

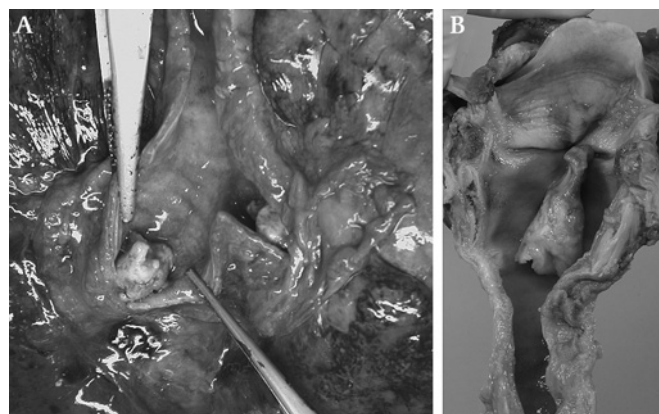
## Concurrent acute endobronchial and endotracheal tumour embolism

A 63-year-old man presented with a 12 h history of severe cough and a fear of choking. He had a known background of locally advanced primary adenocarcinoma of the lung obstructing the right upper bronchus. Three months previously he had coughed up white tissue (confirmed as carcinoma by histology). One month previously he received a single fraction of radiotherapy. His respiratory rate was 20 breaths/min with minimal respiratory distress. His temperature was 38.9°C and his SpO<sub>2</sub> was 94% on room air. His trachea was deviated to the right and breath sounds were decreased in the right hemithorax. Bronchoscopy 2 months previously showed a necrotic tumour causing complete occlusion of the right upper lobe bronchus and extrinsic compression of the right middle lobe bronchus. CT scan 1 month previously (figure 1) and chest x-ray after the most recent admission confirmed a bronchocentric obstructing lesion of the right bronchial tree. Intraluminal tumour extension was not visualised with either imaging modality. The chest x-ray also showed right mediastinal shift, a right pleural effusion and right upper lobe atelectasis. On the ward he suddenly developed severe respiratory distress with stridor. Within 1 min he became apnoeic and lost consciousness. His larynx showed no obstruction at endotracheal intubation. Within minutes he became unventilatable and cardiac arrest ensued. The patient could not be revived. Postmortem examination confirmed primary tumour in the right upper bronchus with a snake-like projection of tumour into the right main bronchus. There were two obstructing mobile tumour plugs, in the left main bronchus (figure 2A) and the subglottic region of the trachea (figure 2B).

Endobronchial tumour embolism is rare, has primarily been described with lung surgery and is difficult to manage in the acute setting.<sup>1</sup> Diagnosis and reversal of this catastrophe can only be achieved by immediate rigid bronchoscopy and tumour plug extraction.<sup>2</sup> To our knowledge, this is the first description



**Figure 1** CT chest 1 month previously showing a right bronchocentric lesion with right upper lobe collapse. Intraluminal tumour growth was not evident, although there was stenosis of the right upper bronchus.



**Figure 2** (A) Posterior view of the lung hilum. There was a snake-like projection of tumour from the primary mass on the right side and a separate mobile tumour plug obstructing the left main bronchus. (B) Posterior view of larynx showing a tumour plug resting in the trachea, abutting the true vocal cords. The tumour plug was mucus covered and freely mobile.

### Learning points

- ▶ Endobronchial tumour embolism may present acutely and be rapidly fatal.
- ▶ Awareness of this condition might lead to early recognition and urgent rigid bronchoscopy.

of endobronchial tumour embolism in a patient with lung cancer outside of the surgical setting. We believe the lesson from our case is that patients with a history of expectorating tumour plugs and a fear of choking may warrant urgent evaluation for threatened endobronchial tumour embolism.

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