EPIDERMOID THYMIC CYST- A VERY RARE MEDIASTINAL MASS

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Abstract

Objectives: Thymic cysts represent 1-3% of all tumors in the anterior mediastinum, but their knowledge is important during the differential diagnosis of a mediastinal mass.

Methods: We describe the case of a 52 years old woman, totally asymptomatic, with an incidental diagnosis of a mediastinal mass at thoracic computed tomography evaluation.

Results: Thoracic magnetic resonance showed an heterogeneous mass with approximately 3,6 cm, at the anterior mediastinum. For diagnostic clarification, surgical excision was performed. The histopathological exam revealed an epidermoid thymic cyst.

Conclusion: Surgical excision and histopathological evaluation allow definite diagnosis of this tumor, associated with a good prognosis.

INTRODUCTION

Cysts represent 15-20% of all mediastinal masses. If we focus on the anterior mediastinum, thymic cysts represent 1-3% of all tumors.[1,2] Epidermoid thymic cysts are very rare lesion, with only 4 cases described in the literature, worldwide. Despite their benign behavior and good prognosis, surgical excision is necessary to obtain a definitive diagnosis and exclude malignancy.

MATERIALS AND METHODS

We describe the case of a 52 years old woman, totally asymptomatic, with an incidental diagnosis of a mediastinal mass at thoracic CT evaluation. For better understanding, she was evaluated with a magnetic resonance, showing an heterogenous mass, with a diameter of 3,56 cm, in relation to the left side of the ascending aorta (Figure 1).

Given these unspecific findings, we decided to perform surgery to obtain a definitive diagnostic.

Intraoperatively, using a median sternotomy, we found an approximately spherical mass, with smooth walls, in the left side of the ascending aorta, without invasion of any of the adjacent structures. It was possible to remove it completely (Figure 2). There were no complications during the post-operative period and she was discharged home at the 4th post-operative day. The histopathological exam revealed an epidermoid thymic cyst (Figures 3 and 4).

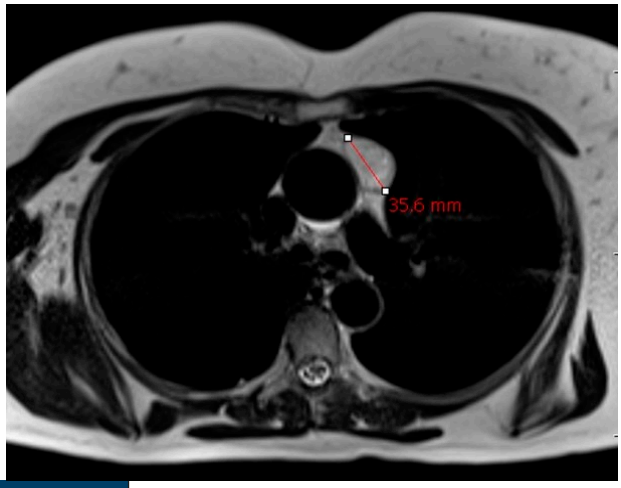

Figure 1 *Magnetic resonance showing anterior mediastinum mass with 35.6mm.*

DISCUSSION

To the best of our knowledge, this is the 5th case of epidermoid thymic cyst described worldwide. The exact etiology of epidermoid thymic cyst remains unknown. It is thought to result from the migration of epidermic cells to the anterior mediastinum with subsequent proliferation.[3] The clinic presentation, between 30 and 60 years old, ranges from totally asymptomatic to thoracic pain, dyspnea, and cough. In most cases, the diagnosis is made with complementary image exams asked for another

