

30. **BRONCHIECTASIS WITH TRANS MEDIASTINAL HERNIATION OF LEFT UPPER LOBE IN 3-YEAR-OLD CHILD: A CASE REPORT**

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 <https://www.youtube.com/watch?v=vlsNiqV1-28&t=5163s>

**BACKGROUND:** Bronchiectasis is a disorder characterized by destruction of smooth muscle and elastic tissue due to inflammation which leads to permanent dilation of bronchi and bronchioles. It may develop in association with Cystic Fibrosis, a single severe episode or recurrent episodes of pneumonia and exposure to tuberculosis. The principal conditions associated with bronchiectasis are obstruction and infection. Infections primarily originate from issues with airway clearance, which cause bronchi and bronchioles to enlarge irreversibly. Vertical airways are notably affected, while distal bronchi and bronchioles are more severely affected. The degree of disease activity and chronicity may affect the histological findings. Childhood bronchiectasis can proceed to severe consequences including persistent bacterial bronchitis, in developing nations like India due to a lack of effective diagnosis and treatment as a result of poor health care infrastructure in the rural areas as well as limited awareness on the part of general public and health care professionals. **THE CASE:** A 3.5-year-old Indian boy presented with productive cough and cold for 8 days associated with low grade fever. Patient was admitted through Out Patient Department (OPD) due to respiratory distress and facial swelling. Clinical exam revealed presence of crepitation, wheeze and pectus carinatum. Patient has history of multiple hospital admissions due to pneumonia and respiratory distress. There is history of exposure to tuberculosis. His mother had been diagnosed with tuberculosis when the child was 3 months old. She received anti-tubercular drugs and is now cured. HRCT thorax reveals collapse of basal segment of right lung, trans-mediastinal space shift of left upper lobe and bi-lateral bronchiectatic changes which include unusually thickened enlarged airways exhibiting the characteristic tram-track appearance. Echocardiogram findings show thickened pericardium, mild pericardial collection and trace tricuspid valve regurgitation. The case is unique since it is quite rare for a young child to have such a severe form of bronchiectasis. **CONCLUSION:** Diagnosis can be done with the help of radiological and clinical examination. However, High Resolution Computed Tomography (HRCT) scan is the investigation of choice. Early management is a key factor in minimizing more serious complication like severe hemoptysis and cor pulmonale. Current treatment modalities include antibiotics, bronchodilators, anti-inflammatory drugs and chest physical therapy. Severe cases may require injectable antibiotics. Bronchiectasis was thought to be an orphan disease that seldom progressed to severe consequences, especially after the introduction of newer antimicrobials. There exist guidelines that advocate treatments for bronchiectasis, and reports of therapy have been shown to be linked with clinical success. However, such guidelines do not exist in India at present. This case is noteworthy as it portrays bronchiectasis in an Indian child that has proceeded to the severe complication of transmediastinal herniation, demonstrating that it is relatively common albeit under-diagnosed in developing countries. Though is an irreversible disease in adults, in children if detected early there is almost complete restoration of pulmonary function and adequate exercise tolerance. Early diagnosis with suitable

pharmacological and non-pharmacological management is critical for a positive outcome and prevention of sequelae like persistent bacterial bronchitis.

**Figure.** Digital Radiograph Showing Tram Track Appearance of Bronchioles and Collapse of Lower Segment of Right Lung.



**Key words:** Bronchiectasis; Case Report; Pneumonia; Pectus Carinatum (Source: MeSH-NLM).