



Benign fibroma of mediastinum. A rare case report

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Abstract :

Tumors of the mediastinum represent a wide diversity of disease states. The location and composition of a mass is critical to narrowing the differential diagnosis. The most common causes of an anterior mediastinal mass include the following thymoma teratoma thyroid disease and lymphoma. Masses of the middle mediastinum are typically congenital cysts, including foregut and pericardial cysts, while those that arise in the posterior mediastinum are often neurogenic tumors. We report a rare case of benign fibroma of posterior mediastinum.

Keyword : benign fibroma , mediastinal tumor, thoracotomy , mediastinum

INTRODUCTION:

Tumors of the mediastinum are generally classified according to their location. There is no absolute criterion as to differentiation between a malignant and benign tumor of the thorax, but all such lesions should be evaluated for surgical resection. Even though the tumor may be benign, it may

eventually lead to serious complications due to pressure on other vital organs, infection, or undergo malignant degeneration. Neurogenic tumors are most common Tumors of the Posterior Mediastinum. We report a rare case of benign fibroma of mediastinum.

CASE HISTORY:

24 years old Female admitted with c/o breathlessness for past 2 days and cough with expectoration, on and off x 4 months. She had a past history of anti-tuberculous treatment for pulmonary tuberculosis. She is a married woman and Mother of 3 Children. Her last child birth 6 months back and she is in lactational amenorrhoea.

On examination, she was Conscious; oriented. Patient was Dyspneic, which increased in supine position. Cyanosis was present. She had No clubbing/pedal edema/generalized lymphadenopathy .her Bp was 90/60 mmHG and PR was 120/min. her SpO₂ was 60% in room air. On respiratory system examination ,Trachea was pushed to left side. On Left side, coarse crackles were present. Right side, breath sounds were decreased, more

on upper zone and basal crepts were present. She had B/L inspiratory and expiratory wheeze.



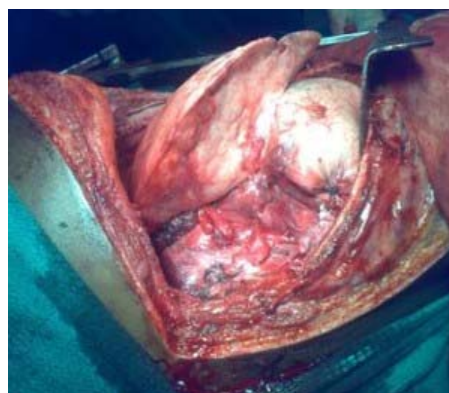
Fig:1. Chest x-ray

fig:2. HRCT chest showing a large well defined soft tissue mass in posterior aspect of rt upper lobe.

Mediastinal structures were normal. No evidence of pleural effusion. Ultra sonogram chest showed 11.5cm x 11.5 cm large echogenic (solid) mass seen in posterior aspect of right lung.

Provisional diagnosis of mediastinal tumor was made. Patient was assessed for exploratory Thoracotomy. Right posterolateral thoracotomy along 6th rib was done. Around 12 X 12 cm tumor from posterior mediastinum, well encapsulated, near Right upper lobe of the lung adherent to surface of lung anteriorly & laterally. Tumor was adherent to right lower lobe. Tumor was gently separated from the lung and Cleavage created all around. Tumor mass was excised in toto after ligating the feeding vessels. Air leak in lung sealed

with 3-0 vicryl .Single right pleural drain kept. 2 units of



compatible blood were transfused .
Fig:3. intraoperative picture showing tumor bed after removal.



Fig 4: Excised tumor in toto

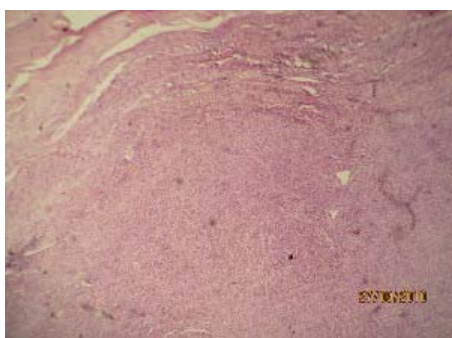
Postoperatively patient was transferred to S ICU and monitored. Iv antibiotics and Epidural analgesia were given .Orals started & ICD was removed on second day. Sutures were removed on 7th day.





