



Case illustrated

Cavitary pulmonary Kaposi's sarcoma in AIDS



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ABSTRACT

Many different pulmonary diseases occur in human immunodeficiency virus-infected patients. This was a case of a cavity lesion, although differentiation was extremely difficult pictorially. This was a rare case that led to a definitive diagnosis because the cavity lesions were complicated by pneumothorax, and we could perform a biopsy.

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Case illustrated

The patient was a 42-year-old man who presented with bloody sputum and weight loss. He had no medical history, nor was he taking any oral medications. However, a lung shadow was reportedly discovered during a medical examination performed 2 years prior in a clinic. He consulted our hospital with bloody sputum and a history of having lost 17 kg over 1 year.

At the consultation, his vital signs were Glasgow Coma Scale, E4V5M6; temperature, 37.1 °C; blood pressure, 114/84 mmHg; pulse, 96/min (regular); respirations, 16/min; and percutaneous oxygen saturation on room air (98 %). A physical examination revealed no abnormal findings. Chest radiography showed nodular shadows in the bilateral lower lung fields (Fig. 1). Chest computed tomography showed multiple nodular shadows with cavities with a greatest dimension of 3 cm in the bilateral inferior lobes of the lung (Fig. 2). During an interview, he revealed that he had sex with other men. The blood test results were as follows: white blood cell count, 3400/μL; C-reactive protein level, 0.34 mg/dL; CD4 count, 45/μL; and HIV-RNA viral load, 320,000 copies/mL.

Bronchoscopy was performed to confirm the diagnosis. However, a right lung class I pneumothorax was detected; thus,

the bronchoscopy was discontinued (Fig. 3-A). Conservative medical treatment was initiated, but the patient developed a contralateral left class 2 pneumothorax (Fig. 3-B). As the suspected etiology of the air leak from the cavity lesions was inconclusive, he underwent a diagnostic and therapeutic pulmonary segmental resection, after which a definitive diagnosis was reached on hospitalization day 25. Pathology revealed Kaposi's sarcoma (Fig. 4-A, B, C). Subsequently, chemotherapy consisting of liposomal doxorubicin and antiretroviral therapy (bictegrovir sodium, emtricitabine, and tenofovir alafenamide fumarate) was administered, and a subsequent reduction in the cavity shadows was detected (Fig. 5).

According to one report, among patients with HIV infection and cavitary lung lesions, fungi was the most common etiology (42.0 %), followed by bacteria (29.6 %) and mycobacteria (25.9 %) [1]. Noninfectious causes of cavitary lesions in patients with HIV infection are rare, but cavitary lesions caused by pulmonary Kaposi's sarcoma and non-Hodgkin's lymphoma have been reported [2]. Furthermore, this case is rare because there have been few reports of Kaposi's sarcoma lesions occurring at the tip of the lung and resulting in complicated pneumothorax [3].

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Fig. 1. Chest radiograph showing nodular shadows visible in the bilateral lower lung fields.

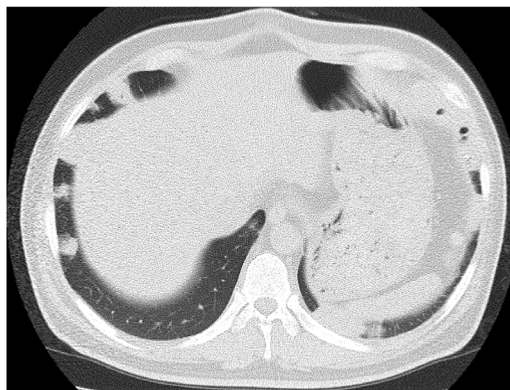
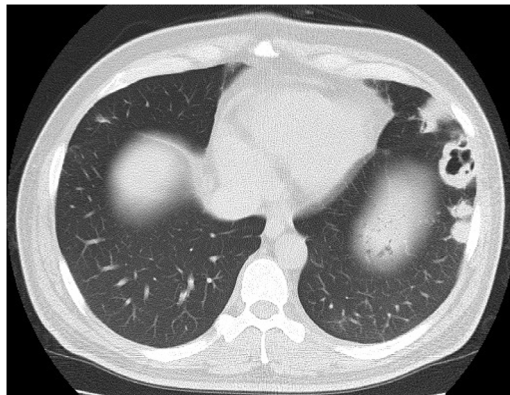
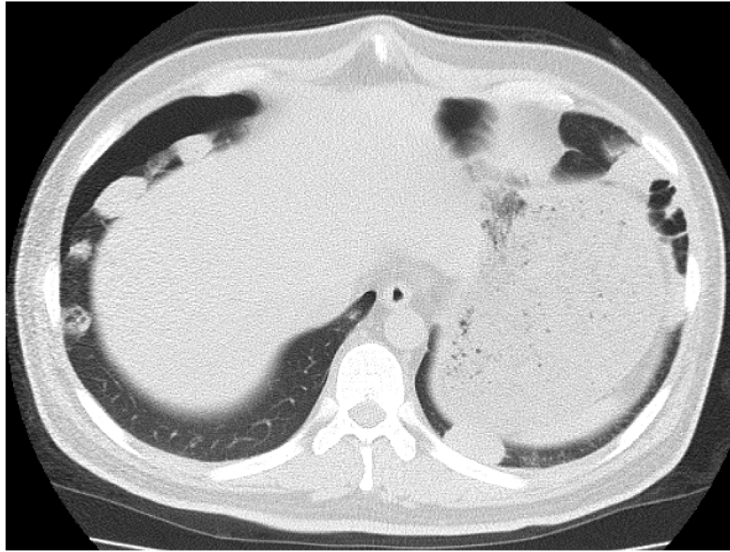


Fig. 2. Chest computed tomography image showing multiple nodular shadows with cavities (greatest dimension, 3 cm) in the bilateral inferior lobes of the lung.

