

Post COVID-19 pulmonary fibrosis

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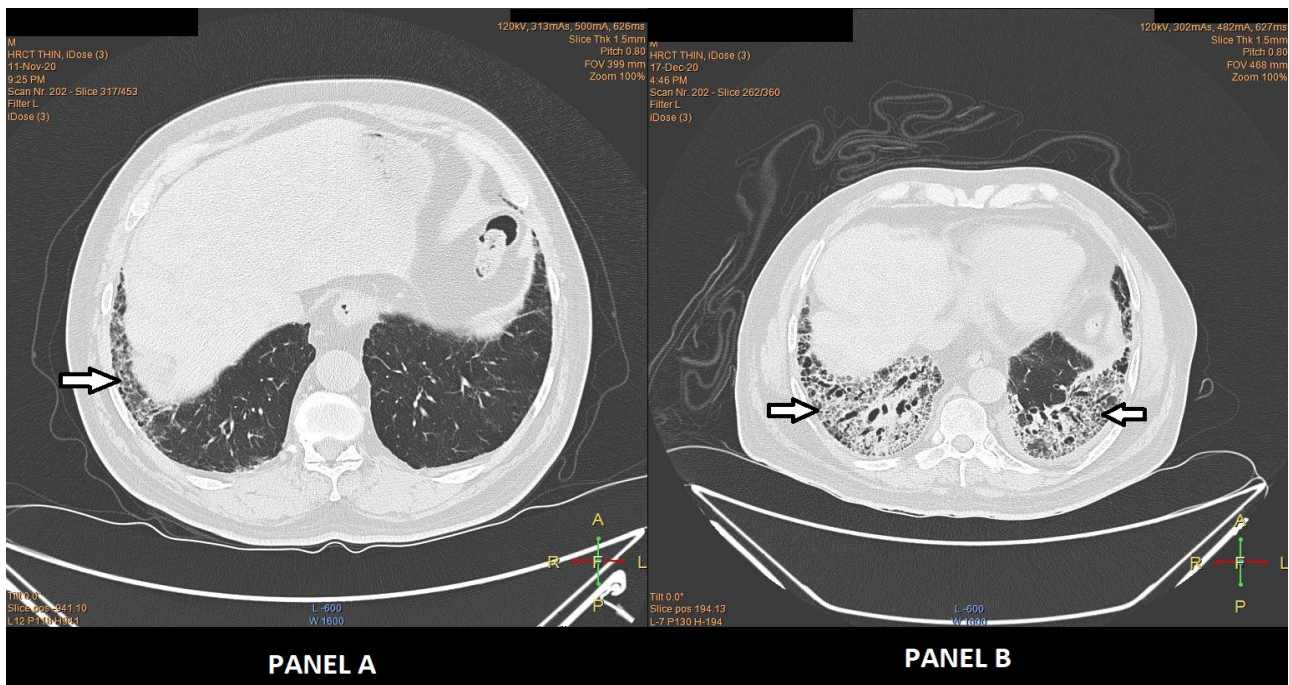
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Panel A: High resolution computed tomography of chest showing few peripheral patchy ground glass densities;

Panel B: High resolution computed tomography of the chest repeated after a month showing significant fibrotic changes in both lungs with predominant involvement of the lower lobes (indicated by arrows). There were septal thickenings with associated traction bronchiectasis and cystic spaces suggestive of honeycombing.

A 72-year-old male patient was diagnosed with COVID-19 pneumonia. High resolution computed tomography of chest, performed a week after symptom onset showed few peripheral patchy ground glass densities (Panel A, indicated by arrow). Patient developed acute respiratory distress syndrome requiring management in intensive care unit with oxygen supplementation using high flow nasal cannula, corticosteroids and deep vein

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thrombosis prophylaxis. He gradually improved over next week. However, he required continuous oxygen supplementation even after one month of treatment. High resolution computed tomography of the chest was repeated, which showed significant fibrotic changes in both lungs with predominant involvement of the lower lobes (Panel B, indicated by arrows). There were septal thickenings with associated traction bronchiectasis and cystic spaces suggestive of honeycombing. These findings are suggestive of post COVID-19 pulmonary fibrosis.¹ He was discharged on home oxygen therapy, oral steroids and antifibrotic therapy. The uninhibited fibroproliferation during the inflammatory phase of ARDS subsequent to dysregulated release of matrix metalloproteinases causes epithelial and endothelial injury, altogether leading to pulmonary fibrosis.² Patients with advanced age, severe illness requiring intensive care management and smokers are at higher risk of developing post COVID-19 pulmonary fibrosis.¹

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References:

1. Rai DK, Sharma P, Kumar R. Post covid 19 pulmonary fibrosis – Is it reversible? *Indian J Tuberc.* 2020 Nov 10. doi: 10.1016/j.ijtb.2020.11.003 [Epub ahead of print]
2. George PM, Wells AU, Jenkins RG. Pulmonary fibrosis and COVID-19: the potential role for antifibrotic therapy. *Lancet Respir Med.* 2020;8(8):807-15.