Bronchogenic Leiomyosarcoma
Case Report with Necropsy Findings

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Leiomyosarcomas generally arise from smooth muscle of the uterus or gastrointestinal tract. Intrapulmonary tumors of smooth muscle origin are rare. There have been few case reports in the past of sarcomas arising from the bronchus, but cases of leiomyosarcoma are even more infrequent. In a recent article, four cases were presented with clinical data and pathologic findings. Most of the cases reported have been based upon conclusions reached from examination of surgical specimens. Case reports based upon complete necropsies are infrequent.

Case Report
A. H., a 79 year old white man was admitted to the Long Beach Veteran’s Administration Hospital with a three day history of sudden onset of dyspnea associated with cough, productive of frothy white sputum and some pink streaking. For the past two months he had a cough with mucoid sputum and occasional blood streaking. In the past he was hospitalized at another institution for repair of a right inguinal hernia.

Physical Examination: Temperature 99° F., pulse 130, blood pressure 186/92. On admission there was cyanosis with distention of cervical veins. Breath sounds were diminished over both lung fields and dullness over the right upper anterior chest was present. Cardiomegaly with three plus pitting edema of the extremities was demonstrated.

Laboratory: White blood cell count 10,200; erythrocyte sedimentation rate 37 mm./hr. X-ray film of the chest (Figure 1) revealed generalized patchy infiltrate throughout both lung fields with a dense 9 x 10 cm. opacity in the region of the right hilum. Also, cardiac enlargement was demonstrated. Emergency measures for pulmonary edema consisted of oxygen under pressure, bed rest, fluids and digitalization with digoxin, aminophyllin suppositories, mercurial diuretics, and sodium phenobarbital. Penicillin and streptomycin were also started. Clinical improvement was prompt with relief of cyanosis and dyspnea. The clinical impressions were bronchogenic carcinoma and hypertensive cardiovascular disease. A second episode of pulmonary edema occurred that was controlled with morphine, atropine, aminophyllin and positive pressure oxygen. He continued to deteriorate and expired 16 days after admission to the hospital.

At necropsy: The right pulmonary apex was firmly adherent to the chest wall superiorly, laterally and posteriorly. The right lung weighed 1600; the left 950 grams. At the orifice of the right upper lobe bronchus, approximately 2 cm. from its origin, there was obstruction and replacement of the bronchus and adjacent pulmonary tissue.

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References
by a tumor which measured 10 cm. in diameter. It was partially necrotic, whitish and fleshy. The pulmonary parenchyma of both the right and left lung was diffusely involved with circumscribed, whitish tumor nodules. There were similar nodules located subpleurally. The lymph nodes in the pulmonary hilar region were grossly replaced by neoplastic tissue similar to that observed in the lungs.

In the parenchyma of the right lobe of the liver there was a 1 cm. well circumscribed

FIGURE 1: Posterior-anterior projection of chest at time of admission.

FIGURE 2A

FIGURE 2B

Figure 2A: Low power view of the tumor (H & E stain, 100X).—Figure 2B: High power view of tumor which has destroyed blood vessel wall (H & E stain, 700X).
nodule of tumor tissue which grossly compressed the adjacent normal appearing liver substance.

**Gross Pathological Diagnoses:** 1. Bronchogenic carcinoma, right upper lobe bronchus with metastases to both lungs, hilar lymph nodes, and nodule in the liver. 2. Generalized arteriosclerosis. 3. Articular sclerosis, kidneys. 4. Nodular hyperplasia, prostate. 5. Cholelithiasis.

With hematoxylin and eosin stain (Figure 2), the tumor in most areas consisted of interlacing bands of spindle cells with elongated blunted nuclei, and an occasional stellate stromal cell. However, some of the cells suggested a pleomorphic cell carcinoma. The Masson’s trichrome and van Gieson’s stains revealed little collagen, and the cells were staining in conformity with muscle cell origin. Many sections were studied after phosphotungstic acid hematoxylin stains, and showed absence of striations in the spindle shaped cells.

**Microscopic Diagnosis:** Myosarcoma (probable leiomyosarcoma), right upper lobe bronchus.

**DISCUSSION**

The rarity of intrapulmonary leiomyosarcomas is evidenced by only 10 being reported in the period 1938-1954. The youngest was a four year old boy, the oldest a 67 year old woman. The tumor has been found to be more frequent in males, 9:4. Location of these intrabronchial tumors were as follows: right upper lobe four; right middle lobe two; right main stem bronchus one; left upper lobe two; left lower lobe three; left main stem bronchus one. Three cases were autopsied. In two the tumor was confined to the thoracic cavity while the other had widespread metastases.

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**REFERENCES**


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**Malignant Mesothelioma of the Pleura**

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This tumor was described by Wagner in 1870. Biggs reported the first case in North American literature. In general there is agreement...