A



B

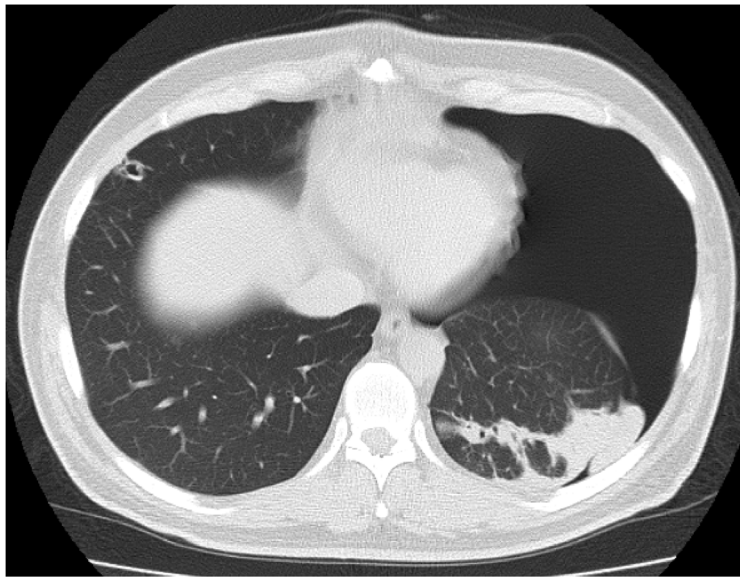


Fig. 3. A: A class I pneumothorax that was detected in the right lung on hospitalization day 14. B: A class II pneumothorax that was detected in the left lung on hospitalization day 23.

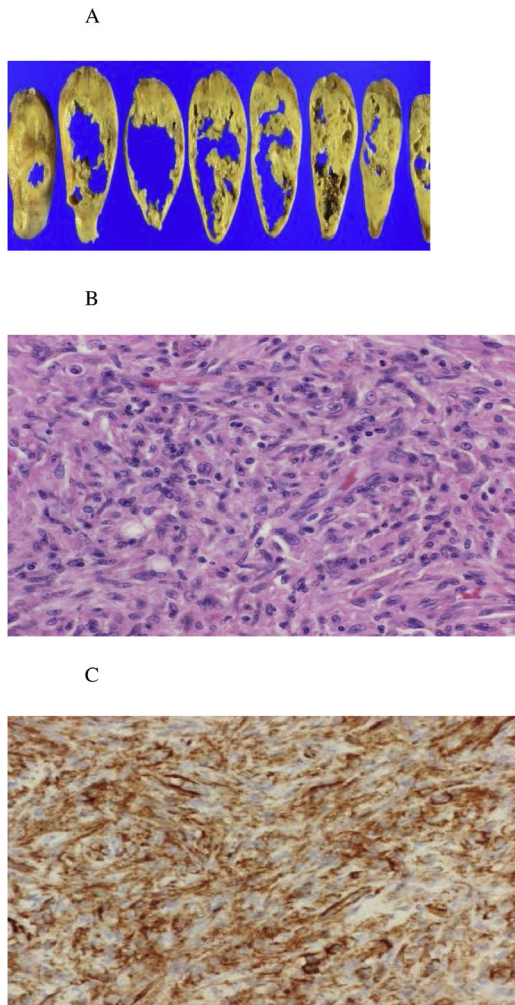


Fig. 4. A: Left lower lobe of the lung segmental resection specimen (S9: 4 cm × 3 cm). B: The dyskaryotic tumor cells showed hyperplasia with fusiform nuclei. C: Immunostaining results: CD31-positive.

Authors' contributions

All authors treated the patient, drafted the manuscript, critically reviewed the manuscript, and approved its final version.

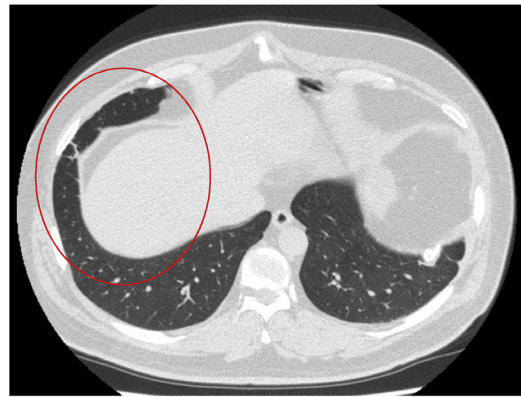


Fig. 5. Reductions in the cavity shadows were detected in a wall 1 year after treatment.

Ethical approval

No ethical approval was required for this publication.

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Consent

Informed consent was obtained from the patient.

Declaration of Competing Interest

The authors report no declarations of interest.

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