Thymic carcinoma. A case report

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Case Report

General Surgery

OPEN ACCESS

Background: Thymic carcinomas are rare malignant tumors that develop in the prevascular (anterior) region of the mediastinum (1). As a result, patients often present with symptoms of mass effect in the prevascular region, bronchi and superior vena cava (SVC), which can cause dyspnea, chest pain, and SVC syndrome, among others (1). Is presented the case of a guatemalan male patient without referring pathological medical history, presenting a left cervical mass and cardiovascular symptoms in the physical examination, complementary studies were subsequently performed such as chest x-ray, contrast-enhanced thoracic computed tomography, and biopsy for definitive diagnosis.

Keywords: Thymic carcinoma.

Primary thymic carcinoma is only a small percentage of thymic epithelial cancer (3). Thymic carcinoma, which was identified by Shimosato et al. in 1977, represents 0.06% of thymic epithelial neoplasms (2). It is estimated that the incidence of this neoplasia in the United States ranges between 0.2 and 1.5% of the total, which is equivalent to 0.13 per 100 thousand cases and it predominates in men aged 70 years (2). Thymic carcinoma requires complete clinical and radiological correlations for its diagnosis, since its diagnostic characteristics are nonspecific (3).

Case report

Is presented the case of a 56-year-old Guatemalan patient with no personal pathological medical history reported. The physical examination revealed dysnea, tachycardia and history of chest pain, secondary to the presence of a left supraclavicular mass of two months of evolution, associated with bilateral cervical lymphadenopathy. A chest x-ray, was performed observing a marked widening of the anterior mediastinum secondary to the presence of a large mass. A contrast-enhanced thoracic tomography was performed, observing an amorphous mass, large in size, predominantly hyperdense, with extension to the thoracic operculum, the mass has approximate measurements of 16.3 cm in the transverse direction, 11.9 cm in the cephalocaudal direction and 11.5 cm in the anteroposterior direction and volume of 1166.6 cc. A biopsy was performed which demonstrates medium sized neoplastic cells with strong basophilic cytoplasm, with irregular and hyperchromatic enlarged nucleus, necrosis, and areas that showed mild basal cell morphology in relation to thymic carcinoma.

Discussion

Thymic carcinoma has been described in a variety of individuals from the youngest to the oldest, associated with certain autoimmune diseases or paraneoplastic syndromes (3). Patients with thymic carcinoma must have the same clinical and radiological characteristics such as dyspnea, dysphagia, chest pain, and superior vena cava syndrome (2). For the initial evaluation of thymic carcinoma, the primary imaging modality is computed tomography (CT) (1). Imaging evaluation should be prompted by high-risk factors such as local invasion and lymphadenopathy to detect extrathoracic systemic conditions (1). Patients with thymic carcinoma have a median overall survival of 5.6 to 8.4 years, with 5-year overall survival rates of 52 to 64% and disease-free survival rates of 41% (1).

Conclusion

Thymic carcinoma is a rare tumor which originates from epithelial cells of the thymic epithelium. This is a very aggressive tumor that unfortunately is diagnosed in advanced stages when there are already distant metastases that complicate its treatment and prognosis with a very limited survival. Complementary studies such as chest X-rays and chest computed tomography, clinical history and physical examination, as well as taking a biopsy are essential for the diagnosis.

Conflicts of interests

There was no conflict of interest during the study, and it was not funded by any organization.

From the Radiology Department, Hospital Regional de Occidente, Quetzaltenango, Guatemala. Received on July 2, 2024. Accepted on July 8, 2024. Published on July 11, 2024.

