Ward round: Chronic respiratory symptoms with no response to tuberculosis treatment in a 35 year old HIV positive man

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A 35 year old HIV positive non smoker presented to Queen Elizabeth Central Hospital (QECH), Blantyre, in October 2006 with the following history:

- one year of productive cough
- HIV test positive January 2006
- smear negative pulmonary TB treatment (diagnosed on the basis of the chest Xray – Fig. 1) from January to September 2006, with no improvement in symptoms despite good self-reported compliance
- An admission to QECH in May 2006 with a diagnosis of pneumonia when a repeat chest Xray was performed (Fig. 2)
- Antiretroviral therapy (Trioimmune 30®) since June 2006
- for the past 4 months, intermittent fevers and gradually worsening shortness of breath

On admission to QECH in October 2006 he was in respiratory distress but was apyrexial. He had moderately enlarged cervical lymph nodes but no oral or cutaneous Kaposi's sarcoma lesions. There were markedly reduced breath sounds in the right middle and lower zones of the chest, with associated stony dullness in this area. Vocal fremitus was mildly reduced on the right side; the trachea was not deviated. The cardiovascular, abdominal and neurological systems were unremarkable. A chest Xray was taken (Fig 3).

The initial impression of the admitting physician was right sided pleural effusion. A diagnostic pleural tap was attempted which yielded no fluid. IV cefotaxime 2g iv bd was started for possible underlying pneumonia. A bedside ultrasound examination of the chest was performed which confirmed that there was no pleural effusion present, although a small pericardial effusion was noted.

What is your differential diagnosis?

What further investigations would you perform?

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Figure 1: January 2006

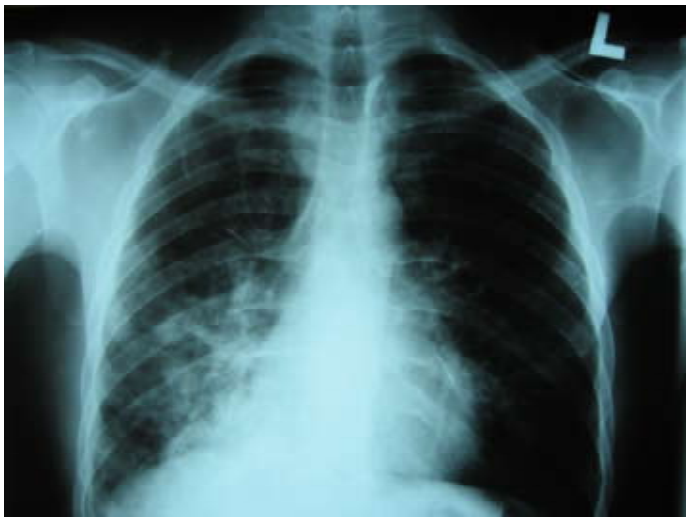


Figure 2: May 2006

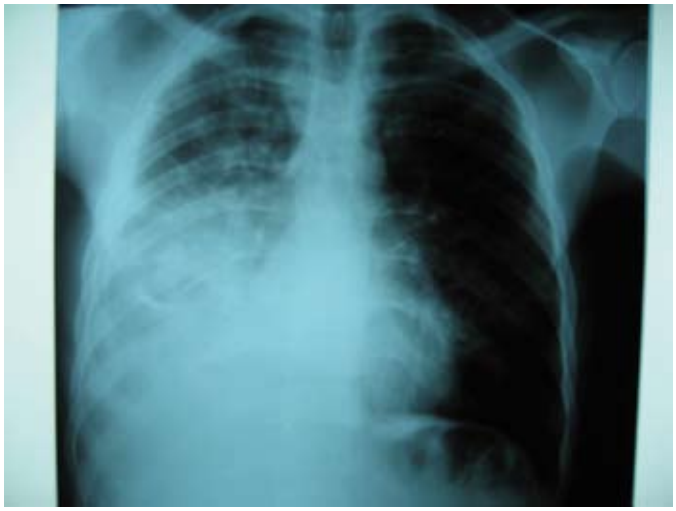
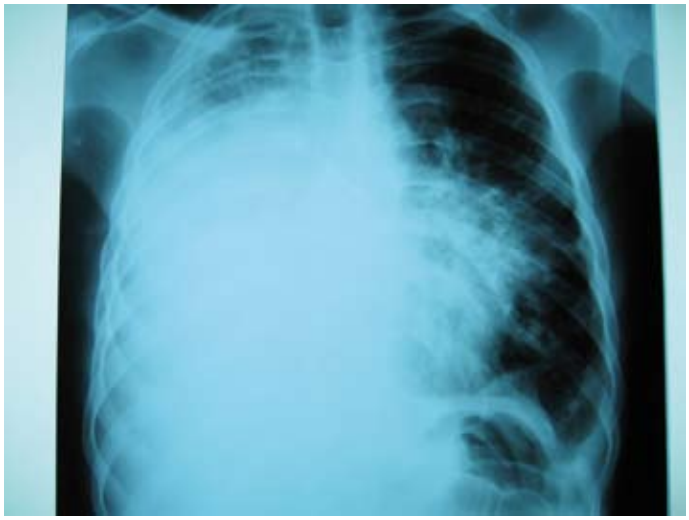


Figure 3: October 2006



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Investigation and Diagnosis

The chest XRay series demonstrates progressive increasing shadowing in the right middle and lower zones with some tracheal deviation towards the right side suggesting a degree of right sided collapse or fibrosis. There are also left mid zone infiltrations apparent on the most recent film (Fig 3) which have progressed from previous XRays.

