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RESEARCH ARTICLE **OPEN ACCESS**

CASE REPORT: LARGE CYSTIC TERATOMA OF ANTERIOR MEDIASTINO

Alexandre Finóquio Virla[1], Mário Lyrio[2], Marcela Almeida Alves[3], Esther Victoria Lima de Mello[4*], Ana Luiza Fonseca[5] and Vinicius Motta[5]

[1]Thoracic Surgeon - Gaffrée and Guinle| University Hospital HUGG & Nova Iguaçu General Hospital | HGNI, Rio de Janeiro; [2]Thoracic Surgeon - Nova Iguaçu General Hospital | HGNI, Rio de Janeiro; [3]Resident of Thoracic Surgery - University Hospital Gaffrée and Guinle| HUGG; [4]Academic of Medicina - Iguaçu University, UNIG | Nova Iguaçu General Hospital, Rio de Janeiro; [5]Resident of General Surgery - General Hospital of Nova Iguaçu | HGNI, Rio de Janeiro

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****Corresponding author:***
Esther Victoria Lima de Mello,

ABSTRACT

Introduction: Mediastinal teratomas come from primordial germ cells, where, in the embryological process there is a failure to complete their migration of the urogenital crest and developing in the mediastinal region. Its peak incidence is between the second and third decade of life, with no predisposition to gender; they correspond to 8 to 13% of tumors in this region; benign tumors have a favorable prognosis to surgical treatment. | **Case report:** A 45-year-old female patient denies comorbidities and reports previous admissions to emergency care units in the city in the four months preceding the surgical approach, complaining of progressive dyspnea, refractory to oxygen therapy. Admitted to the General Hospital of Nova Iguaçu for clinical investigation of dyspnea on small efforts, associated with reduction of vesicular murmur in the left lower lobe, ventilatory-dependent chest pain and verbal report of mediastinal mass in his last hospitalization. Computed tomography of the chest was requested, which showed a large compressive mass in the anterior mediastinum with left laminar pleural effusion. Left anterolateral thoracotomy was performed at the level of the fifth intercostal space, for tumor resection of the anterior mediastinum, measuring 15.0x10.0x7.5 cm and estimated weight of 1,210 grams, without complications. | **Discussion:** Estimate the relevance of the case report, the significant volume of the mediastinal mass and the high intraoperative complexity, its content and the expressive clinical improvement in short recovery time. | **Conclusion:** Surgical intervention in cases of mediastinal tumors are essential in symptomatic or non-symptomatic cases, so that the histopathological report designates the characteristics of this germ tumor and the appropriate treatment.

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INTRODUCTION

Teratoma is a tumor formed by more than one type of neoplastic tissue, a tissue that is not normally found in the organ where it develops. The mediastinal teratomas come from primordial germ cells, where, in the embryological process there is a failure to complete their migration of the urogenital crest and they end up being in the mediastinum(1). They are the most common germ cell mediastinal neoplasms, the anterosuperior mediastinum is the place where they are found most frequently, being the second most common tumor of the anterior mediastinum, the first is thymoma; derived from three primitive embryonic layers, which are the endoderm, mesoderm and ectoderm(2). Its peak incidence is between the second and third decade of life, with no predisposition to gender; they correspond to 8 to 13% of tumors in this region; benign tumors have a favorable prognosis to surgical treatment(3). We report a case of a 45-year-old female patient with symptom evolution 4 months ago; submitted to teratoma resection by the thoracic surgery team of the Nova Iguaçu General Hospital who completely removed the anterior mediastinum tumor, with a pathological finding of mature teratoma. This complex case, with a large-volume tumor, motivated us to write this case.

CASE REPORT

E.A.S., female, 45 years old, denies comorbidities and reports previous admissions in emergency care units in the city in the four months preceding the surgical approach, complaining of progressive dyspnea, refractory to oxygen therapy. Admitted to the General Hospital of Nova Iguaçu for clinical investigation of dyspnea to small efforts, associated with reduction of vesicular murmur in the left lower lobe, ventilatory-dependent chest pain and verbal report of mediastinal mass in his last hospitalization. Thecomputed tomographyof the chest was requested, which showed a large

compressive mass in the anterior mediastinum with left laminar pleural effusion *(Figure 1)* and echocardiogram, with mild flowmetric alteration of the mitral and aortic valves, small pericardial effusion. Approached by thoracic surgery, via left anterolateral thoracotomy at the level of the fifth intercostal space, for tumor resection of anterior mediastinum, measuring 15.0x10.0x7.5 cm and estimated weight of 1,210 grams, adhered tothe pericardium, mediastinal fat and anterior face of the left lower lobe *(Figure 2)*. Through histopathological analysis of the internal contents, identified: pasty material, implanted hair, dentigen formation and white area of cerebriform aspect measuring 7.0x7.0 cm. Patient maintained under intensive surveillance in the first 48 hours, lucid and oriented, hemodynamically stable, eupneic in ambient air, drain with low output, without air leakage and physical examination, identified alteration of vocal resonance, without further complaints.

