



Case Report

A Rare Case of Voluminous Schwannoma of the Pleura

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Abstract

Intrathoracic Schwannoma is a rare neurogenic tumor. In the thoracic region, it is most often found in the mediastinum. It is a solitary lesion and pleural involvement is extremely rare. We report a case of a 62-year-old male with a NYHA class I-II dyspnea. Standard chest radiography showed homogenous mass occupying one third of the left hemithorax. Computed tomography angiogram confirmed a voluminous heterogeneous mass posterior and basi-thoracic left, suggesting a solitary fibrous tumor of the pleura. Because of 2 posterior main direct arterial branches coming from the aorta, a pre-op embolization was performed. The patient underwent a complete open surgical resection. Ultimately, schwannoma of the pleura was diagnosed on histopathologic examination. We therefore report one more case of benign pleural schwannoma. The particularity of our case compared to several cases described in the literature remains its important size.

Keywords: Schwannoma; Pleural; Intrathoracic; Surgery

Abbreviations: CTA: Computer Tomography Angiogram

Introduction

Schwannomas are benign nerve tumors arising from the peripheral nerve sheath of the Schwann cells and are almost always solitary. [1] The most frequent localizations are in the brachial plexus and the large nerve trunks of the limbs with a predilection for the regions of the elbow, wrist, or knee. Thoracic schwannomas are more common in the posterior mediastinum. The retroperitoneum is also a possible location. Pleural schwannoma is a very rare lesion arising from the autonomic nerve sheaths in the pleura. [2] They are generally benign, asymptomatic, slow-growing lesions and occur more frequently in adult males [3].

Case Report

A 62-years-old man presented in our hospital with a NYHA class I-II dyspnea for a few weeks. He had no other thoracic symptoms and no associated cardiac or respiratory pathology. His only comorbidity was hypertension. He had no history of smoking.

Standard chest radiography showed homogenous mass occupying one third of the left hemithorax. Respiratory volume tests were normal. Computer Tomography Angiogram (CTA) confirmed a 120 x 90 x 870 mm left posterior basi-thoracic heterogeneous mass centered at T10 (Figure 1A) and 2 major posterior arterial branches, directly emerging from the aorta.

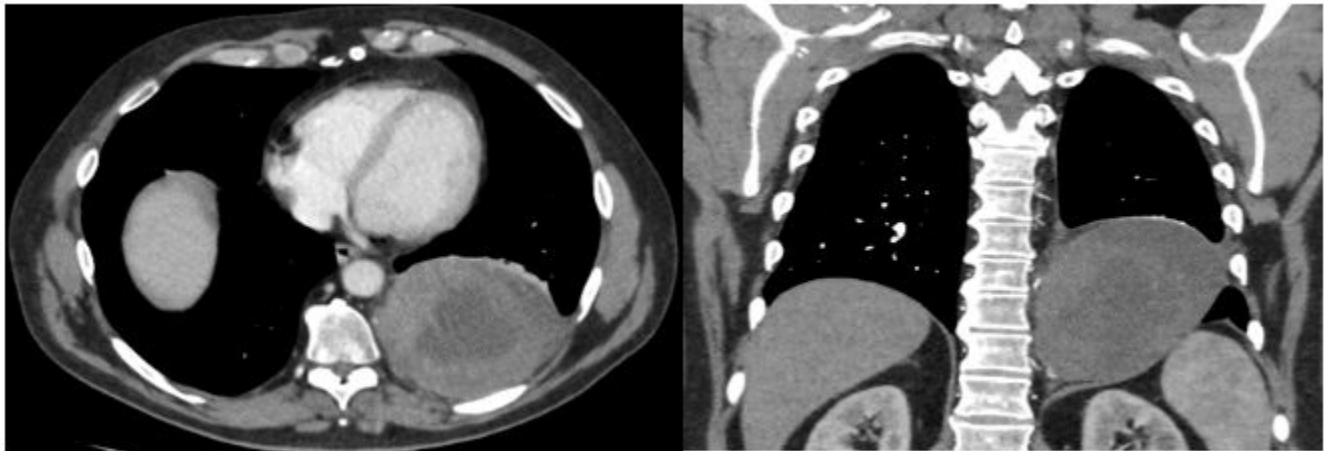


Figure 1A: CTA showed a basi-thoracic heterogeneous mass.

After a multidisciplinary discussion, based on the patient's symptomatology and the CTA showing a well-delineated and heterogeneous mass, the diagnostic hypothesis of a solitary fibrous tumor of the pleura was retained. It was proposed to remove the mass by surgery for therapeutic and diagnostic purposes.

Preoperatively, an interventional radiology procedure was performed to embolize the 2 arterial pedicles supplying the tumor on its posterior surface (Figure 1B), to control the arterial pedicles.

