A CASE REPORT ON PLEURAL HAEMANGIOMA

ABSTRACT

A middle aged female presented with recurrent left sided pleural effusion. Pluroscopy revealed a large mass on pleura. Biopsy from the tumor showed features of capillary haemangioma. She was successfully treated by surgical excision of the mass. The case is being reported for the extreme rarity of haemangioma in pleura.

KEY WORDS

Recurrent Pleural Effusion, Unilateral, Pluroscopy, Pleural mass, Capillary Haemangioma

INTRODUCTION

A hemangioma is a benign tumour which can occur externally on skin and also in internal organs, usually self-involuting, arisingfrom endothelial cells and is characterized by increased number of normal or abnormal vessels filled with blood. Pleural hemangioma as a cause of recurrent pleural effusion has been reported rarely.(1) Pleural hemangioma is a rare entity with its incidence being mostly below 35 years of age with no gender predilection. Pathophysiology is associated with an imbalance of proangiogenic factors and angiogenesis inhibitors (2) They may be asymptomatic or can present as incidental findings or with mild symptoms of cough, chest pain. Incidental finding in adults but may mimic carcinoma on imaging as a solitary nodule. The diagnostic dilemma with pleural effusions resolves after the explorative CECT or thoracoscopy. Radiologically, these tumours are well-defined, variably dense, occasionally cystic masses. However, histopathology of the specimen remains gold standard for confirmation.

Immunohistochemistry shows CD4 positivity for endothelial cells. Plural hemangiomas are not to be confused with sclerosing pulmonary hemangiomas which have a malignant potential. Management is dependent on location, size, depth of infiltration, age of the patient. Various non-surgical options available are radiotherapy, dry ice cryotherapy, steroid treatment, sclerosing agent injection. Vascular ligation, vascular embolization, and ultimately surgical excision are considered depending on the above-mentioned factors. Imaging also plays a role in Follow-up to rule out any residual tumour or recurrence.(3)

We present case of a middle-aged female with recurrent pleural effusion who was diagnosed with benign pleural haemangioma on thoracoscopic biopsy and excisional biopsy.

CASE REPORT

A 43 year old female clinically came with complaints of breathlessness, cough and left (Lt) sided chest pain for about two years. She had history of hospitalization three times for recurrent (Lt) sided pleural effusion. She didn't have history of fever, joint pains, weight loss or hemoptysis. She was a house wife from rural area and was neither a smoker nor alcoholic. She didn't have past history of tuberculosis. On examination her vitals were normal and chest examination revealed features of (Lt) sided pleural effusion. Her x-ray chest confirmed it to be (Lt) sided pleural effusion. Pleual fluid aspiration was done and sent for cytology examination. The pleural fluid was straw coloured with total cell count of 173 cells/cmm with 62% neutrophils and 38% lymphocytes. Gram stain didn't reveal organisms, ZN stain was negative for acid fast bacill.. It was negative for malignant cells. Fluid biochemical parameters were within normal limits and was labeled as a transudate. She was referred for pluroscopy which revealed a large

mass at apical region (Fig. 1). Biopsy was taken, it was highly vascular and electrocautery was done to avoid bleeding. The biopsy showed features of capillary hemangioma. Surgical excision was planned. After proper fitness and under general anasethesia, left posterolateral thoracotomy was done and the tumour mass was removed in-toto .Intercostal drain was removed on fourth postoperative day. There was no refilling of pleural cavity. She is on regular follow up and asymptomatic.

The mass was well circumscribed, grayish, 4x3x3 cm, soft to firm (Fig. 2). Cut surface was grayish with haemorrhages. Sections from the mass reveled tumour mass composed of plenty of capillaries of variable sizes, lined by endothelium and RBCs in their lumina (Fig. 3) and fibrous stroma and was reported as capillary haemangioma

