Inflammatory Fibrous Histiocytoma of the Bronchus*

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A 33-year-old woman underwent lobectomy of the middle and lower lobes of the right lung because of inflammatory fibrous histiocytoma of the bronchus. To our knowledge, this is the first description of such a tumor originating in the bronchus.

Inflammatory fibrous histiocytoma is an exceedingly rare neoplasm. Seven such tumors have been described recently by Kyriakos and Kempson.1 To our knowledge, a tumor of this type arising in the lung or bronchus has not been described previously.

**Case Report**

A 33-year-old woman was hospitalized because of a tumor obstructing the right lower lobe bronchi. Lobectomy of the lower and middle lobes of the right lung was performed. The postoperative course was uneventful.

**Pathologic Findings**

The tumor was in part endobronchial and polypoid, but in the hilar region the tumor infiltrated the parenchyma of the lower lobe. Histologically, the tumor was composed of large cells, mostly with indistinct cellular borders. The cytoplasm was coarsely granular, and many of the cells contained Sudan III-positive material. The PAS reaction was negative. The nuclei were of different sizes, some very large and oval shaped, with irregular masses of chromatin and prominent nucleoli. Some very large hyperchromatic and plump nuclei were present (Fig 1). Mitotic figures were rarely seen.

In some areas the tumor was composed of elongated cells

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**Figure 1. Large cells, some with indistinct cellular borders. At center of field, cell with large nucleus and coarse chromatin is seen. Note dense granulocytic infiltration (hematoxylin-eosin, original magnification × 400).

which showed a storiform pattern and a dense network of reticulum. A prominent feature was infiltration of the entire tumor by polymorphonuclear leukocytes. A second important feature was enlarged congested capillaries with prominent endothelial cells. There were no areas of necrosis (Fig 2).

The mass of the tumor infiltrated the pulmonary parenchyma, but in many areas at the periphery of the tumor, there was dense fibrous tissue, and outside, in the atelectatic parts of the lung, no inflammatory changes were found. In two small lymph nodes from the hilum, dilated venules with prominent endothelial cells were present.

**Discussion**

The histologic picture was that of inflammatory fibrous histiocytoma, defined by Kyriakos and Kempson1 as a specific diagnostic subgroup of fibrous histiocytoma. This subgroup is characterized by massive granulocytic infiltration without necrosis. Kyriakos and Kempson1 emphasized the aggressive nature of this neoplasm. Histologically similar neoplasms of the lungs and bronchi have been described under various names, such as histiocytoma, fibroxanthoma, and postinflammatory pneu-
dotumor. They were grouped together and named "plasma cell granulomas" by Bahadory and Liebow. A pulmonary tumor with somewhat similar morphologic features was recently described by Vigueria et al and was termed "fibrous histiocytoma," but also in this case the granulocytic infiltration was not a prominent feature. To our knowledge, the patient described by us is the first reported case of bronchial inflammatory fibrous histiocytoma.

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REFERENCES

Inflammatory Changes Related to Active Tuberculosis
Confusion with Oat Cell Carcinoma of the Lung on Cytology Specimens
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One case of small cell lung carcinoma diagnosed on cytology specimens could not be confirmed histologically. We feel this likely represents cytopathologic changes induced in response to the patient's active tuberculosis. To avoid aggressive systemic therapy in such cases, patients with localized lesions should have further diagnostic procedures to confirm the cytologic diagnosis histologically.

Small cell undifferentiated carcinoma of the lung is an aggressive tumor which is usually widely disseminated at the time of initial presentation, and nearly all patients die of metastatic disease. Surgery with curative intent is not indicated in this disease since there is no benefit in either survival or palliation, and the survival mortality rate is high. Therefore, once the diagnosis of small cell carcinoma is established, the patient is a candidate for aggressive chemotherapy, possibly with radiotherapy.

With the advent of bronchofiberoscopy and preceding advances in cytopathologic techniques, the diagnosis of oat cell carcinoma can be made from bronchoscopic biopsies, brush biopsies or washings. The cytoligic diagnosis of lung cancer can be made in a very high percentage of cases and the specificity for cytopathologic diagnosis of oat cell carcinoma is generally excellent. Thus, it is conceivable that some patients may come to intensive chemotherapy and radiotherapy based on cytoligic diagnosis alone. We have recently encountered one case of presumed small cell lung carcinoma diagnosed on cytology specimens but seen in association with tuberculosis. Histologic diagnosis failed to confirm the presence of tumor. We feel that this likely represents cytopathologic changes induced in response to the patient's infection.

CASE REPORT

This 42-year-old man was in good health until he developed left shoulder pain. A roentgenogram of the shoulder prior to admission revealed a left upper lobe infiltrate, and a PPD skin test was positive. Examination revealed a 2 cm firm node in the left supraclavicular fossa and a 2 cm subcutaneous nodule on the trunk. Several daily examinations of sputum were negative for acid-fast bacilli (AFB) as were cytoligic tests. Bronchoscopic revealed diffuse bronchitis, and two bronchial washings revealed AFB and oat cell carcinoma by cytology (Fig 1). The patient was started on isoniazid and ethambutol. Whole lung tomograms showed an irregular mass with cavity formation in the left apex. Hematologic parameters, results of blood serum chemistries, pulmonary function tests and liver-spleen scan were normal. Bilateral iliac crest bone marrow biopsies were negative for tumor. Biopsy of the supraclavicular node showed non-caseating granulomas with negative special stains. Biopsy of the subcutaneous nodule revealed an epidermal inclusion cyst. Bone scan showed increased uptake in the left temporoparietal area. Since the patient gave a history of head trauma with subsequent seizures, a biopsy of the skull was performed and showed only callus.

Thoracotomy was performed, and the anterior and apical-posterior segments of the left upper lobe were resected. The mediastinal nodes showed evidence of caseous necrosis and sections of the left upper lobe showed a central cavity with multiple caseating granulomas. Special stains revealed AFB. Cultures revealed Mycobacterium tuberculosis. There was no evidence of carcinoma despite repeated sectioning. The patient's postoperative course was complicated by a peripheral bronchopleural fistula which was treated successfully with tube drainage. Subsequently, the patient has done well on antituberculosis chemotherapy. He has had four bronchosopies, multiple cytoligic examinations of sputa, and sequential chest roentgenograms with tomography, all of which have failed to disclose any evidence of tumor over the 18 months of follow-up.

DISCUSSION

The specific histologic diagnosis of small cell lung cancer is