


CLINICAL PICTURE

Reverse Batwing sign in COVID-19 pneumonia

A 49-year-old gentleman who is a known case of chronic obstructive pulmonary disease presented to the emergency department with complaints of shortness of breath, fever and dry cough for the preceding 5 days. He had no significant travel or contact history. He is a current smoker with a smoking index of 350. He had a pulse rate of 116/min, respiratory rate of 24/min, blood pressure of 128/76 mmHg and oxygen saturation of 96% on 4 l of oxygen through nasal prongs. Laboratory investigations revealed mild lymphopenia, elevated lactate dehydrogenase, ferritin and D-dimer levels. There was type 1 respiratory failure of arterial blood gas analysis. Computed tomography (CT) of the chest showed multiple wedge-shaped peripheral consolidations with base towards pleura and sparing of peri-hilar region consistent with the reverse batwing sign (Figure 1A and B). The patient's nasal/oropharyngeal swab was tested for SARS Cov-2 RT-PCR and it came out to be positive. So, he was diagnosed to have COVID-19 pneumonia and presently receiving supportive treatment.

COVID-19 causes organizing pneumonia in the lung with peripheral consolidations and central sparing, when these consolidations progressively get confluent it gives an appearance of 'Reverse Batwing sign' on CT scan.¹ This pattern was first described by Gaensler and Carrington in chronic eosinophilic pneumonia (CEP) and is also known as 'the photographic negative of pulmonary edema'.² The reverse batwing sign is an unusual sign with narrow imaging differentials like CEP,

pulmonary vasculitis, adenocarcinoma of the lung and organizing pneumonia.³

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References

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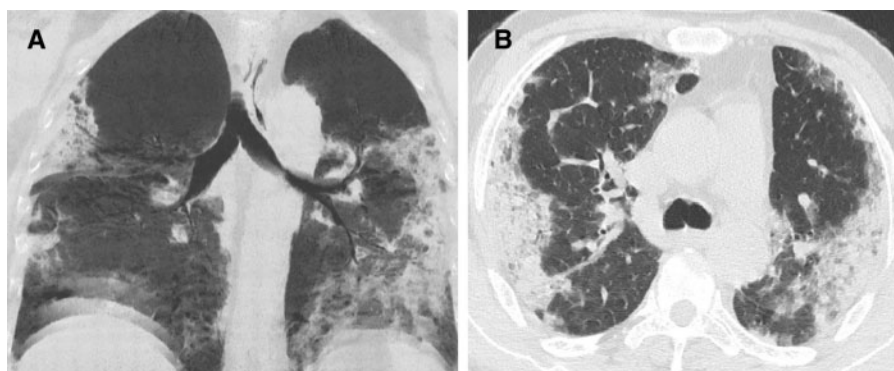


Figure 1. (A, B) Coronal and axial CT images of the thorax depicting bilateral peripheral consolidations with sparing of central region consistent with Reverse Batwing appearance.

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3. Chaddha U, Lee C. Subacute respiratory illness with peripheral pulmonary opacities. *Ann Am Thorac Soc* 2018; **15**: 107-9.