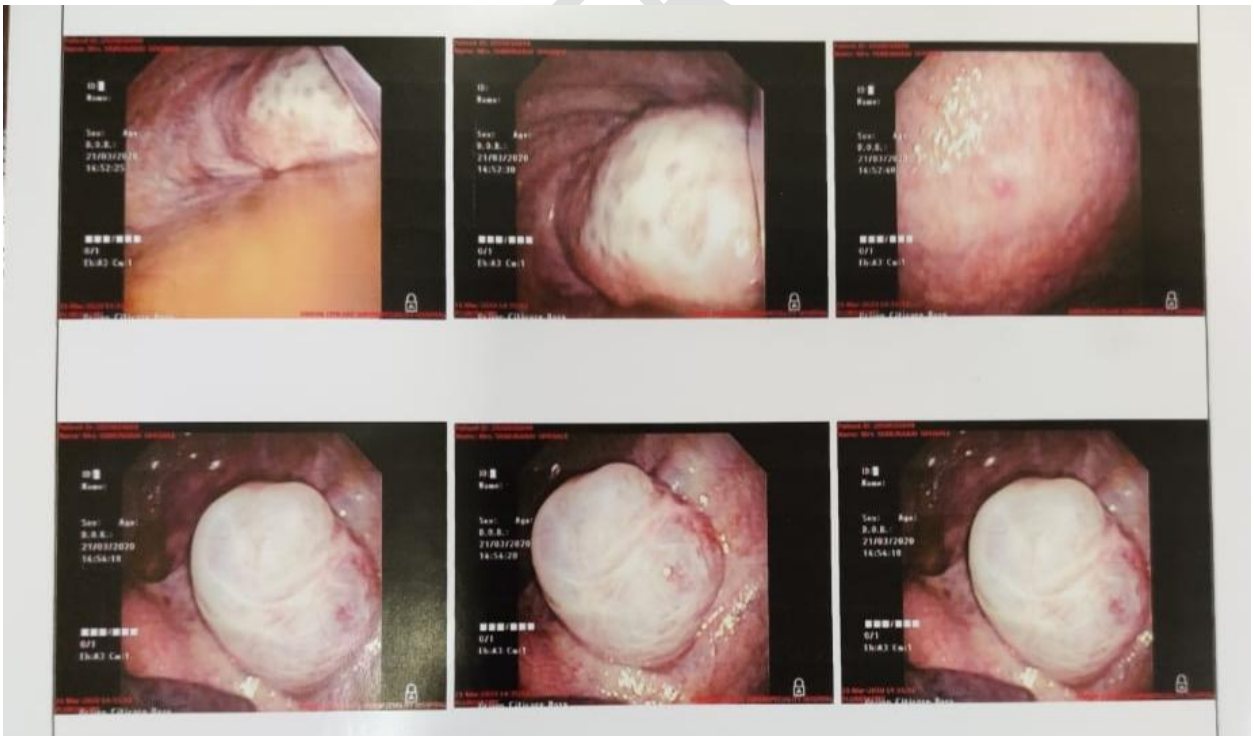

Fig.1 Thoracoscopy showing a well circumscribed mass on pleural surface.