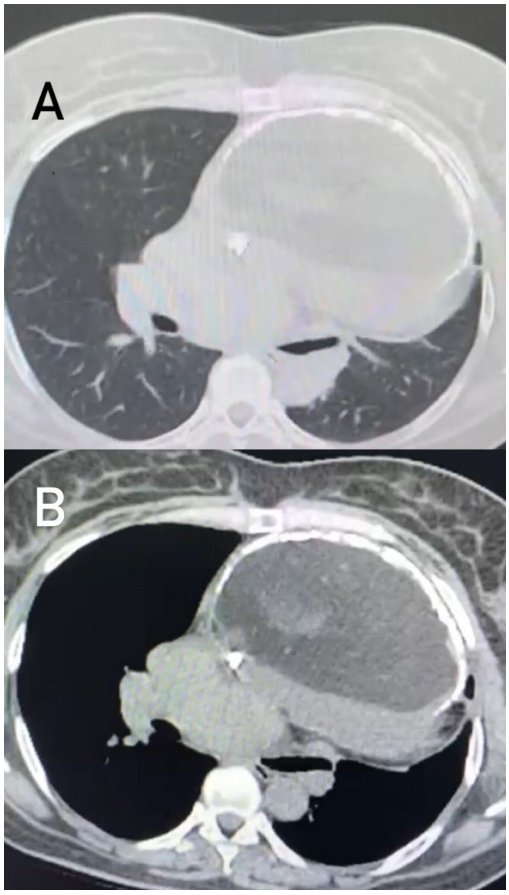

Fig. 1. A- Presentation of the anterior mediastinal tumor in its largest diameter on computed tomography of the chest. B- Same cut in mediastinum

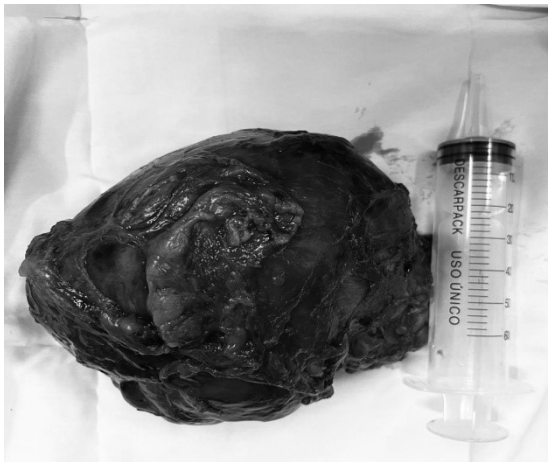

Figura 2. Surgical specimen

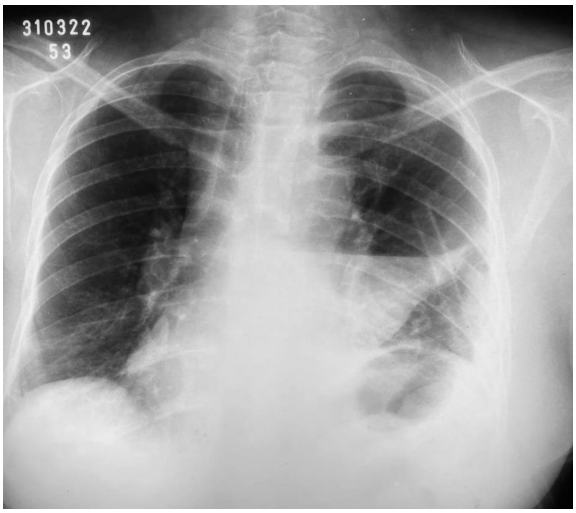

Figura 3. Chest X-ray AP, sixth postoperative day

DISCUSSION

Even mature teratomas, with a good prognosis, when voluminous tend to generate compressive symptoms of neighboring structures, recurrent pulmonary infections, by the inflammatory process by mechanical compression of the parenchyma, thoracic pain of a pleeury character and dry cough. Both being nonspecific symptoms and biased to other thoracic pathologies more prevalent, ontheadoption of imaging study as first choice, computed tomography of the chest (CT) with greater sensitivity and specificity or chest X-ray, excluding differential diagnoses.[5,6,7] Among the complications described, we have pericarditis and cardiac tamponade, the second being rare. Progressive tumor growth increases the likelihood of perforation or compression of mediastinousstructures, considering that 84% of cases will have their origin in large vessels. [6,7] Similar cases with obstructive shock have not been described, considering the long interval to admit significant changes s. Mediastinial teratomas should be surgically treatedfor cure, in addition to performing the histopathological and follow-up of the patient, considering their performance statuss (PPS), anda high complexity hospital. Tumor characteristics will be essential to determine the surgical approach, considering size, location, adhesion and compression in adjacent structures. The factors will be relevant for tumor access and exeresis, whether sternotomy, thoracotomy or combined. [4,5,6] Upon literature review, only 5% of the teratomas areimmature, classified as seminomas and not seminomas, which will require adjuvant oncological therapy, with a survival of 45% of patients in 5 years. [7.8]

CONCLUSION

Surgical intervention in cases of mediastinal tumors are essential in symptomatic or non-symptomatic cases, so the histopathological report designates the characteristics of this germ tumor and the appropriate treatment. In the case reported, the patient presented an important respiratory distress clinic of progressive character, making daily practices unfeasible without valuing her complaints, long investigation time until diagnosis and treatment, important to reestablish her relationship life.

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