In order to investigate suspected right middle and lower lobe collapse a bronchoscopy was performed. This revealed widespread erythematous macular and papular lesions encircling the bronchi throughout the bronchial tree below the carina and causing severe stenosis/obstruction just below the origin of the right upper lobe bronchus. Figs 4 and 5 show bronchoscopic appearances similar to those of this patient (photography of this patient's lesions was not possible).

On the basis of this characteristic appearance, a diagnosis of endobronchial Kaposi's sarcoma (KS) was made. The patient was referred to our palliative care team for counselling, symptom control and consideration of vincristine therapy.

Discussion

While pulmonary KS is common in patients with known mucocutaneous KS (between 47 and 75% from post mortem studies), pulmonary KS in the absence of mucocutaneous involvement is often considered a rare event. However some studies of bronchial KS have shown rates of over 15% of confirmed bronchial KS without skin or palatal lesions so the diagnosis should be considered even in the absence of peripheral lesions.

The clinical presentation of pulmonary KS is non specific and can be indistinguishable from pneumonia and TB. The majority of patients with known KS who present with pulmonary findings have a coexisting opportunistic infection and therefore, in the absence of confirmation by bronchoscopy, treatable conditions (such as TB or pneumonia) should be excluded or treated before making a diagnosis of pulmonary KS. Even if a patient is known to have pulmonary KS, a worsening of symptoms may represent infection rather than disease progression.

Management of bronchial Kaposi's sarcoma

This patient was already taking ARV treatment which is mandatory in all patients with confirmed pulmonary Kaposi's sarcoma. Disease specific treatment is palliative recognizing that median survival in such cases is six months. Palliative treatment means that quality of life issues have to be taken into account, not only focusing on drug availability and full blood count (though these are important base lines), but being guided by the patient's wishes, place of residence (which may dictate ability to travel for medication) and co-existing pathology. This man was started immediately on oral morphine solution (standard starting dose of 2.5mg every four hours) with a laxative (bisacodyl 10mg nocte). This gave rapid symptomatic control of his dyspnoea. His blood haemoglobin coincentration was 15g/dl. He was booked to start vincristine (2mg intravenously every week for 6 weeks as per MOH guidelines) to further optimize symptom control. He was asked if he wanted to know what was wrong with him, after which his condition was explained. He and his wife were advised about the serious, incurable nature of the disease. He was informed that the treatment measures were designed to help him be more comfortable. This may be considered a starting point for the process of ongoing counselling in such cases.

*Figure 1: Endobronchial Kaposi's sarcoma lesion at the carina**

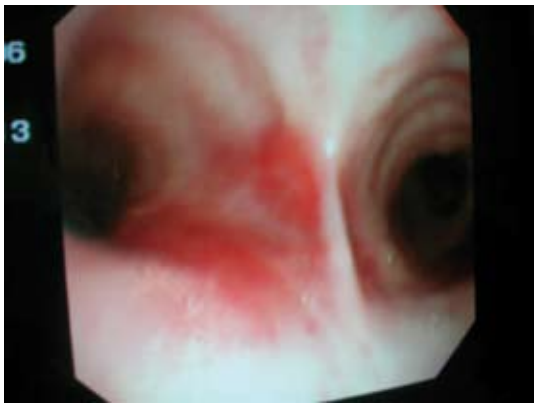
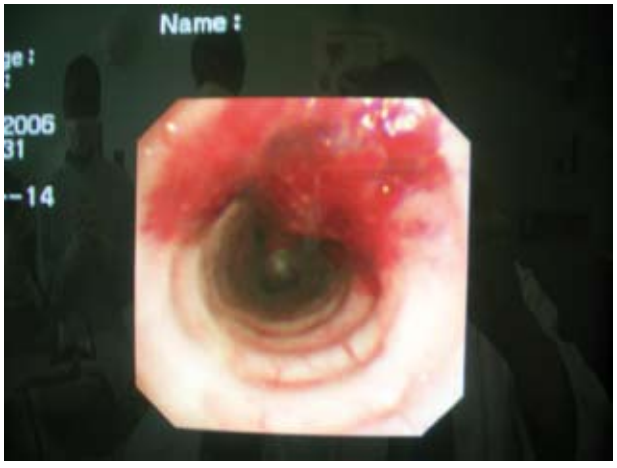


Figure 2: Nodular endobronchial Kaposi's sarcoma in the trachea



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2. Huang L, Schnapp LM, Gruden JF, Hopewell PC, Stansell JD. Presentation of AIDS-related pulmonary Kaposi's sarcoma diagnosed by bronchoscopy Am J Respir Crit Care Med.1996 Apr;153(4 Pt 1):1385-90.
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* (NB figures 1 and 2 are representative pictures from other bronchoscopies, not from the patient whose presentation is described in the text.)

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