

Radiological presentation of *Pneumocystis jiroveci* pneumonia mimicking bacterial pneumonia

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DESCRIPTION

Atypical radiological presentations of *Pneumocystis jiroveci* pneumonia have been previously reported in non-HIV¹ as well as in HIV-infected patients.²

We present the case of a 64-year-old woman with a history of left upper lobe small cell lung cancer in radiological and clinical remission (most recent CT scan performed 1 week before admission). She had undergone treatment consisting of a combination of chemotherapy and left lung irradiation.

She was admitted to our intensive care unit due to rapidly progressive respiratory failure. Her blood count showed severe lymphopenia (250 lymphocytes/mm³) most probably due to chemotherapy cytotoxic effect.

Chest X-rays showed middle lobe confluent pulmonary infiltrates (figure 1). Lung CT confirmed the unilateral involvement and showed one area of lobar condensation within the middle lobe, mimicking bacterial pneumonia (figure 2). Pneumococcal and legionella urinary antigen tests were negative.

Quantitative middle lobe bronchoalveolar lavage fluid culture found no bacterial and no fungal growth in bioMerieux and bio-rad culture media, respectively. Acid-fast bacillus smear and culture were negative.

A negative influenza A and B PCR test excluded these viral infections.

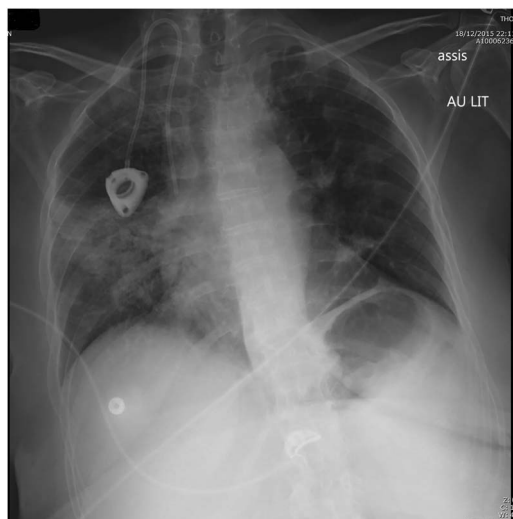


Figure 1 Chest X-rays showing unilateral middle lobe infiltrates mimicking bacterial pneumonia. Note the presence of internal jugular vein implantable chamber for chemotherapy.



Figure 2 Chest CT scan showing an area of 'aeration loss' or 'condensation' within the middle lobe, mimicking bacterial pneumonia. Ground glass infiltrates can be seen. Note sparing of the left lung.

On the contrary, cycle threshold (Ct) of real-time quantitative PCR for *P. jiroveci* infection diagnosis³ was 25 (Ct < 28 highly suggests infection according to our laboratory threshold values).

Despite appropriate antibiotic treatment with intravenous sulfamethoxazole-trimethoprim combination associated with systemic corticosteroids, the patient died 1 week later.

Learning points

- ▶ The radiological presentation of *Pneumocystis jiroveci* pneumonia may present as unilateral pulmonary infiltrate with areas of lung condensation mimicking bacterial pneumonia.
- ▶ The impact of lung irradiation needs to be evaluated in these unilateral presentations. Does lung irradiation exert a 'protection' against *Pneumocystis* infection by altering the ultrastructure of alveolar epithelium, thus reducing the tropism of *P. jiroveci* for the irradiated lung?

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Contributors MS was the referent doctor of the patient reported in this case report, he wrote the manuscript and included the figures. BL processed the images.

Competing interests None declared.

Patient consent Obtained.



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