Massive tension Pyopneumothorax and pneumoperitoneum in a Covid -19 patient

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A formerly healthy 55-year-old woman presented in the emergency room with fever, weakness, and dizziness. The PCR test for SARS -Co-V -2 turned positive and she was at first admitted to the internal medicine department and subsequently to the Intensive Care Unit because of respiratory failure. She was intubated on day 7 and was extubated on day 15. Nevertheless, she was reintubated on day 17. *Aspergillus fumigatus* was isolated in bronchial secretions and treated with isavuconazole, while she was submitted to a tracheotomy on day 30. Her course was complicated by several episodes of ventilator-associated pneumonia caused by multi-resistant gram–negative bacteria treated accordingly. On day 40 after a hemodynamic deterioration she was submitted to a change of central venous catheter and an empirical change of antimicrobial treatment. On day 45, after further deterioration and the presence of subcutaneous emphysema, a tension pneumothorax on the right side was revealed. The insertion of the chest tube drainage showed the presence of a purulent pleural fluid along with the presence of air. The chest X- ray showed free air in the peritoneum, so she was submitted to an emergency C/T scan of the chest and abdomen, confirming the presence of a large quantity of free air in the peritoneum (Figures 1,2) that was attributed to the spreading of the air from the lung. *Pseudomonas aeruginosa* was cultured in the pleural fluid but despite the proper treatment, the patient expired on day 49.

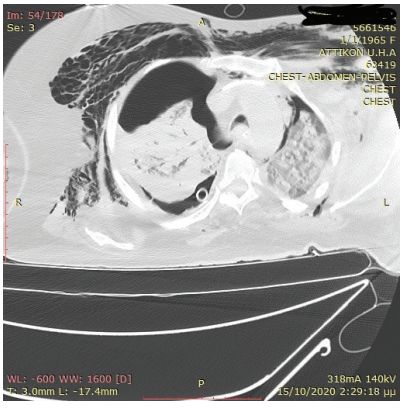

FIGURE 1. C/T scan of the chest. Presence of residual free air in right pleural space. The thoracostomy tube is in place.

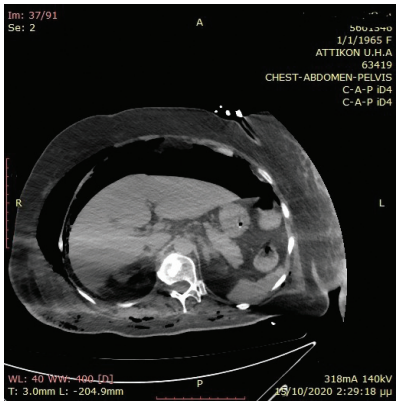

FIGURE 2. C/T scan of the abdomen. Presence of large quantity of free air in peritoneum.

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