A 65 year old woman with a 15 pack year smoking history had recently been diagnosed in the community with chronic obstructive pulmonary disease (COPD). She was admitted to hospital with progressive breathlessness and wheeze; her exercise tolerance had decreased from 800 metres to less than 50 metres over the last year. Her peak expiratory flow rate on admission was 150 l/min increasing to 320 l/min on discharge after treatment with oral steroids and nebulised bronchodilators.

She was readmitted 3 weeks later with a recurrence of her symptoms. A flow-volume loop suggested intrathoracic large airway obstruction (fig 1). Her chest radiograph showed a mid tracheal mass (fig 2A) which was confirmed on a computed tomographic (CT) scan (fig 2B). Flexible bronchoscopy revealed a polypoid tumour in the trachea 8 cm below the vocal cords causing a 60% reduction in tracheal diameter. Biopsies confirmed a non-Hodgkin's lymphoma of B cell origin. There was no evidence of lymphoma involvement in any other site.

She was initially treated with high dose steroids and received a single 10 Gy fraction of radiotherapy to the trachea. She responded rapidly and her breathing returned to her pre-morbid state. A repeat CT scan after 12 months showed no evidence of tumour at the primary site.

Primary non-Hodgkin’s lymphoma of the trachea is very rare. A Medline search identified only 13 case reports in the literature. The diagnosis may be delayed as symptoms may be confused with those of asthma or COPD. Direct bronchoscopy and biopsy is the definitive investigation. Primary lymphoma of the trachea is a radiosensitive tumour and can be controlled with moderate doses of radiation.

Learning points

- Primary non-Hodgkin’s lymphoma of the trachea is extremely rare and responds well to radiotherapy.
- Not all patients with a “wheeze” and reduced peak expiratory flow that responds to steroids have asthma/COPD.

Figure 1 Flow-volume curve.

Figure 2 [A] Chest radiograph and (B) CT scan showing mid tracheal tumour.

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B cell non-Hodgkin's lymphoma of the trachea mimicking COPD

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