



MYCOBACTERIUM TUBERCULOSIS IN A SEQUESTERED LUNG-A CASE REPORT

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ABSTRACT Tuberculosis is one of the common infectious disease caused by Mycobacterium Tuberculosis. TB affecting sequestered lung is one of the rare presentation. Pulmonary sequestration is congenital foregut malformation, mostly manifest in childhood, uncommonly seen in adults. It is diagnosed by Contrast enhanced CT or CT angiogram to demonstrate aberrant vessel supplying the sequestered lobe. Pulmonary lobectomy or embolization of involved artery is the treatment of choice for these patients to avoid recurrent infections or hemoptysis. There are only very few case reports in Mycobacterium Tuberculosis affecting a sequestered lung. Here we present a case of 30yr old female with Intra-lobar sequestration with Bi-lobectomy done with Mycobacterium TB infection in sequestered lobe.

KEYWORDS : Pulmonary Sequestration, Mycobacterium Tuberculosis, Lobectomy.

INTRODUCTION

Pulmonary sequestration is defined as area of dysplastic and non-functioning lung tissue which fails to communicate with main bronchus. Pulmonary sequestration constitutes about 6% of all congenital anomalies of lung. It has an anomalous blood supply from systemic arteries. Pulmonary sequestration is usually a disease of childhood, in rare cases it manifests in adulthood with most common presentations being recurrent pneumonia and massive hemoptysis.(1)

CASE REPORT

A 30 years old female presented to the Chest OP SVRR Government Hospital Tirupati Andhra Pradesh, with history of recurrent cough with mucoid sputum, shortness of breath for 1month. There was no history of fever, loss of appetite, loss of weight or hemoptysis. She did not have any history of allergy or seasonal variations in shortness of breath. She was married and had two children. On physical examination she had bilateral expiratory wheeze. Other systems were normal.

Her lab investigation complete blood count, absolute eosinophil count were normal. Sputum gene x pert was negative for MTB. Her chest x ray revealed right lower lobe infiltrates. Hence CT chest was taken which showed consolidation in right middle and lower lobe.



Fig.1 Chest x ray showing Right Lower and Midzone opacity.



Fig.2. Contrast Enhanced CT chest Showing sequestration.

Bronchoscopy showed mucous obstruction in right upper lobe while middle lower lobes were not visualized. Contrast Enhanced CT revealed intra-lobar Pulmonary sequestration of right middle and lower lobes.

Patient was conservatively managed. Due to recurrent infections patient was referred to Thoracic Surgeon for lobectomy. Bilobectomy was done. Specimen was sent for TB gene expert which was positive for MTB. She was started on ATT and her health status improved.

DISCUSSION

Pulmonary sequestration is a solid mass of nonfunctional primitive segmental lung tissue which fails to communicate with tracheobronchial tree. It is a bronchopulmonary foregut anomaly. It can be classified into Intra and Extra-lobar sequestration. One well accepted mechanism for formation of sequestration is due to formation of accessory lung bud distal to normal laryngotracheal bud on the central part of primitive foregut. As this anomaly grows it becomes invested by mesenchymal tissue. (2)

In Intra-lobar sequestration the abnormal lung tissue lies within the substance of lung which covers it. In Extra-lobar sequestration the abnormal lung tissue lies outside the pleura and has separate pleural covering.

Intra-lobar sequestration manifests as non-resolving pneumonia, recurrent hemoptysis. Due to mucus obstruction the secretions will not be drained and gets infected. This manifests as recurrent pneumonia. The anomalous artery supplying the sequestered lobe will be source of bleeding in case of massive hemoptysis.(3)

Sequestration should be suspected in adulthood if there is a persistent opacity in posterobasal segment of lower lobe which manifest with above mentioned symptoms. Contrast CT will be suffice in diagnosis of sequestration sometimes, angiography will demonstrate abnormal vessel supplying sequestered segment.

Treatment of Pulmonary sequestration involves resection of the affected lobe. In our case VATS was done due to recurrent infection. Embolization of artery supplying affected lobe was also done, but recurrence rate is up to 25 to 47%.

Mycobacterium might have reached sequestered lobe through pores. Infection with Mycobacterium Tuberculosis may complicate Pulmonary sequestration even in the absence of other radiological findings, as in our case. Surgical resection was able to clinch the exact cause of infection.(4)

CONCLUSION

This case shows the importance of non resolving pneumonia with recurrent infection manifesting as pulmonary sequestration. Mycobacterium Tuberculosis infecting the sequestered segment is a rare finding.

Conflict of Interest: Nil

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