

CASE IMAGE

Lung abscess caused by *Rhodococcus equi* in a patient with advanced retroviral disease

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Email: e.l.c.ong@ncl.ac.uk**Abstract**

Rhodococcus equi is a Gram-positive coccobacillus bacterium commonly found on dry surface soil of farming and livestock properties. This organism is a rare cause of subacute, necrotizing infection, and mostly causes cavitary pneumonia and lung abscess, especially in immunocompromised hosts with advanced human immunodeficiency virus (HIV) infection.

KEYWORDScavitary pneumonia, lung abscess, retroviral disease, *Rhodococcus equi*

1 | CASE PRESENTATION

A 33-year-old man with newly diagnosed HIV infection presented to Hospital Sungai Buloh, Malaysia, in January 2022 with a 4-month history of fever, cough, and breathlessness. He had no recent traveling or direct contact with soil or animals. Physical examination revealed oral thrush and cervical lymphadenopathy. His CD4 count was <35 cells/mm³, and viral load was 5.13 log₁₀ copies/ml. Computed tomography (CT) scan of the thorax revealed a thick-walled cavitary lesion with air-fluid level

in the right lower lobe, indicating lung abscess (Figure 1). The sputum culture yielded *Rhodococcus equi*, but negative for mycobacterium tuberculosis. The patient received intravenous vancomycin 1 g thrice daily and oral azithromycin 250 mg once daily for 2 months, followed by oral azithromycin and levofloxacin, which resulted in clinical and radiological improvement. He was also started on antiretroviral therapy (tenofovir-emtricitabine and efavirenz).

R. equi is a Gram-positive, coryneform bacterium that is a major opportunistic pathogen in immunocompromised

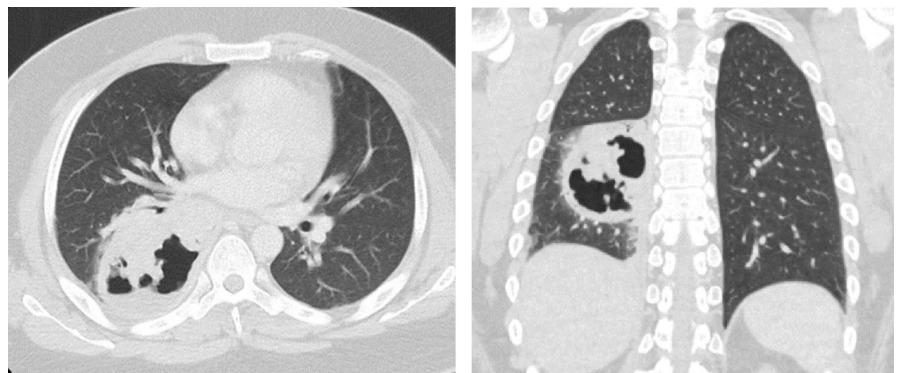


FIGURE 1 CT scan of the thorax revealed a thick-walled cavitary lung lesion, measuring 7.6 × 6.1 × 7.6 cm with an air-fluid level, involving the medial and posterobasal segments of the right lower lobe

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patients, particularly those with retroviral disease. Although the clinical spectrum of *R. equi* disease is broad, pulmonary involvement is a predominant feature in the majority of cases.¹ The most common radiographic changes on CT of *R. equi* infection are ill-defined consolidation and irregular areas of cavitation in the lungs with preference for the upper lobes. Antibiotic options include combination therapy with vancomycin, macrolides, fluoroquinolones, rifampin, and imipenem-cilastatin.²

AUTHOR CONTRIBUTIONS

CYC prepared the manuscript and took care of the patient. ELCO provided guidance and editing the final manuscript.

ACKNOWLEDGMENTS

None.

CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

DATA AVAILABILITY STATEMENT

None.

CONSENT

Written informed consent was obtained from the patients for publication of this case report. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

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