Calcified Paramediastinal Mass

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This 30-year-old postpartum white woman had chorioretinitis, intermittent ankle and facial edema, night sweats, arthralgia, myalgia and weakness, and an iron deficiency anemia.** The chest lesion had almost doubled in size in the past two months.

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**She was treated with prednisolone.
Diagnosis: Calcified Bronchogenic Cyst

The roentgenograms (Fig 1-3) revealed a lobulated mass in the anterior superior mediastinum. A collection of calcium at the inferior edge of the mass on the upright views appeared to shift in position on the recumbent tomogram.

The mass was surgically excised. It lay within the lung and consisted of two communicating 3.5 cm contiguous cavities containing abundant, dark, greenish-yellow, odorless fluid under pressure. There was no bronchial communication. Microscopic examination demonstrated a lining of bronchial epithelium and cartilaginous and chronic inflammatory changes within the wall. Culture of the cyst contents was negative for tubercle bacilli. Calcifications were palpated in the cyst wall, but none was recognized in the cyst fluid.

Bronchogenic cysts have occasionally been identified in the presternal soft tissues, thoracic inlet, pericardium, pancreas, and paraspinal area, but the great majority are either mediastinal or pulmonary. The mediastinal cyst usually lies adjacent to the carina, often with the larger portion extending posterior to the trachea.

Calcium has been recognized in bronchogenic cysts in the pericardium and diaphragm, and recently in the mediastinum, but not heretofore in the lung.

Other intrathoracic entities that may contain calcification include granuloma, hamartoma, thymoma, teratoma, thymic cyst, neurogenic tumor, and, rarely, hemangioma and lymphangioma. Some of these may be distinguished by their location.

The congenital origin of mediastinal bronchogenic cyst is not contested; it is believed to be derived from the primitive foregut, in a manner similar to the development of enterogenous cyst. The origin of the pulmonary type is less settled. Three mechanisms have been considered. A process identical to the congenital formation of mediastinal bronchogenic cyst is favored. Another theory envisions a failure of canalization of the primitive lung tissue. An inflammatory cause, involving a check-valve mechanism within a bronchus, has also been proposed.

Most bronchogenic cysts are unilocular, round or oval, and contain either clear serous or mucoid material. If there has been hemorrhage, the fluid contents will be dark. An occasional cyst may contain air or an air-fluid level if there is bronchial communication. Milk of calcium may also be present and is strongly suggested in our case by the shifting position of the calcium. Certainly shifting calcium within any lesion always indicates fluid content. Histologic examination shows the characteristic of ciliated epithelial lining with various tissue elements within the wall of a bronchogenic cyst.

Malignant degeneration is rare. Increase in size of a bronchogenic cyst must, of course, be investigated, although hemorrhage is the most likely cause. However, there was no explanation for the rapid increase in the size of the cyst in this patient.

REFERENCES


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