IMAGING IN INTENSIVE CARE MEDICINE

Paranephric air in COVID-ARDS patient: an extension of pneumothorax

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A 52-year-old female was admitted to the intensive care unit (ICU) after diagnosis of coronavirus disease 2019 (COVID-19) with 3-day history of fever, cough, and shortness of breath. She had no prior history of lung disease, smoking or any comorbidity. Due to further worsening, she was intubated and started on pressure-controlled ventilation. After two days of invasive mechanical ventilation, she developed barotrauma with characteristic X-ray finding (Fig. 1). The figure showed the presence of severe acute respiratory distress syndrome with bilateral pneumothorax, pneumomediastinum, and subcutaneous emphysema in bilateral chest wall (left more than the right) along with the retroperitoneal extension of air into the left renal fascia and pneumoperitoneum in the left side. The possible mechanism could be ventilatory stress and persistent high airway pressure leading to rupture of alveoli, resulting in the retroperitoneal passage of air up to left renal fascia, most likely through diaphragmatic hiatus as there was no history of diaphragmatic or peritoneal injury. A bilateral intercostal drainage tube was inserted to manage the pneumothorax; however, she died due to refractory hypoxemia and septic shock.

Supplementary Information

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Fig. 1 Showing presence of Pneumothorax (green arrow), Pneumomediastinum (yellow arrow), Subcutaneous emphysema (red arrow), and air in the Perinephric area (blue arrow)

Declarations

Conflicts of interest

All four authors declare that there is no conflict of interest.

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