Thymic cyst as a differential diagnosis of acute thoracic aortic disease

Cisto tímico como diagnóstico diferencial de doença aguda da aorta torácica

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Abstract
Patient was referred to our Service with acute thoracic pain and diagnosis of intramural hematoma of the ascending aorta for surgical correction. The diagnostic investigation showed a cystic tumor involving the ascending aorta causing restriction of the right ventricular inflow. After resection, the histologic analysis disclosed the diagnosis of thymic cyst. The aim of this study is to describe a rare mediastinal tumor that may simulate a radiologic feature with characteristics of intramural hematoma and may result in a wrong therapeutic approach.


INTRODUCTION

Primary tumors and mediastinal cysts are uncommon, affecting patients of all ages (though they are more frequent in young and middle-aged adults), and typically identified during routine examinations. The benign lesions are usually asymptomatic, while the malignant lesions are associated with chest pain, pleural effusion, diaphragmatic paralysis, weight loss and/or fever. The diagnosis is confirmed by biopsy and histological analysis, but the clinical suspicion of a specific lesion can be based on its location, the patient’s age, the presence or absence of symptoms and the association with systemic diseases. Most lesions of the anterior mediastinum (structures committed between the sternum and pericardium) are of thymic origin, but there are recent reports in the literature about thymic lesions (thymoma and thymic cyst) located in the middle mediastinum. In the case of tumors of the anterior mediastinum, the thymic cyst occupies the ninth position, being preceded by the following neoplasms: thymoma, germ cell tumor, lymphoma, lymphangioma, hemangioma, lipoma, fibroma and fibrosarcoma [1-3].

Thymic cysts are uncommon mediastinal tumors corresponding to 1% to 3% of the lesions in the mediastinum [4]. These cysts are rarely symptomatic, however, due to their mass effect, which is associated with
DISCUSSION

Thymic cysts represent about 1% of all mediastinal masses. When only the cystic thymic lesions are analyzed, the incidents range from 12% to 30% [5]. They are more frequently located in the anterior mediastinum, and can also be found in the neck, depending on thymus development.

Thymic cysts can be unilocular or multilocular. The unilocular cysts are probably of congenital origin (derived from embryologic thymic tissue), with a thin fibrous capsule composed of cuboid or columnar, squamous or transitional epithelium. In most cases, there is a clear serous fluid inside this epithelium, which can also be thick, blood or heterogeneous, and its wall could present traces of cholesterol, signs of chronic inflammation, hemorrhage or calcification [6]. The most important feature, which allows for the definitive diagnosis of the lesion, is the presence of thymic tissue in the cyst wall characterized by a corticomедullary differentiation, where the Hassall’s corpuscles can be found in about 50% of cases. The multilocular cysts are usually acquired lesions and commonly result from infection, trauma or neoplasia, as occurs in Hodgkin’s disease or in association with other diseases such as the Human Immune Deficiency Syndrome and auto-immune diseases such as Sjogren’s Syndrome.

The symptoms vary according to the tumor’s size and location. The tumor can cause chest pain, dyspnea, cough, dysphagia and symptoms of low cardiac output [7]. They are usually found between the 3rd and 6th decade of life, usually through routine radiological examinations or cervical or thoracic surgeries. The characteristics of such tumors under chest tomography are similar to a lesion with...
low-attenuation homogeneous structure, usually between 0 and 20 Hounsfield units. It is worth noting that, when performed by non-experienced professionals, the radiological analysis of thymic cyst images - completely encircling the ascending aorta - can result in an incorrect diagnosis and, as a result, errors in the therapeutic approach.

The treatment of unilocular thymic cysts is controversial. Some authors believe that resection is necessary for diagnosis because it deals with a histological diagnosis. Reports of malignant transformation and incipient neoplasia are also indications for surgery [8]. Multilocular cysts should also be removed so that any malignant degeneration is identified. Surgical resection is usually curative and can be performed safely and efficiently through videothoracoscopy, longitudinal sternotomy or thoracotomy.

REFERENCES


