Granular Cell Myoblastoma of the Bronchus
in a Child: A Case Report

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ABSTRACT: Granular cell myoblastoma of the right main bronchus in a 5-year-old girl is reported. The tumor extended to the lower trachea from the right main bronchus which was occluded completely by the tumor. The diagnosis was established histologically by obtaining bronchoscopic biopsy specimen. Right pneumonectomy was carried out to control pulmonary suppuration caused by the tumor obstruction of the bronchus. External radiotherapy and interstitial brachytherapy were successful to control the growth of the residual tumor. She has been free from symptoms for about 12 years after the treatment.

KEY WORDS: granular cell myoblastoma, bronchial origin, thoracotomy, radiotherapy

INTRODUCTION

Granular cell myoblastoma is controversial regarding the histogenesis. It is presently considered to be myogenic, histiogenic, fibroblastic or neurogenic. Abrikossoff was the first to report the tumors originating from the tongue, muscle of the lower extremities and the lips, and a number of cases have been described. Most common sites of the tumor are the tongue, the skin, the breast, and the subcutaneous tissue. Forty-eight cases of bronchial granular cell myoblastoma have been reported in the English literature since the first report by Kramer.

This report concerns a five-year and 10-month-old girl with persistent pulmonary infection caused by a tumor occluding the right main bronchus and extending to the carina and the lower trachea. Bronchoscopic biopsy established the diagnosis. The tumor was unresectable but right pneumonectomy was carried out because of persistent and uncontrollable lung infection due to the obstruction of the right main bronchus. She is the youngest and the 49th patient with bronchial granular cell myoblastoma reported in the English literature.

CASE REPORT

A five-year 10-month-old girl was healthy until October, 1967 when she developed persistent cough and slight fever. Chest x-rays were taken and anti-tuberculous drugs were given following a tentative diagnosis of tuberculous pleurisy. As the roentgenographic findings and her symptoms did not improve after five months of chemotherapy, she was referred to our clinic. Physical examination on admission showed a normally developed girl for her age. Her thorax was symmetrical but the movement was limited at respiration. Her entire right hemithorax was dull on percussion. Wheezing, stridor and hoarseness were absent. Chest roentgenography revealed an atelectatic shadow of the right lung and a
marked tracheal deviation to the right (Fig. 1). The hematological data were normal except for a slight increase in WBC (11,800). Urinalysis, liver function study and serum electrolyte analyses were normal. Electrocardiographic findings were sinus tachycardia. Skin test for tuberculosis was negative.

Bronchoscopy using general anesthesia detected a tumor occluding completely the right main bronchus and extending to the carina and the lower trachea. The tumor was yellowish white, and the surface was finely granulated with dilated capillaries. Bronchoscopic biopsy was of diagnostic value and the histological diagnosis was granular cell myoblastoma of the bronchus (Figs. 2 and 3).

Surgical treatment was attempted to control the persistent lung infection in May, 1968. Right thoracotomy revealed thickening of the entire visceral pleura and some pleural effusion. The entire lung appeared heavily infiltrated and indurated. Multiple abscesses were observed in the lung parenchyma. Lymph nodal swelling in subcarinal and tracheobronchial regions was apparent. Transection of the azygos vein facilitated exposure of the tumor located near the carina measuring 1.7 × 1.8 × 1.5 cm. Right pneumonectomy was considered to be the best surgery for the initial purpose but the majority of the tumor was left unresected in the primary site. Silver marking clips were placed to surround the tumor as an aid of determination of the postoperative radiotherapy field.

The tumor consisted of large, polygonal and spindle shaped cells with acidophilic cytoplasm and fine granules. The small hyperchromatic nuclei were round to oval in shape and located concentrically. Mitotic figures were not observed. The surface of the tumor was covered with bronchial epithelium with moderate squamous metaplasia. Histological diagnosis of the tumor was granular cell myoblastoma.