



How would you manage a rare cause of haemoptysis?

Case report

A 55-year-old male was admitted to hospital with symptoms of haemoptysis, which had developed over a 10-day period. The patient had a history of classical Kaposi's sarcoma (KS), which had been treated with chemo-radiotherapy 2 years previously.

On examination, normal pulmonary and cardiac auscultation were observed.

Investigations

The patient was seronegative for HIV. The results of laboratory testing, including blood cell counts, prothrombin time, activated partial thromboplastin time and biochemical parameters, were normal. In addition, results of room air arterial blood gas analysis, pulmonary function tests, chest radiographs and high-resolution computed tomography (HRCT) of the chest were all normal (figure 1).

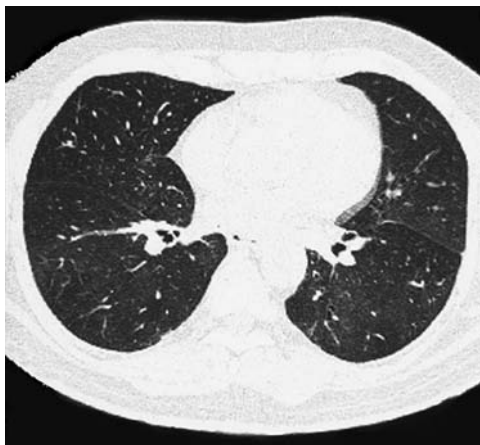


Figure 1
HRCT scan of the chest.

Task 1

At this point, suggest which diagnostic test you would use.

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Answer 1

In this case, fiberoptic bronchoscopy was performed for evaluation of the haemoptysis.

Figure 2 shows the results of the bronchoscopy.

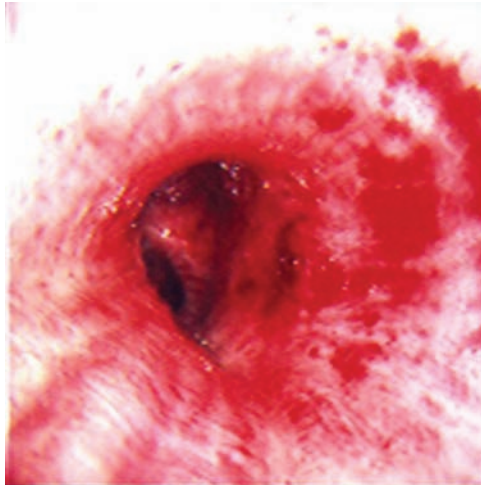


Figure 2
Fiberoptic bronchoscopy.

Task 2

Interpret the bronchoscopic features.

Task 3

Based on the bronchoscopic findings presented to you, suggest a diagnosis and the appropriate diagnostic procedure to perform on bronchoscopy.

Answer 2

Fiberoptic bronchoscopy revealed mucosal erythema, and cherry-red lesions within the mucosa of the lingular segment.

Answer 3

The visualisation of characteristic endobronchial lesions on bronchoscopy and the history of KS were compatible with **endobronchial KS**.

Bronchoalveolar lavage (BAL) was performed, and human herpes virus DNA (HHV8) was detected by nested PCR.

The patient received bleomycin combined with vincristine chemotherapy, following the diagnosis of pulmonary involvement of KS. After two cycles of chemotherapy, haemoptysis ceased. A control bronchoscopy revealed normal mucosal findings.

Discussion

KS can present clinically as the following: 1) classic KS, occurring primarily in older males of Eastern European or Mediterranean descent; 2) endemic (African) KS, which is prevalent among young children and is extremely aggressive, in which skin lesions are infrequent; 3) transplant associated; and 4) epidemic (AIDS-associated) KS [1, 2].

The patient presented here was diagnosed with classic KS because he was serologically HIV negative, had no transplantation history and was of Mediterranean descent.

Lung involvement of KS is observed more frequently in AIDS patients or patients with immunosuppressive therapy than in other KS types. Classic KS presents as nodular skin lesions in the lower extremities without lung involvement. Pulmonary manifestations of KS are present in 20–40% of AIDS patients, but there is no occurrence of lung involvement in classic KS [3]. Haemoptysis is a less common symptom in patients with KS [4].

Chest radiographic findings include ill-defined parenchymal and subpleural nodules, bilateral interstitial infiltrates, perihilar densities and bilateral pleural effusions [5, 6]. Fewer than 1% of patients with intrathoracic KS may have normal CT findings [6].

The diagnosis of endobronchial KS can be made either by visualisation of characteristic lesions on bronchoscopy or by lung biopsy [3]. Bronchoscopic findings appear as multiple erythematous to purpuric lesions within the

tracheobronchial tree. Mucosal biopsy is not recommended routinely because of the significant bleeding risks. PCR amplification of HHV8 in BAL is a noninvasive method with a high positive predictive value [2, 7, 8].

In conclusion, endobronchial involvement of classic KS is rare; however, the presence of haemoptysis, which is not a common symptom of KS, can be an important sign even when the results of CT scans are normal.

References

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