

Short reports

Xanthogranulomatous malignant fibrous histiocytoma arising from posterior mediastinum

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Since O'Brien and Stout first described malignant fibrous histiocytoma in 1964,¹ several other reports have been published. Weiss and Enzinger studied a series of 200 patients² and found that this tumour arose most commonly in the extremities, abdominal cavity, or retroperitoneum. In the mediastinum primary mesenchymal neoplasms are excep-

tionally rare. We report a mediastinal tumour, which histologically proved to be a malignant fibrous histiocytoma of xanthogranulomatous type.³ Despite its rarity, the possibility of a neoplasm of this type should be considered in the differential diagnosis of mediastinal tumour.

Case report

A 40 year old Japanese woman complained of back pain and was admitted to the hospital of Saga Medical School because of an abnormal shadow on the chest radiograph. Computed tomography showed a spherical mass measuring 8.5 × 5.2 cm in the right pleural cavity, and a selective right

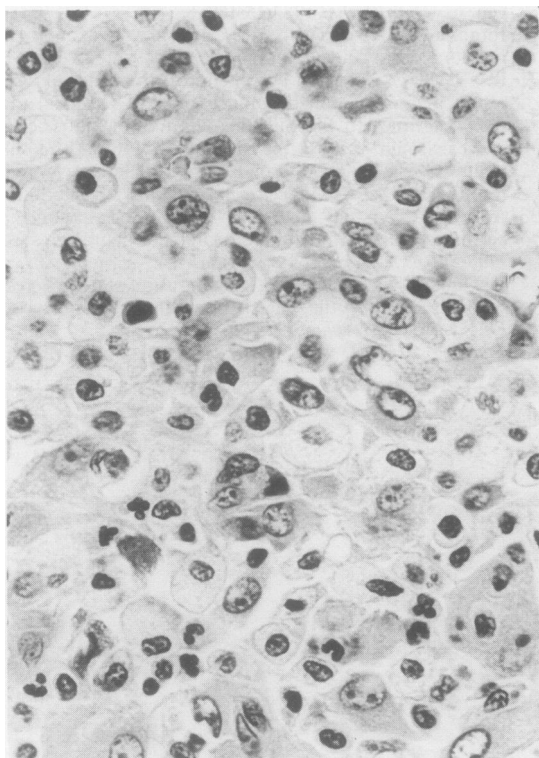


Fig 1 The neoplastic xanthomatous cells and histiocytic cells intermingled with various inflammatory infiltrates of which the tumour was largely composed. (Haematoxylin and eosin, × 70.)

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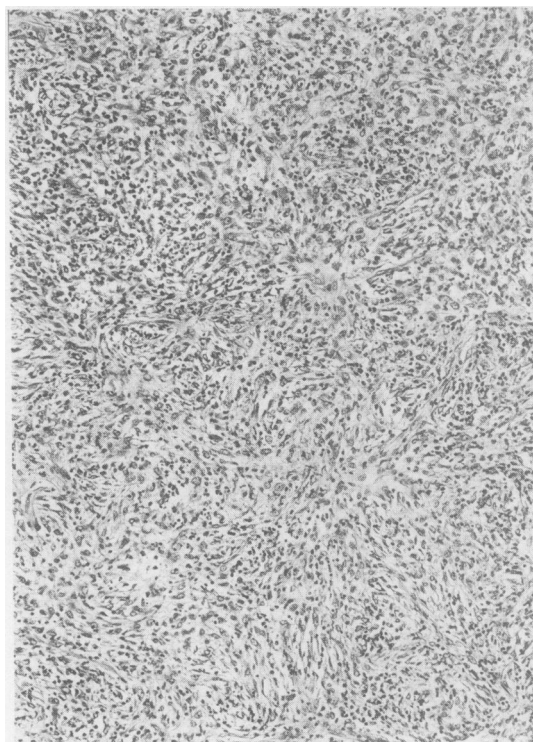


Fig 2 Spindle cells arranged in short fascicles forming a prominent storiform pattern. (Haematoxylin and eosin, × 18.)

bronchial arteriogram showed that the mass was fed by the mediastinal branches of the bronchial artery, suggesting an origin in the posterior mediastinum.

Right thoracotomy was performed through the bed of the 6th rib in March 1984. The tumour arose from the posterior mediastinum, being attached to the adventitia of the oesophagus by a thin stalk. It formed an oval mass in the right pleural cavity and was partly adherent to the pleura of the right lower lobe. The mass was separated from the lung and resected with the stalk.

On gross examination it had a smooth surface and consisted of rubbery solid tissue, yellow or white in colour, measuring $10 \times 8 \times 3$ cm. Histologically, the main components consisted of xanthomatous cells and spindle or ovoid elements with plump cytoplasm diffusely infiltrated by inflammatory cells (fig 1). A storiform pattern of spindle cells arranged in short fascicles was observed in places (fig 2). The histological appearances were characteristic of the xanthogranulomatous type of malignant fibrous histiocytoma. Electron microscopy showed that the xanthomatous cells contained membrane bound lipid droplets. Most of the remaining cells were abundant in expanded cisternae of rough endoplasmic reticulum. Undifferentiated cells with scanty organelles were scattered among them.

The postoperative course was uneventful. Neither chemotherapy nor radiation was considered necessary. The patient currently remains well with no evidence of recurrence or metastasis 15 months after surgery.

Discussion

Malignant fibrous histiocytoma is now recognised as the most common soft tissue sarcoma in older patients, arising

most frequently in the extremities and retroperitoneum. Histologically, this tumour is divided into four or five subtypes but storiform areas (fig 2) are their common diagnostic hallmark.³ To our knowledge, only four cases of malignant fibrous histiocytoma originating in the mediastinum have been reported since the first description in 1982.⁴⁻⁶ Of the subtypes of malignant fibrous histiocytoma, the xanthogranulomatous variant is uncommon and has not been reported in the mediastinum.

Weiss and Enzinger reported a poor prognosis in patients treated surgically, most deaths occurring within the first two years.² It will be of interest to know the outcome of our case which occurred in a relatively young woman. A better understanding of the natural history and postoperative course of this tumour will allow accurate evaluation of the best form of treatment.

References

- 1 O'Brien JE, Stout AP. Malignant fibrous xanthoma. *Cancer* 1964;17:1445-55.
- 2 Weiss SW, Enzinger FM. Malignant fibrous histiocytoma—an analysis of 200 cases. *Cancer* 1978;41:2250-66.
- 3 Enzinger FM, Weiss SW. Malignant fibrohistiocytic tumors. In: *Soft tissue tumors*. St Louis: CV Mosby, 1983:166-98.
- 4 Mills SA, Breyer RH, Johnston FR, *et al*. Malignant fibrous histiocytoma of the mediastinum and lung—a report of three cases. *J Thorac Cardiovasc Surg* 1982;84:367-72.
- 5 Chen W, Chan CW, Mok CK. Malignant fibrous histiocytoma of the mediastinum. *Cancer* 1982;50:797-800.
- 6 Stark P, Guthrie AM, Weitzner S, Walker WE. Malignant fibrous histiocytoma of the mediastinum presenting as a retrosternal mass. *Fortschr Röntgenstr* 1983;139:327-9.