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SEMINAR ON

PATHOLOGY OF THE THYMUS

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CLINICAL HISTORIES

CASE 1 (Dr. Levine; #77-11643). This 60-year-old man had a chest radiograph following a brief history of vague, non-specific right anterior chest pain. There was no history of myasthenia gravis and physical examination showed no lymphadenopathy or splenomegaly. A partially calcified, 6 cm. right anterior mediastinal lesion was seen on x-ray and a tumor was removed via a median sternotomy on 9/16/77. The lesion was firm and adherent to the pericardium and pleura but not invasive into these or other mediastinal structures.

Gross examination showed a 65 gram, bosselated mass measuring 6 x 6 x 3.5 cm. Sections showed a variegated pattern including yellow and brown areas as well as foci of gray tissue interpreted as non-necrotic neoplasm. There has been no recurrence to date.

CASE 2 (Dr. Levine; #PAVA-S-78-1469). A 49-year-old man was admitted in June 1978 for repair of a right inguinal hernia. Preoperative evaluation revealed a firm nodule in the right lobe of the thyroid. This was cold on scan and thyroid function studies were within normal limits. In addition, a chest radiograph showed a lesion in the anterior mediastinum. Retrospective questioning of the patient indicated that this had been asymptomatic. A complete hematologic study showed no abnormality and there was no history of myasthenia gravis. On 6/5/78 a right thyroid lobectomy was performed and a 7 cm. mass was completely removed from the region of the thymus on 6/14/78. The tumor had a bosselated outer surface and measured 7 cm. in maximum diameter.

Cut surface showed numerous nodules of gray-tan tissue subdivided by fibrous bands.

CASE 3 (Dr. Rosai; NYH 64-4694). A 69-year-old woman with rheumatoid arthritis was found to have an anterior mediastinal mass on routine x-ray. This was a 13 x 11 x 8 cm. tumor invading pleura. The patient died in the hospital 12 days after operation and no residual tumor was identified.

CASE 4 (Dr. Levine; #77-6473). This 50-year-old male had an asymptomatic mass in the anterior mediastinum. A full hematologic evaluation was within normal limits and there was no lymphadenopathy or splenomegaly. At surgery a well encapsulated, 7 x 5 x 4 cm. mass was found in the anterior mediastinum. This was situated slightly to the right and below the base of the heart and although adherent to the parietal pleura on the right side, was not infiltrative. Complete removal was easily accomplished.

On section the tumor was homogeneous and pale gray with a "fish-flesh" cut surface.

CASE 5 (Dr. Rosai; #R77-759). A 52-year-old male had a 275 gm encapsulated mass removed from the anterior mediastinum. The cross section was quite firm and yellowish gray.

CASE 6 (Dr. Levine; #20109). The patient is a 10-year-old boy who was admitted in 1973 (then aged 6) with a cough of ten days' duration and mild dyspnea of five days' duration. A chest radiograph demonstrated an anterior mediastinal mass. Hematologic examination showed a hemoglobin of 13.5, a white blood count of 7,200 with 71% polymorphs, 16% lymphocytes, 13% monocytes and 191,000 platelets. Exploratory thoracotomy in February 1973 showed a mass in the region of the thymus. This was grossly malignant as judged by its invasiveness. Only partial excision was accomplished.

The specimen was a 195 gram, 12.8 x 11.2 x 3.4 cm., gray-tan, somewhat rubbery mass of tissue.

Postoperatively the patient was irradiated (4,000 Rads) and received a variety of chemotherapeutic agents including Vincristine, Prednisone, 6-mercaptopurine, Cytoxan and Methotrexate. He developed a series of infectious complications including pneumocystis, pneumonitis (July 1973), cytomegalic chorioretinitis (March 1975), herpes zoster of the scalp (October 1977), and presently he is without evidence of disease.

CASE 7 (Dr. Rosai; #UH74-4212): 13-year-old girl with retrosternal oppression. Chest x-rays showed a large multinodular mass in anterior superior mediastinum. There was no cervical lymphadenopathy. A thoracotomy was performed and a multi-nodular tumor was found in the thymic region. A partial resection was carried out followed by a course of radiation therapy.

CASE 8 (Dr. Levine; #77-7536). The patient is a 36-year-old man who first complained of dull pain radiating to the left arm and left upper chest in October 1978. After 24 hours the pain disappeared spontaneously. A chest radiograph at that time was interpreted as showing no abnormality. The pain recurred in January 1977 and was present once again in April 1977, at which time a chest radiograph showed an anterior mediastinal mass. The pain was sufficiently severe to awaken the patient at night. He experienced no cough, weight loss, sweating, dyspnea or pleuritic pain. Examination showed no clubbing or cyanosis. On the 12th of April 1977 a 105 gram lobular tumor with attached pulmonary tissue was removed from the anterior mediastinum.

On section it was gray-white and fleshy in consistency. The gross specimen measured 1 x 7.5 x 5.0 cm.

CASE 9 (Dr. Rosai; #R76-1291): 35-year-old male. In October 1975 a bronchial tumor was excised and diagnosed as carcinoid tumor. A year later a mediastinal mass measuring 6 x 3 x 3 cm. was found in the anterior superior mediastinum. Laboratory tests showed persistent elevation of serum calcium parathyroid hormone associated with decrease of phosphorus. The mediastinal mass was excised and the neck was exposed. 3 large parathyroid glands were found and 2 of them were excised. The Seminar slides are from the mediastinal tumor.

CASE 10 (Dr. Rosai; #R76-231): 19-year-old male with large tumor mass in anterior superior mediastinum without evidence of distant metastases. The tumor was excised. The weight was 400 gms. and the dimensions 12 x 8 x 6 cm. It was encapsulated and showed a solid cross section of grayish color and multiple areas of necrosis, hemorrhage and cystic degeneration. The consistency was soft.

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DIAGNOSES

CASE 1 (Dr. Levine) - "Classical" thymoma.

CASE 2 (Dr. Levine) - "Classical" thymoma.

CASE 3 (Dr. Rosai) - Malignant thymoma, with hemangiopericytomatous pattern.

CASE 4 (Dr. Levine) - "Lymphocyte-rich" thymoma.

CASE 5 (Dr. Rosai) - Malignant thymoma, lymphoepithelioma-like.

CASE 6 (Dr. Levine) - Convoluted lymphoblastic lymphoma.

CASE 7 (Dr. Rosai) - Hodgkin's disease, nodular sclerosis.

CASE 8 (Dr. Levine) - Sclerosing malignant mediastinal tumor (? histiocytic lymphoma)

CASE 9 (Dr. Rosai) - Thymic carcinoid.

CASE 10 (Dr. Rosai) - Yolk sac tumor.