

# Tension Pneumothorax complicating COVID19 Pneumonia

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## Abstract

Acute decompensation in patient with COVID19 is usually a consequence of worsening ARDS , however acute pulmonary embolism and acute pneumothorax are frequently recognized causes of acute decompensation , the later causes are treatable and having high index of suspicion is very important in order not to miss them.

**Title :** Tension pneumothorax complicating COVID19 pneumonia

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**Key clinical message:** to know the value of lung imaging in patient with acute decompensation in the setting of COVID19 and to know that pneumothorax is currently a well-recognized complication related to COVID19 pneumonia.

83 year old male with recent admission with COVID19 pneumonia for 10 days, during which he completed treatment with dexamethasone and remdesivir and was discharged on 3L of oxygen at home which is new, he is coming back to ED with worsening shortness of breath and hypotension, his oxygen saturation on presentation was 60%, his exam was notable for elevated JVD and no air entry over the left lung.

Chest X-ray and CT scan of the lung were done with evidence of large left pneumothorax in the absence of history of underlying lung disease together with ground glass opacities in the right lung consistent with underlying COVID pneumonia.

Chest tube was inserted with improvement of his blood pressure and resolution of pneumothorax on follow up X-ray but he remained hypoxic requiring high flow nasal cannula and later BIPAP, later the lung infiltrates

worsened and the picture was consistent with re-worsening of COVID19 pneumonia, the patient continued to worsen and eventually was converted to comfort care per his wishes and later died.

The main message from this case is that usually in case of acute decompensation from COVID19 we think about worsening ARDS, superimposed bacterial pneumonia or pulmonary embolism, diagnosing PE needs a CT scan, not all of us think about pneumothorax which is frequently reported now [1] and just needs a simple chest X-ray which is reasonable to be considered prior to proceeding to more advanced imaging.

### References

Martinelli AW, Ingle T, Newman J, et al. COVID-19 and pneumothorax: a multicentre retrospective case series. *Eur Respir J* . 2020;56(5):2002697. Published 2020 Nov 19. doi:10.1183/13993003.02697-2020.

### Figure legend

Panel A is showing large left pneumothorax, also the left hemidiaphragm is elevated which is a chronic finding.

Panel B is CT scan of the lung with IV contrast showing large left pneumothorax with lung collapse and is also showing no evidence of pulmonary embolism, it is also noted there is ground glass opacities in the right lung consistent with known COVID19.