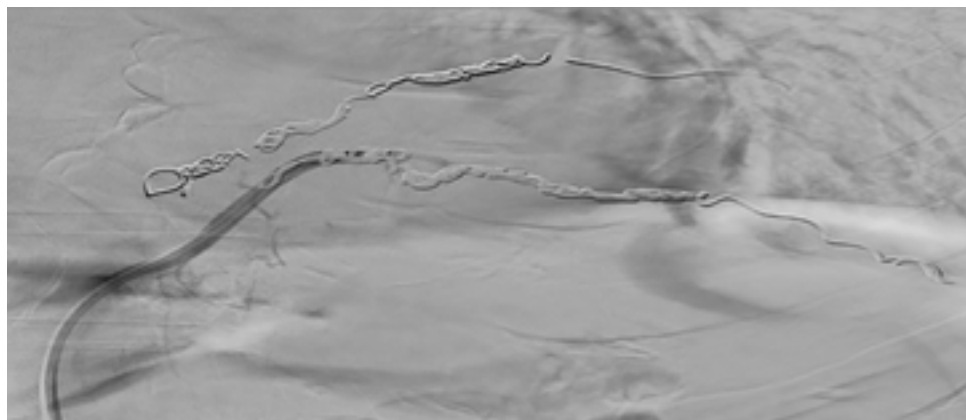


Figure 1B: Angiography showing the embolization of the arterial pedicles.

Our patient underwent complete surgical resection via a posterolateral thoracotomy. During operative intervention, we observed a voluminous mass, which appeared to arise from the sheath of the autonomous nerve fibers of the pleura and respected the pulmonary parenchyma (Figure 2A). It was an encapsulated, firm, yellowish-white tumor. (Figure 2B). We also visualized the coils previously placed in interventional radiology.

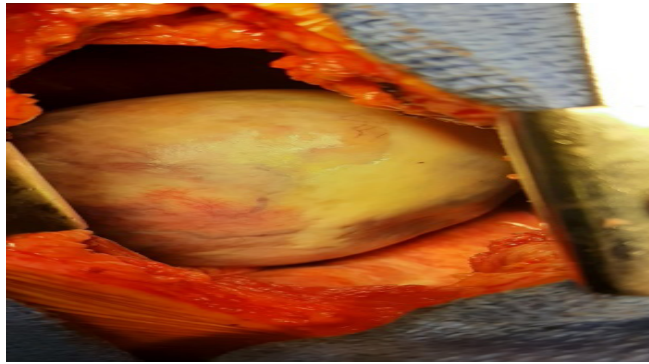


Figure 2A: Intraoperative view with the tumor occupying the entire visual field.



Figure 2B: Images of the surgical specimen after excision

The anatomopathological analysis describe a well-limited mass with regular contours free of vegetation, measuring 14.5 x 10 x 8 cm and weighing 462 g. Histopathological aspect and immunohistochemical profile corresponding to a schwannoma. Post-operative follow-up was simple and uneventful.

Discussion

Thoracic benign neoplasia includes solitary fibrous tumor, lipomatous tumors, adenomatoid tumor, calcifying fibrous tumor, multicystic mesothelioma, and schwannoma. [4] Of these, solitary fibrous tumor is the most frequently encountered. [5] Neurogenic tumors, although common in the mediastinum, rarely occur in the chest wall. Cases of primary pleural schwannomas are extremely rare. Men are more commonly affected than females. [3] Most benign tumors of the chest wall, including schwannomas, manifest as slow-growing, painless, and palpable masses. Large tumors have the potential to produce pain and neurological symptoms due to their mass effect and compression on adjacent structures.

Our patient was nearly asymptomatic. He had no chest wall pain. The mass was not palpable because of its intra thoracic location. The first diagnostic hypothesis retained was not that of

a schwannoma but of a solitary tumor of the pleura, taking into account its different radiological elements: well-delineated masses and usually heterogenous.

We therefore report one more case of benign pleural schwannoma. The particularity of our case compared to several cases described in the literature remains its important size.

References

1. McClenathan JH, Bloom RJ (2004) Peripheral tumors of the intercostal nerves. *Ann Thorac Surg.* 78: 713-4.
2. Ravikanth R (2017) A rare case of primary benign schwannoma of the pleura. *Digital Medicine.* 3: 36-38.
3. Kransdorf MJ (1995) Benign soft-tissue tumors in a large referral population: distribution of specific diagnoses by age, sex, and location. *American Journal of Roentgenology* 164: 395-402.
4. Granville L, Laga AC, Allen TC, Dishop M, Roggli VL, et al. (2005) Review and update of uncommon primary pleural tumors: a practical approach to diagnosis. *Archives of Pathology and Laboratory Medicine* 129: 1428-1443.
5. Churg A (2000) Localized Pleural Tumors. In: Cagle PT (Editor). *Diagnostic Pulmonary Pathology.* New York, NY: Marcel Dekker. 719-735.