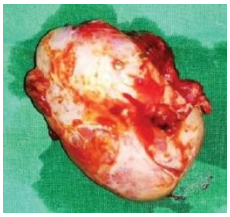

Fig. 2 shows gross appearance of excised pleural mass

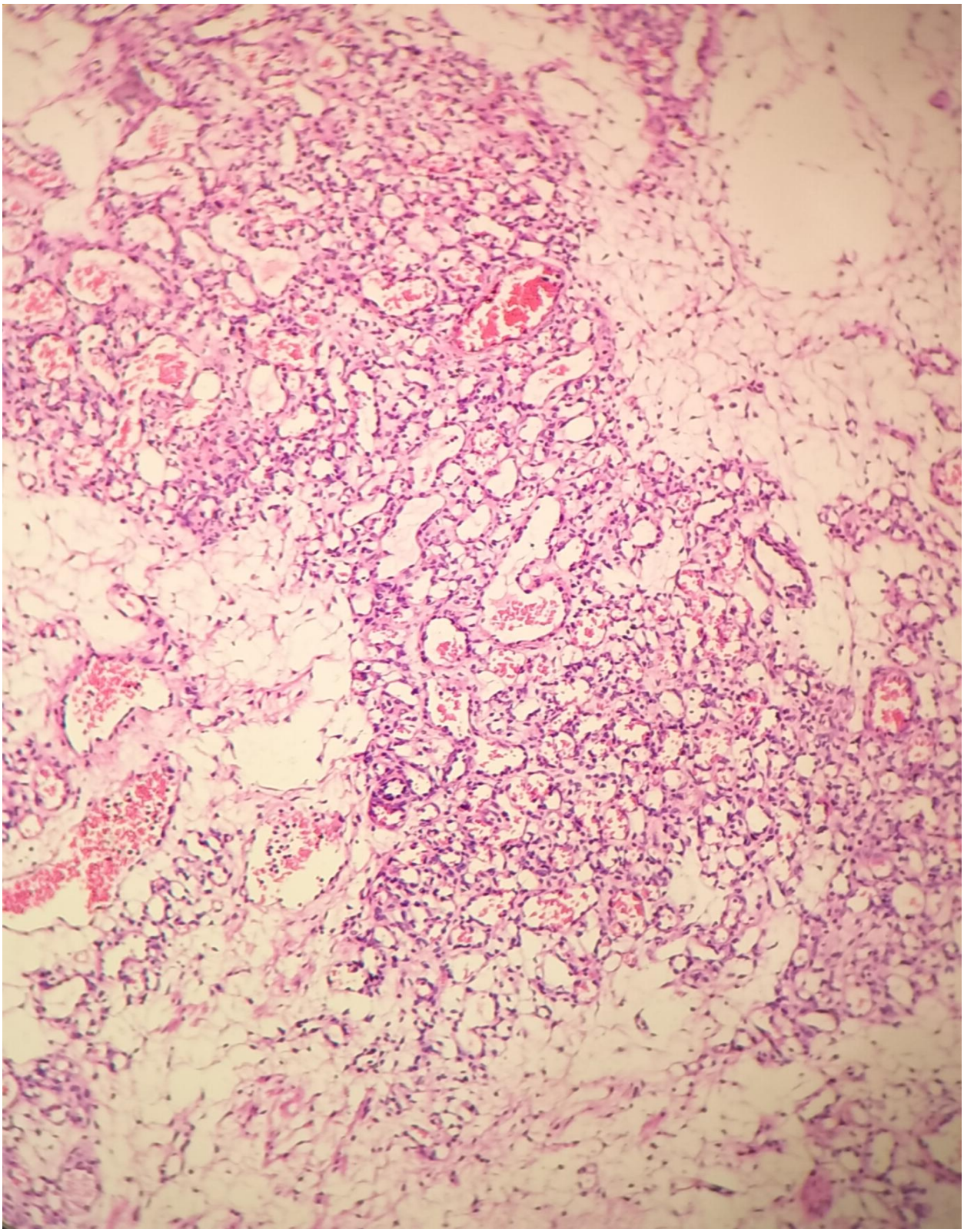

Fig. 3 from microscopic section from mass showing plenty of small thin capillaries lined by endothelium and containing RBCs in their lumina (H & E 10x X 10x)

DISCUSSION

Haemangioma is a rare benign neoplasm and can present since birth. They constitute about 7% of all benign neoplasms. It can occur externally on skin and also be seen in internal organs.(2) Capillary hemangiomas are observed in skin, mucus membrane whereas cavernous hemangiomas are generally seen in liver, bone, soft tissue and lung. Pulmonary hemangiomas of lung, chest wall (rib or muscle) and mediastinum have been reported, but rarely pleural hemangiomas are come across with. Majority of pleural hemangiomas are discovered incidentally or when they rupture and result in hemorrhagic pleural effusion. Our patient of pleural hemangioma presented clinically with recurrent massive (Lt) sided pleural effusion. Approximately 80 - 90% of haemangiomas develop before the age of 30 but our patient presented at the age of 45 years. Diagnosis of haemangioma depends primarily on imaging and pathological examinations. The most widely used imaging studies include computed tomography and MRI. The previous reported case of pleural hemangioma was diagnosed on exploration. In our case, the diagnosis was achieved on pluroscopic biopsy of mass and histological confirmation. The treatment of haemangioma should be individualized, depending on the location of the tumour mass, the depth of its infiltration, and the age and cosmetic requirements of the patient. Comprehensive treatment strategies are recommended, including dry ice cryotherapy, radiotherapy, steroid treatment, sclerosing agent injection, vascular ligation, vascular embolism and surgical excision. We managed our patient with surgical excision of the tumor.

The take home message is (1) An extrapulmonary mass with benign features and typical centripetal enhancement pattern on contrast CT should raise a suspicion of pleural hemangioma to be added in the differential diagnoses.

(2) Awareness of this possibility is important to reduce the time to diagnose and proper management, though rare in its incidence in this location.

(3) When imaging features are suggestive of pleural hemangioma, preoperative biopsy is not recommended as it may lead to torrential bleeding.(4)

CONCLUSION

To conclude, in patients presenting with recurrent pleural effusion, possibility of benign tumors like hemangioma should be kept in mind and investigated. Plurocoscopy can be a useful and easy tool to confirm etiology of such benign tumor. This is a case of capillary hemangioma located in the pleura, an extremely rare location, accompanied by recurrent pleural effusion, an unexpected presentation in this type of tumor.

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