Fig.5: post op picture after suture removal

Fig.6: post op picture showing patient being comfortable at rest



Histopathology report showed benign fibroma. Low power view showed intact capsule. High power view showed spindle shaped cells with wavy cytoplasm arranged in palisading pattern.

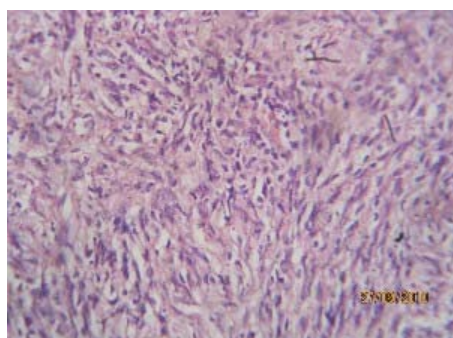


Fig.7:low power view showing intact capsule

Fig.8: High power view showing Spindle shaped cells with wavy cytoplasm arranged in palisading pattern

DISCUSSION:

MEDIASTINAL TUMORS are classified based on anatomic location and tissue of origin¹. Based on tissue of origin, Neurogenic Tumors, Thy-moma, Lymphoma, Germ Cell Tumors, and Primary Carcinomas. Primary carcinomas² are subdivided into Mesenchymal Tumors, Endocrine Tumors and Cysts. Tumors of mesenchymal origin are typically found in fibromatosis forms as ill-defined lesions with indistinct margins.⁵

Fibroma are slow growing tumor, so clinically symptoms are produced only in advanced stage.⁴ Usually detected as incidental finding on CT. Patients usually present with chest pain, cough, dyspnoea, fever and chills³. They can also present with clinical manifestations of anatomic compression such as Spinal cord compressive syndrome, Vena caval obstruction, Pericardial tamponade, Congestive heart failure, Dysrhythmias, Pulmonary stenosis, Tracheal compression, Esophageal compression, Vocal cord paralysis, Horner's syndrome, Phrenic nerve paralysis, Chylothorax, Chylopericardium, and Pancoast's syndrome. *Connective tissue tumors*¹ include fibromas, lipomas, xanthomas, chondromas, etc., with their malignant counterparts. Usually they are slow in growth and they may attain huge size (particularly the lipomas) before symptoms

become manifest. Symptoms, when present, are generally those of compression. Hour-glass extension into the Spinal canal or through an intercostal space may occur. These tumors cannot be differentiated clinically. Whether benign or Malignant, they are not amenable to x-ray treatment.

Mediastinal mesenchymal tumors originate from the connective tissue, striated and smooth muscle, fat, lymphatic tissue, and blood vessels present within the mediastinum. These Occur less commonly within the mediastinum. **Mesenchymal tumors have been reported to occur in less than 10% of the primary masses in the various series.** The soft tissue neoplasms include lipomas, liposarcomas, fibrosarcomas, **fibromas**, xanthogranulomas, leiomyomas, leiomyosarcomas, benign and malignant mesenchymomas, rhabdomyosarcomas, and mesotheliomas. Fibroma & localised fibrous mesothelioma comes under the group of solitary fibrous tumor.⁴ These tumors have a similar histologic appearance and generally follow the same clinical course as the soft tissue tumors found elsewhere in the body. Fifty-five percent of these tumors are malignant. Surgical resection remains the primary therapy because poor results have been obtained using radiation therapy and chemotherapy. Removal is always indicated when feasible.¹

Exploratory thoracotomy is now a relatively safe procedure which may be recommended with impunity for lesions which are potentially malignant or from which fatal complications are likely to ensue. In most mediastinal lesions the diagnosis may be suspected, but cannot be verified, prior to surgery. Thoracotomy should be performed without delay in all cases for which there is some prospect of surgical cure.

Benign fibromas are rare mediastinal tumors and have been infrequently reported in literature. M. P. SUSMAN⁶ (1940) reported an case of intrathoracic fibroma. J.W. Fouché (1951)² reported a case of benign fibroma. We report yet another rare case of benign fibroma of posterior mediastinum.

The mediastinal tumor which remains undiagnosed (treated by observation) is a dangerous lesion for two reasons: The ever present threat of malignancy², and the possibility that life-threatening complications might occur in benign tumors. Early thoracotomy is thoroughly justified in the management of mediastinal tumors not only because of its low mortality, but also because of the virtual assurance of a cure when benign lesions are encountered.

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