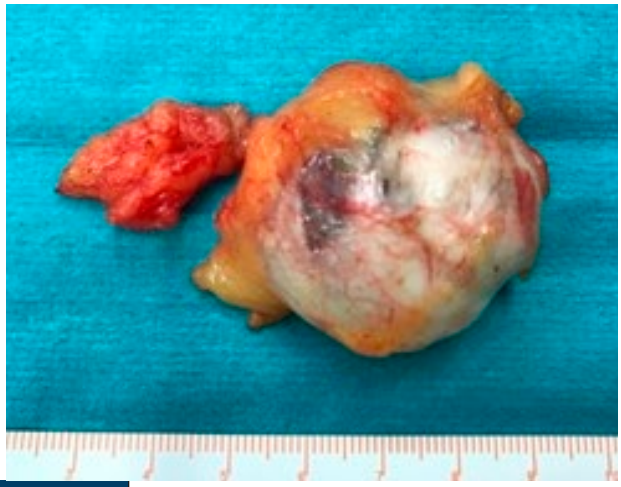

Figure 2 *Tumor with 4cm, approximately.*

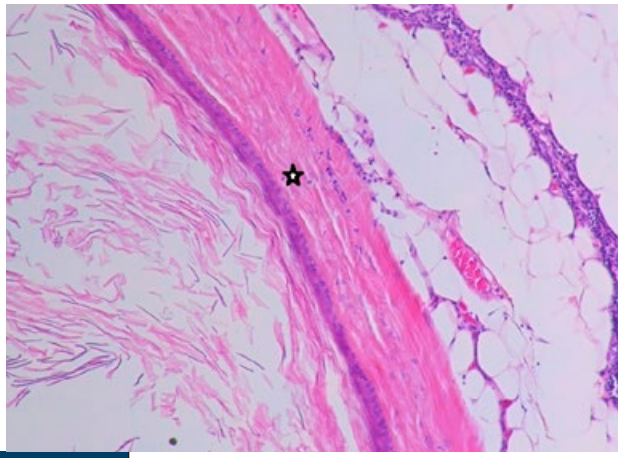

Figure 3 *HE x 100. Cyst coated with pavement epithelium and content of keratin (star).*

reason. The imaging signs are unspecific. The differential diagnosis include malign tumors such as thymomas, teratomas, lymphoma, sarcomas, neuroblastoma and benign lesions such as pericardial or bronchogenic cysts.[3] Given its rarity, the epidermoid thymic is not frequently considered in the differential diagnosis of a mediastinal mass. Magnetic resonance is probably the most suggestive exam of epidermoid cyst.[3] However, definitive diagnostic is only possible with the histological exam. It shows a cyst mass

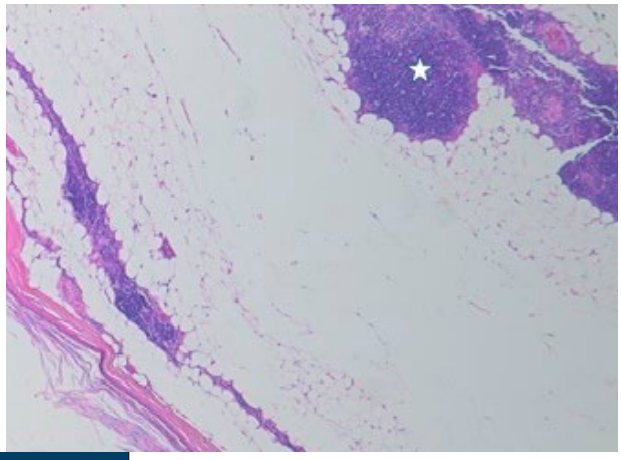

Figure 4 *HEx40. Thymic tissue in the cystic wall (star).*

surrounded by thymic tissue. The epithelium is stratified paviment, with a high content of keratin. The presence of keratin makes it possible to differentiate these cysts from other types, including bronchogenic cysts.[2] Surgery can be performed by video thoracoscopy, median sternotomy, as we did in our case, or by thoracotomy.

CONCLUSION

Despite its rarity, epidermoid thymic cyst should not be forgot during the differential diagnosis of a mediastinal mass. Surgical exclusion and histopathological evaluation allow definite diagnosis of this tumor, associated with a good prognosis.

REFERENCES

1. Cray da Costa A, Rodrigues M, Colman J, Cordeiro da Costa G. Giant thymic cyst with atypical location: case report. Rev Bras Cir Cardiovasc 2013, 28(3): 408-411.
2. Nalladaru Z, Mbahi M, Wessels A. Epidermoid Cyst—A Rare Mediastinal Mass. Indian J Surg. 2015; 77(Suppl 1): 19–20.
3. Qureshi J, Pagano B, Mueller J, Schumacher L, Velosa C, Hartman M. Thymic Epidermoid Cyst: Clinical and Imaging Manifestations of This Rare Anterior Mediastinal Mass. Case Reports in Radiology 2016, 4.