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Clinical Image

Pneumatoceles in COVID-19 Pneumonia

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Pneumatoceles are thin-walled air-filled cysts in lung parenchyma. Airways inflammation is one of the main causes among many others [1].

We present the case of a 50 year old man who presented with a 2 week history of myalgia, fatigue, cough and progressive shortness of breath. He has no past medical history and is a non-smoker. On examination he was tachypneic and hypoxic. He was lymphopenic and his inflammatory markers was high. He tested positive for SARS-CoV-2. CXR followed by CT Thorax (Figure 1) confirmed a pneumonia.

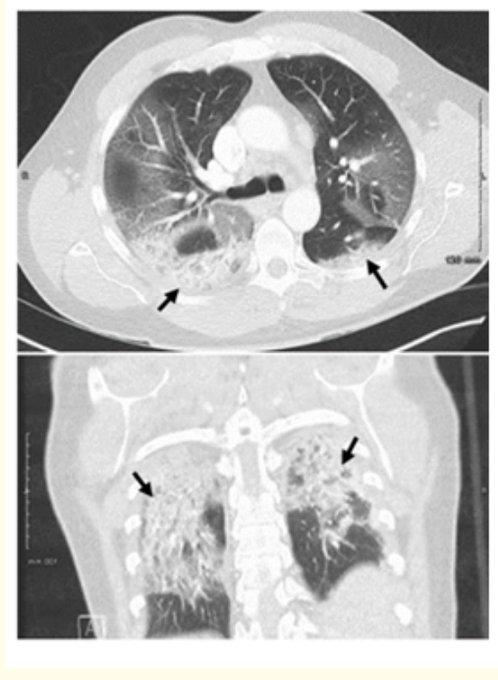

Figure 1: *CT Thorax showing bilateral ground glass changes and consolidation.*

He was treated with antibiotic, steroid, Tocilizumab and continuous positive airway pressure. He clinically improved and was discharged home two weeks later.

He presented 3 weeks later with right sided pleuritic chest pain. His Oxygen saturation was normal. CT pulmonary angiogram was performed and excluded a pulmonary embolism. However, it showed a right sided pneumatocele (Figure 2) with a trace pneumothorax. He was kept under observation for 24 hours. His symptoms improved with analgesia and he was discharged and is being followed up at our respiratory clinic.

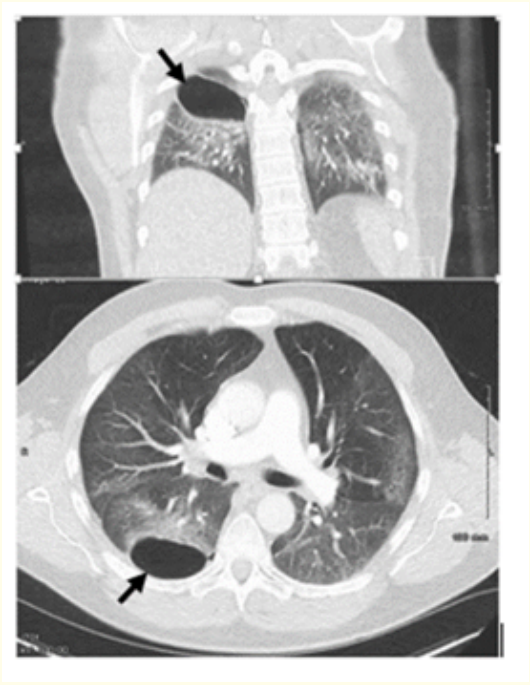

Figure 2: *CT thorax showing evidence of right upper lobe pneumatocele (arrow). The ground glass changes and consolidation showed interval improvement.*

Pneumatoceles have been reported in COVID-19 patients. In most circumstances, pneumatoceles are asymptomatic and do not require surgical intervention. However, it can progress to complications such as abscess, pneumothorax or becomes symptomatic due to increasing size. As in our case, chest pain is a possible presentation of a complicated pneumatocele which might mimic the presentation of pulmonary embolism, a known complication of COVID-19 pneumonia. Therefore, there should be a low threshold for re imaging post covid patients with new respiratory symptoms. The rupture of a pneumatocele, in turn, may be the trigger of the occurrence of pneumothorax, pneumomediastinum and pneumopericardium [2-9].

Reflecting on our case, we concluded pneumatoceles might be a complication of COVID-19 pneumonia and patients should be monitored in a respiratory outpatient.

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