

Lymphangioma of the middle mediastinum as an incidental finding on a chest radiograph

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Case report

A 39-year-old black male (JB) was admitted to The University of Chicago Hospitals and Clinics with a 10-day history of retrosternal pain with radiation to the left arm, precipitated by exercise. Physical examination was negative. The ECG showed ischaemic change. A chest radiograph showed a homogeneous water-density mass in the right paratracheal area on the frontal projection. The lateral projection showed the mass to lie in the middle mediastinum (fig 1). Tomography showed it to be lobulated, of homogeneous water density, situated in the right paratracheal region with slight extrinsic compression of the trachea (fig 2). Bronchoscopy, ventilation/perfusion lung scan, and gallium scan were negative. Mediastinoscopy revealed a cystic structure in the right paratracheal area. The cyst ruptured and approximately 100 ml of chylous fluid was aspirated. Cytology and culture of the fluid were negative. The cyst wall and several lymph nodes were sent for histology. The pathological diagnosis

was cystic hygroma (fig 3). Eighteen months later the patient was well and free from symptoms.

Discussion

Lymphangioma is a rare condition which is characterised pathologically by cystic spaces lined by endothelium, containing clear fluid and with aggregations of lymphocytes.^{1 2} It is classified on the basis of the size of the cystic spaces into (a) simple lymphangioma, (b) cavernous lymphangioma, (c) cystic hygroma.³

The aetiology of this condition is unknown. Two commonly proposed theories are that it arises from an aberrant rest of lymphoid tissue which fails to develop a vascular communication,⁴ and that it represents a tumorous growth of mesenchymal tissue.⁵ Ringertz and Lidhold⁶ reviewed the literature and found lymphangiomas to have an incidence of 1·6-

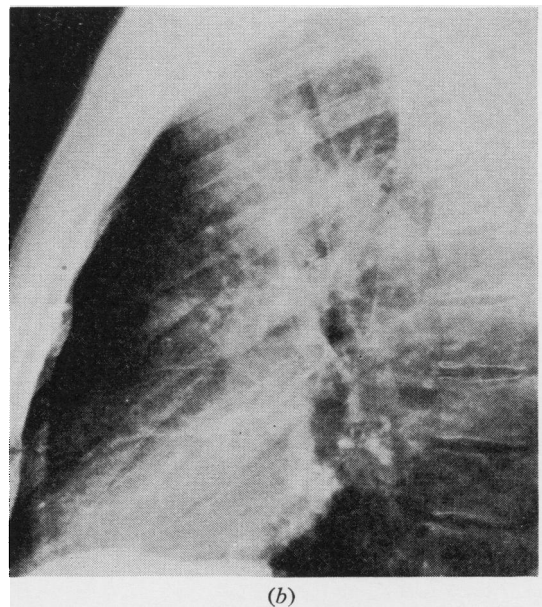
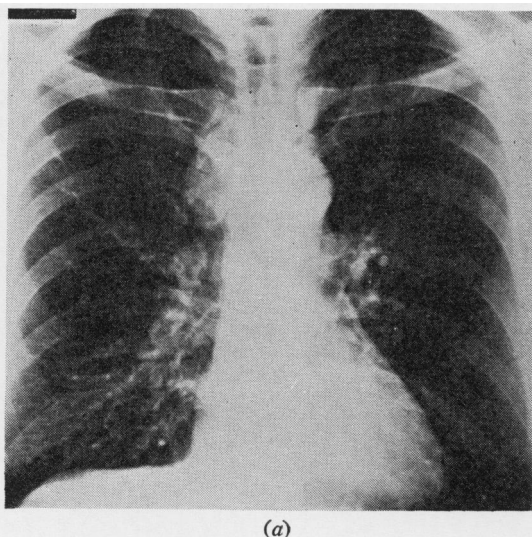


Fig 1 (a) Homogeneous, well-circumscribed water density mass in right paratracheal area. (b) Lateral view shows the mass to be superimposed upon middle mediastinal structures.

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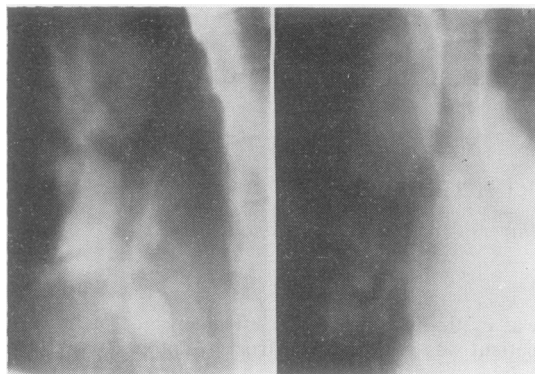


Fig 2 Tomography in RPO and AP projections shows the intimate relationship of the mass to the trachea and right main bronchus. The lateral margin of the tumour is smooth and slightly lobulated.

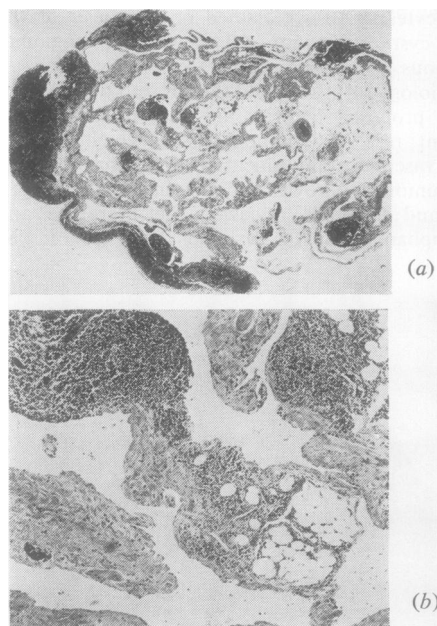


Fig 3 (a) Low power photomicrograph showing the honeycomb-like pattern of cysts with lymphoid tissue that tends to be localised peripherally (H and E, original magnification $\times 13.5$). (b) Higher power view close to the centre of (a) showing the walls to consist principally of fibrous tissue in which lymphoid aggregates and occasional lipocytes can also be seen, while the cysts are lined by flat endothelial cells (H and E, original magnification $\times 80$).

4.5% of primary mediastinal tumours and cysts. They excluded reticulosis, lymphoma, metastasis, aneurysms, oesophageal tumours, bronchogenic carcinoma, intra-thoracic goitre, sarcoidosis, parasitic cysts, and tuberculoma from consideration in their series.

Lymphangiomas have been described in the superior mediastinum,⁷ antero-inferior mediastinum, and less commonly in the posterior mediastinum.⁸ This is the first case to our knowledge of a lymphangioma arising in the middle mediastinum. The diagnosis was not considered before operation in this case. The differential diagnosis in this patient included primary and metastatic malignancy, leukaemia, lymphoma, and tuberculoma. Mediastinoscopy was undertaken to achieve a histological diagnosis. Had the diagnosis been suspected, thoracotomy with complete removal would have been a more appropriate course of action as, if a lymphangioma is not completely removed, it has a tendency to recur.⁹

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