Pneumomediastinum in a Patient with *Pneumocystis jirovecii* Pneumonia

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A 33-year old man presented with fever and dyspnea that had developed over a period of 1 month. A chest CT scan on admission revealed diffuse bilateral infiltrates and pneumomediastinum (Picture 1). Coronal images demonstrated pneumomediastinum with air around the heart and right paratracheal region (Picture 2). Laboratory data showed a white blood cell count of 10,300/μL with 6.0% lymphocytes and LDH of 576 IU/L. Arterial blood gas analysis demonstrated PaO2 of 123.1 Torr, PaCO2 of 30.9 Torr (under 12 L/min of oxygen). Microscopic examination of bronchoalveolar lavage revealed *Pneumocystis jirovecii* (*P. jirovecii*). The patient proved to be seropositive for human immunodeficiency virus.

Pneumomediastinum is rare in patients with *P. jirovecii* pneumonia, but such a complication has been reported at the time of diagnosis, during ventilation, and during trimethoprim/sulfamethaxazole treatment (1). The possible pathogenesis of pneumomediastinum in this case might be due to the air leak which arose from cystic lesions caused by proteases released by activated macrophages, and ischemic necrosis of vessels caused by the pathogen. Air might escape from the cystic lesions and track along the vascular sheath to the hilum, and then to the mediastinum (2). Clinicians should be aware that pneumomediastinum can be observed at any timing in the clinical course of HIV virus-positive patients with *P. jirovecii* pneumonia.

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**References**
