

A Case of Pleural Schwannoma Which Detected Incidental

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Abstract: In addition to many devastating consequences of the covid 19 pandemic, which has affected all countries of the world, it has also caused reasons such as the diagnosis of most undiagnosed diseases. One of the most important reasons for this is the use of increasing imaging methods throughout the world during the pandemic. This result has enabled the incidental detection, early diagnosis and treatment of many lung pathologies other than the symptoms. Here, many pleural diseases progress with vague symptoms, and the patient's admission to the health institution is usually delayed. Pleural schwannomas are exceedingly rare neoplasms of the thoracic cavity. In the example of our case; pleural schwannoma, one of the rare pleural diseases detected incidentally, is discussed.

Keywords: Pleural schwannoma, Thorax computed tomography, Transthoracic fine needle aspiration biopsy.

INTRODUCTION

Pleural schwannomas are extremely rare neoplasms of the chest cavity. These tumors arise from autonomic nerve fiber sheaths on the pleural surface of the lung. Pleural schwannomas are usually benign, asymptomatic and slow growing lesions. Most patients with pleural schwannomas are usually asymptomatic or may present with nonspecific and different symptoms. Therefore, the vast majority of pleural schwannomas are discovered incidentally during examinations for other complaints. Peripheral nerve sheath tumors should be considered in pleural-based space-occupying lesions and an effective differential diagnosis should be made.

CASE

In the thorax computed tomography performed on a 77-year-old female patient with the prediagnosis of Covid-19 pneumonia, an extrapleural, oval-shaped hypodense mass lesion of 42x22mm in size, located in the posterior arc of the 9th rib in the left lung, with a smooth contour, was observed (Figure 1). The patient had stabbing pain in the left subcostal region, intermittent pain. There were complaints of shortness of breath and cough. In the physical examination of the patient who had no known comorbidity, family history and smoking history, respiratory sounds were normal. The patient's heart rate 84 / min, blood pressure 120/80 mmHg, respiratory rate normal (14 / min), and oxygen saturation was 97% in room air. In laboratory parameters, except sedimentation (34 / hour), all other biochemical and hematological parameters were within

normal limits. With the consent of the patient, transthoracic fine needle aspiration biopsy was performed for the histopathological differential diagnosis. In histopathological examination; diffuse strong staining with S100 was observed in the immunohistochemical staining, but no staining with CD34 and SMA was observed. Based on the present findings, the case was defined as peripheral nerve sheath tumor/schwannoma.

CONCLUSION

Primary pleural schwannomas constitute 1-2% of all thoracic tumors. These tumors are extremely rare neoplasms of the thoracic cavity, and less frequently in the pleura, with around 20 cases reported in the medical literature [1]. The majority of these neoplasms are benign pleural schwannomas, but malignancy has been reported in some cases [2]. Schwannomas typically arise from specialized myelin-producing cells (Schwann cells) of either the sympathetic or parasympathetic autonomic nerve fiber sheaths [3]. Although it can occur at any age, pleural schwannomas usually affect adults between the third and sixth decades. In addition, men are affected more often than women. Schwannomas that arise on the pleural surface of the lung usually grow slowly; therefore, it is usually asymptomatic [4]. Definitive diagnosis can only be made by histopathological examination and immunohistochemical staining of the neoplasm, which requires a cross-section of the tumor [5]. Immunohistochemically, pleural schwannomas typically stain diffusely and strongly positive for S100 protein. On the other hand, they stain negatively for CD-15, CD-30, CD-34, and pan-cytokeratin [6]. Similarly, cases in the form of case-reports have been presented in the literature, and the moderate features of these cases

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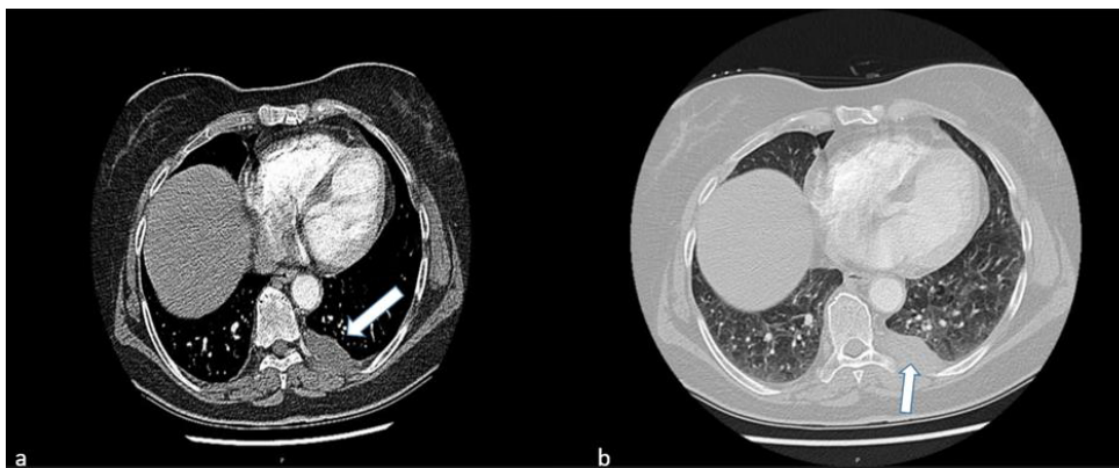


Figure 1: Extrapleural location 42x22mm sized, oval shaped hypodense mass lesion with smooth contours **a-**Mediastine section **b-** Parenchyma section.

are the absence of specific symptoms, detection in imaging methods performed with the suspicion of other diseases, and positivity with S100 protein in the histopathological examination [4, 8, 9]. The standard treatment for pleural schwannomas is primarily surgical resection of the tumor (thoracoscopic or complete pleural resection) with frequent continuous follow-up whenever technically possible [10].

As in our case; no matter how benign pleural schwannomas are, it is important to provide rapid histopathological verification and resection, considering that such cases may show malignant transformation.

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