SCLEROSING HAEMANGIOMA OF THE LUNG

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ABSTRACT

An asymptomatic middle-aged woman was investigated for a lung nodule detected on routine chest X-ray. Percutaneous needle biopsy revealed it to be a sclerosing haemangioma which was subsequently removed by a left lower lobectomy. The literature on this uncommon benign lesion is reviewed.

Keywords: *Sclerosing haemangioma, lung, asymptomatic, woman.*

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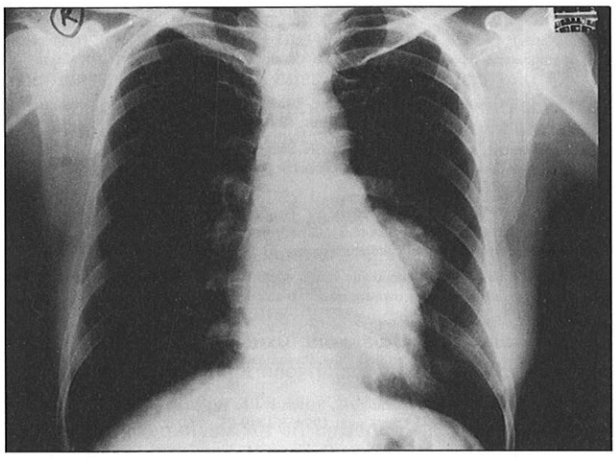
INTRODUCTION

Sclerosing haemangioma of the lung is an uncommon benign lesion which was first described by Liebow and Hubbell in 1956[1]. It presents predominantly in women as an asymptomatic nodule on chest X-ray[1-4]. The microscopic features are variable and include solid, papillary, angiomatoid, and sclerotic areas; one of these may predominate. Despite the term sclerosing "haemangioma" and "angiomatoid" variant, electron microscopic and immunohistochemical studies support an origin from type 2 pneumocytes rather than endothelial cells[5].

CASE REPORT

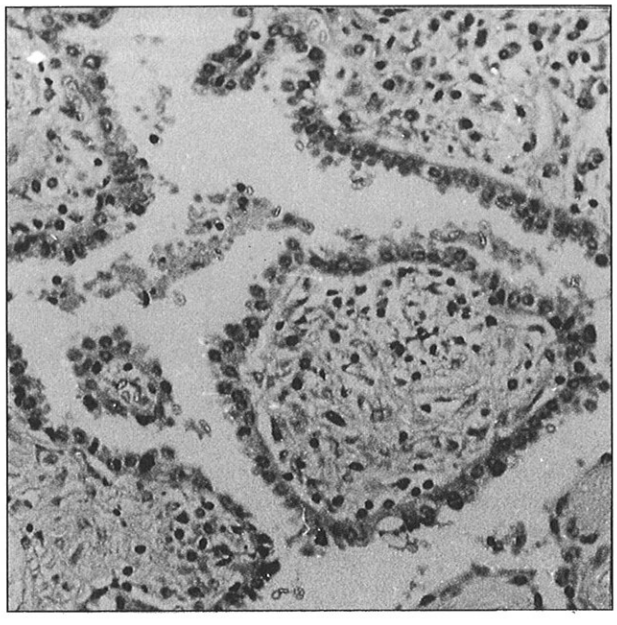
A 43-year-old asymptomatic Chinese woman was referred because a routine chest X-ray showed a well-defined round opacity in the lower lobe of her left lung (Fig 1). She was a non-smoker and did not have any chest X-ray taken previously. There was no finger clubbing and chest examination findings were unremarkable. The rest of the physical examination was normal. Investigations revealed a haemoglobin of 123 g/l, total white cell count 5.6 x 10^9/l and ESR 61 mm/hr. Fibreoptic bronchoscopy showed narrowing of the opening of the apical segmental bronchus of the left lower lobe due to mucosal swelling. Bronchial brushing and lavage were negative for malignant cells and cryptococcus. Percutaneous transthoracic Trucut needle biopsy of the left lower lobe mass under fluoroscopic guidance revealed histological changes consistent with sclerosing haemangioma. Her lung function test showed a forced vital capacity of 1.71*l* (69% predicted), forced expiratory volume in the first second 1.61*l* (77% predicted), residual volume 1.28*l* (102% predicted) and total lung capacity 2.88*l* (74% predicted).

Fig 1 - Chest X-ray showing a well-defined round opacity in the lower lobe of the left lung.



At thoracotomy, a large well-defined spherical, yellowish and pinkish spongy tumour measuring 6 cm in the greatest diameter, and extending to the surface of the lung but limited to the left lower lobe was found. The hilar lymph nodes were not macroscopically involved. The tumour was resected together with the left lower lobe. Histopathological examination revealed that the tumour had well-defined borders and was composed of a proliferation of polygonal epithelial cells which were arranged in solid sheets in some areas and lining cystic spaces and clefts in other areas (Fig 2). Some papillary structures were also found. Large areas of haemorrhage, sclerosis, calcification and cholesterol clefts were seen. The histological diagnosis was sclerosing haemangioma of the lung.

Fig 2 - Blood-filled spaces lined by benign polygonal cells which are also found in the stroma. (H&E x 50).



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DISCUSSION

Sclerosing haemangioma of the lung was first described by Liebow and Hubbell in 1956[1] and there are now several published series[4-6]. There is a striking preponderance in women[1-4]. Our patient, a female, illustrates the typical case of the condition as she was asymptomatic and therefore is in keeping with the observation that the lesion is clinically silent in most patients. Symptoms when present, include cough, haemoptysis and chest pain if the growth is near the pleura[1,4]. Radiologically, this benign tumour appears as a peripheral round shadow or as a coin lesion measuring a few centimetres in diameter in either lung field[1,3,5]. Although most of the cases present with solitary lesions, multiple tumours have been reported[6]. The consistency of the lesion is soft or firm and the edge is sharply demarcated by a pseudocapsule of compressed lung. The cut surface varies from grey to red, or reddish-brown, and may be partly calcified or necrotic.

Spencer and Nambu[5] pointed out that light microscopy may show one or more of a variety of patterns: papillary, solid, angiomatoid or sclerotic. Evidence from electron microscopy and immunohistochemical examinations points to an origin from type 2 pneumocytes rather than endothelial cells. Chan et al[4] have suggested that "benign sclerosing pneumocytoma" would be a more appropriate name for the tumour. Many authors regard sclerosing haemangiomas as hamartomas formed from distal lung structures[5,7,8]. Because of the angiomatous changes seen in some tumours, Liebow and Hubbell[1] thought they were vascular tumours and hence gave them the name by which they are still best known. Liebow and Hubbell[1] mentioned that post-inflammatory pseudotumours differed from sclerosing haemangiomas principally because no clearly haemangiomatous components were found in them, and plasma cells and other leucocytes were predominant.

Arean and Wheat[9] grouped plasma cell tumours, post-inflammatory pseudotumours, xanthomas, and even haemangiopericytomas all together into the single entity of sclerosing haemangioma.

It is unfortunate that the multiplicity of names given to both plasma cell granuloma of the lung and to pulmonary sclerosing haemangiomas has led to confusion of the two. Plasma cell granuloma has been inappropriately included under the term "sclerosing haemangioma" and the reverse has also occurred though both varieties of lung tumours are of a totally different nature and origin.

Sclerosing haemangioma of the lung should be in the list of differential diagnosis for a solitary coin lesion on the chest X-ray. It can sometimes be mistaken for lung cancer or a tuberculoma[4,6]. Even though it is a benign lesion, biopsy and surgical removal with histological confirmation is the only way to be certain of the diagnosis.

References

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