were stained by the same antibody; they were mature eosinophils with segmented nuclei. In a bone marrow biopsy specimen from a patient with hyper eosinophilic syndrome, there were also many mature EG2-positive eosinophils.

These observations suggest that in asthma eosinophils have already been activated in the early immature stage in the bone marrow. This finding might be related to the pathogenesis of asthma.

**REFERENCES**


**Elevated Levels of Carcinoembryonic Antigen and Cancer Antigen 125 in a Thymic Cyst**

To the Editor:

An asymptomatic 75-year-old man visited our hospital after living with his tuberculosis-infected wife for 3 months. Physical exami-

nation disclosed enlargement of the thyroid gland on the right side only. Thyroid function was normal. Chest radiography revealed superior mediastinal widening. Computed tomography of the neck and chest revealed an anterior mediastinal cystic mass (4.8 cm in diameter) close to the ascending aorta and an enlarged thyroid gland with retrosternal extension on the right side. Ultrasonography-guided aspiration of the cystic mass produced 10 ml of yellowish serous fluid. Analysis of tumor markers in aspirated fluid revealed the following values: carcinoembryonic antigen (CEA), >100 ng/ml; cancer antigen 125 (CA-125), 50.29 U/ml; α-fetoprotein, 6.51 ng/ml. Analysis of a blood sample obtained simultaneously revealed the following values: CEA, 6.01 ng/ml; CA-125, 36.61 U/ml; α-fetoprotein, <5 ng/ml.

At surgery, a 5-cm cystic mass containing clear yellowish serous fluid and 70 g of thyroid gland were removed. Microscopic studies disclosed that the thymic cyst was lined with ciliated columnar epithelium, squamous epithelium, and fibrotic granulation tissue; thyroid tissue with nodularity created by islands of colloidal-acini; and islands of small hyperplastic acini separated by scarring.

Elevated levels of CEA and CA-125 have been found in various benign situations.\(^1\)\(^4\) There have been few reports of either marker in diseases of the thymus. As for thymic cyst, there has been only one case reported, by Mashimoto et al., in which an elevated CEA level was found in the cystic fluid without elevation in serum. With the use of immunohistochemical studies, the epithelium of thymic carcinoma and the Hassall's corpuscles of normal thymus tested positively for CEA, but not the epithelial cells of normal thymus and thymoma.\(^4\) In the case of thymic cyst, Mashimoto et al. found that both the epithelial cells lining a thymic cyst and the Hassall's corpuscles tested positively. In cell culture, Savino et al. found expressions of CEA by normal and neoplastic human thymic epithelium cells and high amounts of CEA in the culture supernatants. They considered CEA to be a marker of undifferentiation in thy mepithelial cells. However, in the case reported by Mashimoto et al. and in our case, pathologic examinations did not detect malignancy despite the elevation of CEA in cystic fluid.

Based on these findings, we believe that thymic cyst may represent limited dedifferentiation of thymic epithelium with active expression and secretion of CEA and CA-125, as found in our case. Whether CEA and CA-125 spill out or cause elevation of serum levels may depend on the intactness of the epithelial lining. We believe that high levels of CEA and CA-125 in the cystic fluid of mediastinal masses should not preclude diagnosis of a benign lesion.

**REFERENCES**


Reprint requests: Dr. Hua, VGH Chest Department, No. 201, Sec. 2, Shih-pai Road, Shih-pai, Taipei, Taiwan

**ELEVATED LEVELS OF CARCINOEMBRYONIC ANTIGEN AND CANCER ANTIGEN 125 IN A THYMIC CYST**

To the Editor:

An asymptomatic 75-year-old man visited our hospital after living with his tuberculosis-infected wife for 3 months. Physical exami-