An Unusual Cause of Haemoptysis in Pregnancy

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Introduction
Pregnant women may present with shortness of breath and/or haemoptysis during their pregnancy, which can have many underlying causes. This case demonstrates the importance of considering more unusual causes.

Case history
A lady in her mid-30s presented via her GP with four episodes of frank haemoptysis, occurring over the preceding 4 weeks. At the time of presentation she was 27 weeks pregnant. She reported dyspnoea that was worse than in her previous pregnancy, but no chest pain, fevers or night sweats. She was born in Pakistan, but had been resident in the UK for many years and reported no known contact with TB. She had never smoked and had no family history of lung cancer. She had no recent travel history.

Initial investigations

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
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<tbody>
<tr>
<td>White cell count</td>
<td>10.7</td>
</tr>
<tr>
<td>Haemoglobin</td>
<td>104 g/L</td>
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<tr>
<td>D-dimer</td>
<td>1027</td>
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<tr>
<td>Chest x-ray</td>
<td>Ill defined parenchymal opacity in the left midzone, with a suggestion of cavitation</td>
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Differential diagnosis
1. Infection
2. Tuberculosis
3. Malignancy
4. AV malformation

Next steps
CT thorax demonstrated a 4 x 2cm lobulated mass at the left hilum encasing a small segmental lower lobe artery, with no cavitation or lymphadenopathy.

This narrowed the differential diagnosis to TB, lymphoma or a pulmonary neuroendocrine tumour.

Discussion at the Lung Cancer MDT advised bronchoscopy as the next step. This showed a vascular mass arising from a left upper lobe bronchus and obstructing the left main bronchus. Laser ablation was carried out, and biopsies taken.

Histology of the biopsy showed typical carcinoid appearances, of tightly packed cells with eosinophilic cytoplasm and round nuclei.

Further management will be with delivery of the pregnancy at term, and then surgical resection.

Haemoptysis during pregnancy
Haemoptysis in pregnancy has many causes, as demonstrated by the wide range of differential diagnoses considered in this case. Causes include:

- Pneumonia
- Pulmonary embolism
- TB
- Bronchiectasis
- Malignancy
- AV malformation
- Amniotic fluid embolism

New malignancy should be considered as a cause, as numerous cases of underlying lung malignancies presenting as haemoptysis during pregnancy have been recorded.

Bronchial carcinoid
Bronchial carcinoid tumours are a rare cause of haemoptysis in pregnancy, although previous cases have been reported. In the general population bronchial carcinoid occurs in up to 2 per 100,000 people per year.

Presenting symptoms such as shortness of breath or pleuritic chest pain are often related to bronchial obstruction. The standard treatment is surgical resection.

Learning points
- For pregnant patients with respiratory symptoms, plain film chest x-ray involves a low dose of radiation, but may demonstrate mass lesions, as well as infection.
- The possibility of malignancy occurring during pregnancy should not be discounted, as a new malignancy is diagnosed in approximately 1 in 1000 pregnant women.

References