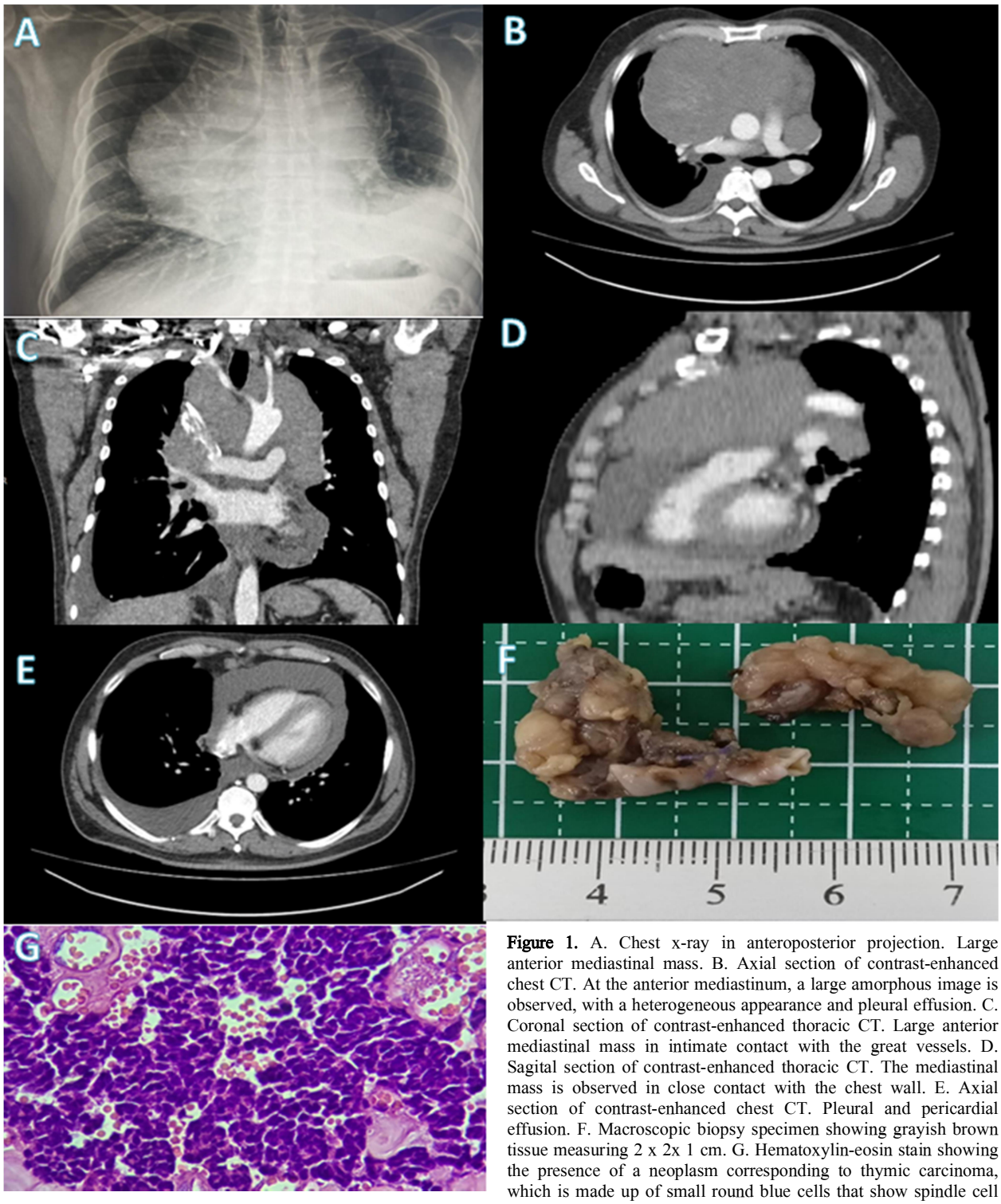

Figure 1. A. Chest x-ray in anteroposterior projection. Large anterior mediastinal mass. B. Axial section of contrast-enhanced chest CT. At the anterior mediastinum, a large amorphous image is observed, with a heterogeneous appearance and pleural effusion. C. Coronal section of contrast-enhanced thoracic CT. Large anterior mediastinal mass in intimate contact with the great vessels. D. Sagital section of contrast-enhanced thoracic CT. The mediastinal mass is observed in close contact with the chest wall. E. Axial section of contrast-enhanced chest CT. Pleural and pericardial effusion. F. Macroscopic biopsy specimen showing grayish brown tissue measuring 2 x 2x 1 cm. G. Hematoxylin-eosin stain showing the presence of a neoplasm corresponding to thymic carcinoma, which is made up of small round blue cells that show spindle cell areas.

Acknowledgements

- To the memory of the patient because his case serves as teaching through this publication.
- To Hospital Regional de Occidente for giving us the necessary supplies in the radiology department to make the diagnosis.

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DOI 10.5281/zenodo.12730163
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