ISSN (print) : 2589-9120
ISSN (online) : 2589-9139

International Journal of Medical Science and Applied Research (IJMSAR)

Available Online at: https://www.ijmsar.com

Volume – 1, Issue – 4, July – August - 2018, Page No. : 17 - 18

An Unusual Presentation of a Left Hemithoracic Mass in Infancy

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Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Pulmonary and mediastinal lung masses are rare in infancy. Common causes of mediastinal masses are lymphomas leukemias in anterior mediastinum and middle mediastinum, followed by germ cell tumors. Posterior mediastinum masses are neurogenic in most cases (90%). Pulmonary malignancies are due to metastasis in most cases. Common primary pulmonary malignancies in children are carcinoid tumors and pleuropulmonary blastoma. Ask in tumor is a round cell tumor in Ewing sarcoma family of tumors that arises from chest wall in children [1][3].

Case Report

A 6 months old female child, normal by birth and development, immunized for age, born of unrelated parents, presented with the complaints of increased respiratory activity and mild grade fever since 1 week. Chest x-ray was suggestive of a large well-defined homogenous radio-opacity in left mid and lower zone obliterating costo-phrenic angle. CBC was normal, inflammatory markers were raised. Saturation was 96% on room air. Child was treated with intravenous antibiotics for 10 days and other supportive measures. Repeat chest x-ray after 10 days of IV antibiotics showed no resolution of left hemithoracic opacity and symptoms persisted so CT scan was done which was suggestive of large lobulated left thoracic mass with contralateral mediastinal displacement along with multiple small nodular parenchymal lesions and pretracheal LNs. CT findings were suggestive of malignancy likely Lymphoma-leukemia.

Patient was referred to tertiary centre for further management. The HRCT chest review was suggestive of a left hemithoracic mass with a feeder from aorta hence possibility of pleuropulmonary blastoma was considered. CT guided needle biopsy was performed, showed necrotic changes. Symptoms were persistent requiring supportive measures (increased respiratory activity) so surgical opinion was taken and mass was excised by a team of cardiothoracic and pediatric surgeons.

There was significant loss of blood intraoperative requiring PRC transfusions and cardio pulmonary resuscitation. Post operatively child required ventilatory support for two days, PRC transfusions and higher antibiotics were given but could not be salvaged. Histopathological Examination of the mass revealed extensive necrosis with collapsed alveoli with caseous necrosis surrounded by Langerhans giant cells, epithelloid cells and lymphocytes. Special staining with Ziehl Neelsen stain showed no AFB.

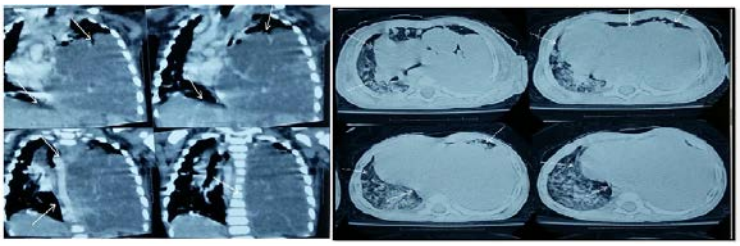

Fig 1: CT scan

Discussion

- Present case highlights the delayed diagnosis of common diseases due to uncommon presentation.
- Differential diagnosis considered were congenital, malformations, cysts, malignancies like pleuropulmonary blastoma, germs cell tumors particularly teratoma, lymphomas -leukemia
- A pediatrician must remain vigilant and key step in diagnosis of tuberculosis in its most unusual forms is initial consideration and high suspicion.

Conclusion

In a high endemic country like India, tuberculosis must be considered with lung and mediastinal masses with high suspicion as it can be promptly treated with AKT and can have good outcomes.

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