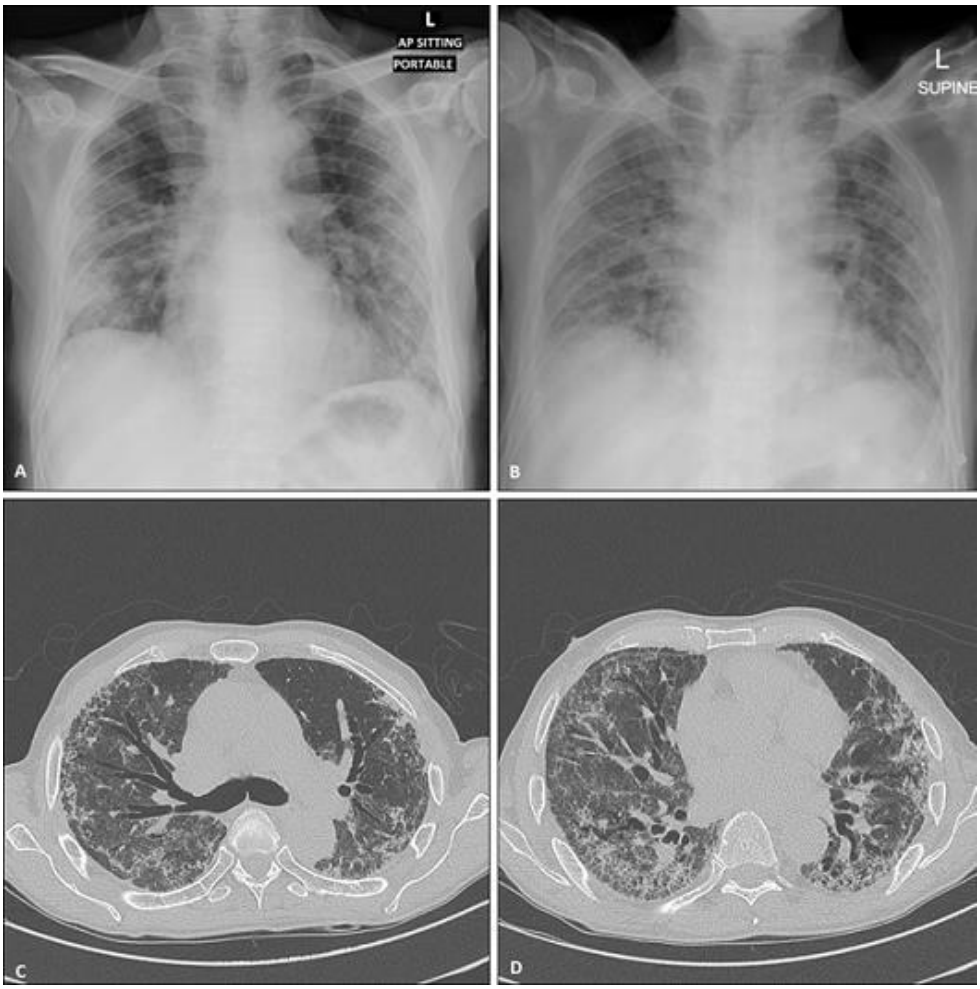

Figure 1: A) initial chest radiograph at time of diagnosis of COVID-19; B) follow-up chest radiograph taken 7 weeks later; C, D) high-resolution computed tomography performed after 7 weeks demonstrating extensive pulmonary fibrosis