Primary Leiomyosarcoma of the Lung*

Case Report

ALEX ROSEN, M.D., ALEXANDER H. CHRISTENSEN, M.D.
AND ROBERT W. JAMPLIS, M.D., F.C.C.P.
San Jose, California

Primary leiomyosarcoma of the lung is a rare tumor. Shaw1 reported two cases and in a review of the literature up to 1961, found a total of 26 other cases of this tumor.

The following is a case report of a primary leiomyosarcoma of the lung which was associated with chronic granulomatous pneumonitis, probably tuberculous. None of the other reported cases was associated with concurrent tuberculous infection and we attach no significance to the possible combination here of these two conditions.

Case Report

A 55-year-old man was seen in the Chest Clinic of the Santa Clara County Hospital complaining of chest pain, increasing fatigue, and cough for about two years. One week before admission, he noticed bright red blood in his sputum. Physical examination revealed a slight decrease in breath sounds over the right upper lobe. There was no palpable lymph node in the neck. Pulmonary function studies were normal.

Roentgenographic examination revealed an oval density around the right upper lobe bronchus with a diminished size of the right upper lobe. The entire right lung had a slightly thickened pleura with blunting of the right costophrenic sinus and elevation of the right leaf of the diaphragm. Fibrocalcific nodules were present in the periphery of both upper lobes (Figs. 1 and 2). A barium swallow demonstrated no enlargement of the subcarinal nodes.

Sputum was obtained for smear and culture and he was started on antituberculosis drugs. Bronchoscopy showed exudate and hyperemia about the orifice of the right upper lobe bronchus. A biopsy specimen taken from this area revealed a spindle cell sarcoma. Right thoracotomy was performed. There were dense adhesions over the entire lung from old inflammatory disease. A hard, 3 cm. mass was palpated in the right upper lobe near the hilum. Pneumonectomy was performed because of the proximity of the tumor to the right main bronchus. He had an excellent postoperative course and was continued on antituberculosis drugs.

*From the Department of Surgery, Santa Clara County Hospital.

![Fig. 1](image1.png)  
**FIG. 1:** A large irregular mass is present in the right upper lobe. No calcification is present. The hili appear normal. A small inflammatory lesion is present in the left upper lobe.  

![Fig. 2](image2.png)  
**FIG. 2:** Lordotic view of the described right upper lobe lesion.
**Pathologic Findings:** The right upper lobe bronchus, 2.5 cm. from the proximal resection line, was partially occluded by a firm, gray-white tumor mass measuring 3 x 2 cm. Tumor tissue appeared to encircle the bronchial wall, stenosing the lumen. The remainder of the lung revealed numerous small cavitory lesions ranging in size from 0.1 to 1.0 cm. in diameter and filled with yellow caseating material. Microscopically, the tumor appeared to rise from the bronchial wall and infiltrated the surrounding pulmonary parenchyma. It was composed of long spindle and strap-shaped cells containing elongated nuclei with blunted ends, arranged in interlacing bundles. Trichrome stains revealed the tumor cells to be of muscle origin. Tumor cells in one area extended into an adjacent lymph node. Sections of the remainder of the lung revealed numerous chronic granulomata characterized by central areas of caseation necrosis and surrounded by epithelial cells, lymphocytes, and Langhans giant cells (Fig. 3). Sections of the hilar lymph nodes showed no evidence of metastatic tumor. The pathologic diagnosis was primary bronchogenic leiomyosarcoma of the right upper lobe and chronic granulomatous pneumonitis, probably tuberculous.

**Discussion**

In a review of the other reported cases, the average age of patients was 44 years with the range extending from four to 83 years, and distribution was equal between the sexes. There was no definite pattern of origin as they arose in all lobes of the lung, while two cases took origin from the trachea. One half of the cases showed distinct bronchial sites of origin.

Symptoms were similar to those reported in bronchogenic carcinoma—cough, dyspnea, chest pain, weight loss, and hemoptysis. Generalized metastasis was noted in six cases, and five cases were locally invasive. Lymph node invasion was found in only one case and was associated with generalized metastasis.

Roentgenograms will frequently show a mass with rounded, fairly sharp edges, but the diagnosis cannot be made by x-ray alone. Bronchoscopy is helpful, but only
50 per cent of the tumors were intrabronchial. Cytologic studies of bronchial washings are not rewarding because the tumor does not tend to exfoliate.

The treatment of choice is surgical excision. Lobectomy is considered sufficient, as these tumors tend to remain localized and do not spread by lymph channels. The prognosis for long-term survival is good in patients in whom the primary tumor can be entirely resected.

**REFERENCE**


For reprints, please write Dr. Rosen, 53 Main Street, Sagville, New Jersey.

---

**MYOCARDIAL SARCOIDOSIS SIMULATING HEALED MYOCARDIAL INFARCTION**

A case of a 44-year-old Negro woman is presented, believed to have died as the result of myocardial sarcoidosis. The patient exhibited three unusual manifestations. The electrocardiogram was compatible with a well-established and healed anterolateral myocardial infarction, the patient developed congestive heart failure, and the degree of replacement fibrosis and thinning of the left ventricular wall was sufficiently extensive to produce an aneurysm of the anterolateral portion of that chamber without microscopic evidence of a pre-existing inflammatory process.


---

**MASSIVE HEMORRHAGE CONTROLLED BY CIRCULATORY OCCLUSION UNDER NORMOTHERMIA**

A case of constrictive pericarditis in a 45-year-old man is reported. Pericardiectomy was performed through right thoracotomy. Although care was taken to avoid laceration of the heart wall, the right atrium was injured and massive bleeding occurred. Under normothermia, circulatory occlusion for nine minutes by cross-clamping of the vena cavae was attempted and the laceration was closed satisfactorily. Following release of the clamping, no clinical signs and symptoms of suspected disturbances of the brain, heart, liver, kidney and other organs were recognized. The vena cava might have been occluded incompletely and a mechanism similar to the so-called "azygos flow factor" might have remained. The authors feel their occlusive method is useful in permitting accurate suture in cases of massive hemorrhage from the atrium and vena cavae.


---

**PROLONGED USE OF CONTROLLED RESPIRATION AFTER RESECTION**

Application of active positive-negative pressure controlled respiration was very effective for patients who fell into ventilatory disturbance with complication after pneumonectomy, and for patients who had pulmonary hypofunction in the contralateral lung before lobectomy and fell into ventilatory disturbance with complication after lobectomy.


---

**CARDITIS DURING SECOND ATTACKS OF RHEUMATIC FEVER**

Although the majority of rheumatic patients tend to follow a mimetic pattern in each recurrence, findings indicate that in a substantial proportion of cases the manifestations in subsequent attacks may differ from those observed in the first attack. At the present time, a somewhat guarded prognosis should be given to children who had no clinical evidence of carditis in the first attack. Prophylactic measures for the prevention of recurrences should be continued in such cases until adulthood when the incidence of streptococcal infestations usually declines.