

Dysphagia complicating malignant mesothelioma

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Aching chest discomfort, breathlessness, and malaise are the common complaints in mesothelioma.^{1,2} Occasionally the tumour is discovered on a chest radiograph before symptoms become manifest and, rarely, rapid accumulation of pleural fluids leads to an emergency admission with acute breathlessness.¹ In two series dysphagia has been reported as a rare preterminal event^{1,3} while in other series⁴⁻⁹ this complication has not been recorded. Post-mortem examination in cases of mesothelioma has shown the oesophagus to be affected infrequently^{1,2,4} or not at all.^{3,5-9} In our patient dysphagia became a prominent symptom requiring active treatment.

Case report

A 61-year-old non-smoking woman presented in June 1979 with a six-month history of persistent left-sided lower chest pain and mild exertional breathlessness. There was a dull percussion note at the left base with reduced breath sounds and the chest radiograph showed pleural thickening on the left with a few scattered calcified pleural plaques in both lung fields. In July 1979 she developed herpes zoster affecting segments T9 and T10 over the left chest wall. This resolved but by December she had become more breathless. The chest radiograph showed a large left-sided pleural effusion. The effusion was an exudate but cytological examination of the fluid and multiple pleural punch biopsies gave negative results. Bronchoscopy showed nothing abnormal. At thoracoscopy pleural nodules were seen and biopsy specimens were taken. Histological examination showed large collections of mesothelial cells, which in places formed acini all within dense fibrous tissue, consistent with a diagnosis of mesothelioma. Chemical pleurodesis was performed with tetracycline.

A more detailed history then revealed that the patient's father, who had been widowed at an early age, was an asbestos weaver and that the patient while in her teens had cleaned his dusty work overalls regularly for several years.

She remained well for the next nine months with minor left-sided chest discomfort. This discomfort increased over the next six months, requiring regular analgesia, and was accompanied by increasing breathlessness. Examination showed increased rigidity of the left chest wall, scoliosis

concave to the left, and reduced breath sounds at the base. A hard swelling had appeared in the scar from the thoracoscopy incision. She had also developed ankle oedema and a chest radiograph taken in April 1981 showed an enlarged cardiac shadow with a small left effusion. The ankle oedema was controlled with a diuretic.

In August 1981 the patient admitted to a four-month history of increasing dysphagia, anorexia, and weight loss. A chest radiograph showed further enlargement of the cardiac shadow, broadening of the mediastinum, and left-sided pleural fluid or fibrosis (fig 1). A barium swallow showed a tapered stricture of the distal oesophagus about 10 cm in length (fig 2). Oesophagoscopy confirmed the presence of a smooth stricture beginning 28 cm from the mouth, compatible with external compression. Mucosal biopsy specimens were normal. She subsequently required oesophageal dilatation and the insertion of an endoesophageal tube because of complete dysphagia for solids

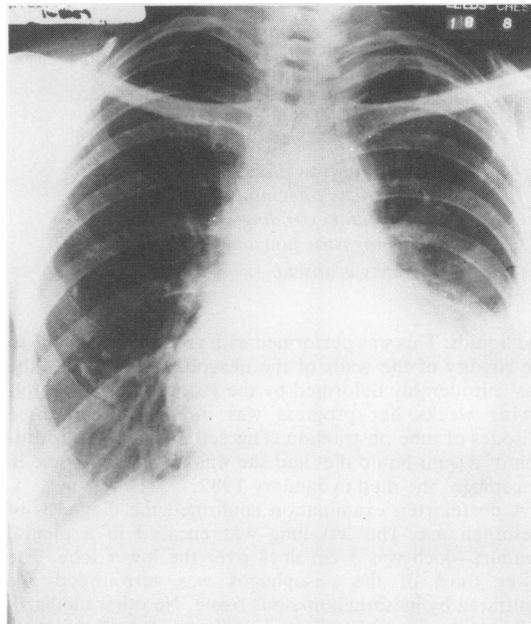


Fig 1 Chest radiograph showing enlarged cardiac shadow, broadened mediastinum, and left pleural effusion or fibrosis.

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Fig 2 Barium swallow showing a tapered stricture beginning 28 cm from the mouth and extending 10 cm to the oesophagogastric junction; mucosal irregularity is absent.

and liquids. This was performed with great difficulty due to the rigidity of the walls of the oesophagus, and the tube was considerably deformed by the lesion. During the following weeks her progress was interrupted by three episodes of tube obstruction. This settled after the institution of a semi-liquid diet and she was discharged home in December. She died in January 1982.

A postmortem examination confirmed the diagnosis of mesothelioma. The left lung was encased in a pleural tumour, which was 3 cm thick over the lower lobe. The lower third of the oesophagus was surrounded and infiltrated by mesotheliomatous tissue. No other mediastinal structures were affected and no metastases were

encountered. Calcified pleural plaques were confirmed and asbestos bodies were isolated after lung digestion.

Discussion

Many of the features which characterise malignant mesothelioma were present in this patient. Exposure to asbestos preceded the development of tumour by more than 40 years. The presentation with chest pain and breathlessness and the subsequent development of a large pleural effusion was typical.¹ Her survival, however, to 33 months was considerably longer than average, which has recently been reported to be as short as 10 months after presentation.² Possibly the tumour was a less aggressively malignant variant, which would be in keeping with the limited spread of tumour noted at postmortem examination.

Mesotheliomas have a propensity to spread within tissue planes; thus the underlying lung becomes encased in a firm mantle before parenchymal infiltration is advanced.^{1,5} The tumour similarly surrounds mediastinal structures but unlike bronchogenic carcinoma tracheobronchial obstruction and superior mediastinal obstruction have not to our knowledge been reported, and dysphagia occurs rarely as a preterminal event.^{1,3} Often before this occurs the tumour has spread more widely, penetrating diaphragm and pericardium⁵ or metastasising,⁴ usually with rapid clinical deterioration.

The slow onset and predominance of dysphagia in our patient is related to a combination of her extended survival and the limitation of spread of the tumour to the lower oesophagus. Treatment of dysphagia by endo-oesophageal tube was technically difficult in her case but the alternative—subcutaneous oesophagogastric bypass¹⁰—was undesirable in view of the frequency with which mesothelioma penetrates surgical wounds¹ and the increased mortality and morbidity associated with major surgery.

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