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A RARE CASE OF PRIMARY BENIGN PLEURAL SCHWANNOMA

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ABSTRACT

Pleural Schwannoma, also known as neurilemmoma, is a rare benign tumor of the thorax. The other sites for schwannoma are the neck, posterior spinal roots, flexor surfaces of extremities, retroperitoneum, mediastinum. Patients are usually asymptomatic. Compression of nerve or blood vessels are the symptoms for which patients presents to the hospital. Here we report a 55 years old female who presented with left sided chest pain and shortness of breath. A Contrast enhanced CT chest showed left pleural mass with left lower lobe collapse. A left posterolateral thoracotomy was performed which showed a large posterior mediastinal tumor attached to the lung. Mass was completely excised and histopathologically proved it to be cystic Schwannoma.

KEYWORDS : Schwannoma, Pleural mass

INTRODUCTION

Schwannomas are benign tumors originating from Schwann cells of the neural sheath. They are usually slow growing tumor. Pleural schwannoma are extremely rare neoplasm of the thoracic cavity and they arise from the autonomic nerve fibre sheaths in the pleura.1,2 These tumors are usually asymptomatic and can attain large size before presentation. Large tumors have the potential to produce pain and neurological symptoms due to their mass occupying effect and compression on adjacent structures. Other differential diagnosis includes neurofibroma and other benign spindle cell tumors like leiomyoma, leiomyosarcoma. Definitive diagnosis can only be established through histopathological examination and IHC staining of the neoplasm, which requires a section of the tumor.3 Here we report a case of primary benign pleural schwannoma in a 55 years old female in whom the pleural mass was discovered incidentally on CT chest. The patient was subjected to left anterolateral thoracotomy and pleural mass was resected which showed histopathology features of Schwannoma.

CASE PRESENTATION

A 55 years old female with no known comorbidity, presented with left sided chest pain and shortness of breath for 4 months duration. She had no prior hospitalizations or surgical procedures, and was not on any routine medications. Her family history was unremarkable. On general examination, she was afebrile and vitals were stable. Chest examination revealed decreased intensity breath sounds in the left infrascapular, axillary and interscapular areas. Laboratory tests including complete blood count with platelet, renal, hepatic and coagulation profiles were normal. Chest X ray revealed left side heterogenous opacity with tracheal and mediastinal shift to the right side (Fig:1). A CT chest revealed a large left side pleural based mass and passive collapse of left upper and lingular segments. (Fig:2)

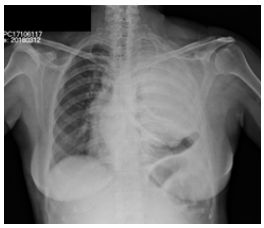

Fig:1

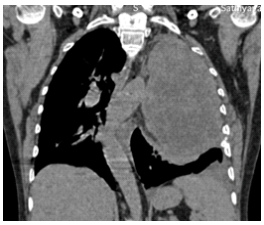

Fig:2

Bronchoscopy showed extrinsic compression to the left lower and lingular segments and did not reveal any intraluminal pathology. Biopsy attempts had proven inconclusive. A left anterolateral thoracotomy was done in which a large posterior mediastinal mass was seen attached to the left lung. Mass was completely excised (Fig:3).

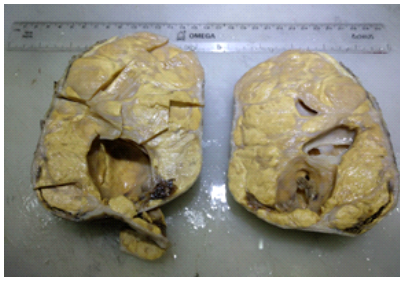

Fig:3

Patient had an uneventful postoperative recovery. Histopathology of the mass which measured 12 x 9 x 6 cm and was reported to be a cystic Schwannoma which showed alternating hyper and hypocellular areas with spindle cells arranged in fascicle (Fig:4).

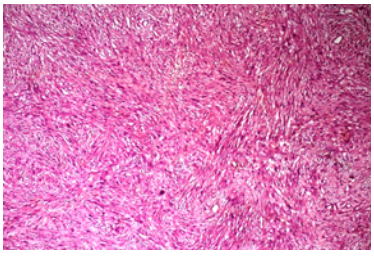

Fig:4

The patient did not receive any further treatment and on follow up after 2 months there were no evidence of recurrence or complication.

DISCUSSION

Posterior mediastinal masses classifications are based on their morphology and origin as neurogenic, esophageal, cystic, extramedullary hematopoiesis, or lymphomas. Neurogenic tumors comprise 19% to 39% of all mediastinal tumors. They develop from mediastinal peripheral nerve, sympathetic and parasympathetic ganglia, and embryonic remnants of neural tube.1 Among posterior mediastinal neurogenic tumors, schwannoma is the most common. They develop in the 3rd to 4th decade and affects both genders equally. Schwannomas arising in the pleural surface of the lung generally grow slowly; hence, they do not usually produce symptoms. Patients become symptomatic when the

tumor attains large size. Large tumors have the potential to produce pain and neurological symptoms due to their mass occupying effect and compression on adjacent structures. Pleural effusions, if present are usually reactive or can be hemorrhagic due to the rupture of the tumor.4 Schwannoma shows prominent degeneration changes such as cyst formation, calcification, hyalinized vessels, hemorrhage, and cytologic atypia. Pleural schwannomas should be included in the differential diagnosis of pleural lipomas, pleural metastasis, mesotheliomas, and solitary fibrous tumors. CT scan remains the diagnostic imaging modality for these neoplasms. CT scan can also demonstrate cystic and/or solid components of the tumor. Malignant pleural schwannomas are usually associated with the presence of pleural nodules, pleural effusions, and metastatic pulmonary nodules.5 Microscopically, Antoni A and Antoni B areas are seen in the majority of pleural schwannoma cases. Antoni A represents areas of hypercellularity with Verocay bodies. Antoni B represent areas of cyst formation, hemorrhage, calcification, xanthomatous infiltration, and hyalinization.3 Definitive diagnosis can only be established through histopathological examination and IHC staining with S-100.

CONCLUSION:

Pleural schwannomas are extremely rare neoplasms of the thoracic cavity. Diagnosing pleural schwannomas is often challenging. The standard care of the management of pleural schwannomas is primarily surgical resection thoracoscopically or complete pleural resection of the tumor with frequent continuous follow-up. Definitive diagnosis can only be established through histopathological examination and IHC staining with S-100 of the neoplasm.

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