Complication of *Pneumocystis jiroveci* Pneumonia

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A 26-year-old male patient with HIV infection presented to the Emergency Department with a 1-week history of retrosternal chest pain, shortness of breath, and fever. A chest radiograph revealed bilateral pulmonary infiltrates with pneumomediastinum and subcutaneous emphysema (fig. 1). A chest CT scan showed bilateral ground glass infiltrates, subcutaneous emphysema (black arrow), and massive pneumomediastinum and pneumo-

pericardium (white arrows) (fig. 2a, b). The patient developed a worsening respiratory status and was intubated and started on mechanical ventilation. Bronchoscopy with bronchoalveolar lavage revealed *Pneumocystis jiroveci*. His clinical course was complicated by bilateral pneumothoraces that were drained by chest tubes. Eventually the patient was discharged in good health.

Fig. 1. Chest radiograph showing bilateral pulmonary infiltrates with pneumomediastinum (white arrow) and subcutaneous emphysema (black arrow).

Fig. 2. Chest CT scan showing bilateral ground glass infiltrates, subcutaneous emphysema (black arrow), and massive pneumomediastinum and pneumopericardium (white arrows).

Pneumomediastinum is a rare complication of *P. jiroveci* pneumonia. The air leak is thought to arise from the pneumatocoles developed as a result of proteases released by activated macrophages and/or alveolar overdistention secondary to localized bronchiolar inflammation caused by *P. jiroveci*. The air may escape from these pneumatocoles and track along the bronchovascular tissue sheath into the hilum and mediastinum [1, 2]. The free air in the mediastinum is initially located in the upper portion; however, it may progress to involve the pericardium [3].

References

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