

# Tracheobronchomalacia Presenting as Infantile Wheeze

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We report six months old infant with a history of recurrent wheeze, admitted for foreign body aspiration like presentation, where fibreoptic bronchoscopy revealed the diagnosis of tracheobronchomalacia.

**Key words:** *Infant, Tracheobronchomalacia, Wheeze.*

**T**racheomalacia is characterized by flaccidity of the tracheal support cartilage leading to tracheal collapse resulting in respiratory distress and wheeze, especially when increased airflow is required. If the condition extends further to the main bronchi, it is termed tracheobronchomalacia. These disorders should be considered when unexplained symptoms of wheezing or coughing are present in young infants, especially if the symptoms start four to eight weeks after birth and persist without signs of viral infection [1].

## CASE REPORT

A six months old male infant was admitted at our institution with history of repeated hospitalizations for wheeze and respiratory distress. Born as a term neonate by normal delivery, his neonatal period was uneventful. The infant developed first episode of wheeze at two months of life and was nebulized with salbutamol.

At three months of life, he was admitted for wheeze with respiratory distress and was treated as bronchiolitis for about a week. His chest skiagram at admission was reported normal. The infant used to have recurrent episodes of cough/wheeze for which he was treated by a nearby physician with oral bronchodilators and antibiotics.

At six months of age, he was readmitted at a pediatric care hospital for severe respiratory distress with wheeze. His blood counts were normal. The repeat skiagram and CT scan of the chest showed hyperaeration of the left lung with consolidation of the right upper lobe. Since the wheeze persisted despite repeated beta agonist nebulizations and imaging showed obstructive hyperaeration of the left lung, rigid bronchoscopy was performed to rule out foreign body aspiration. No intraluminal pathology was identified. Following this, the child was referred to us.

On admission, the infant was dyspneic with bilateral wheeze and decreased air entry on the left side. The upper GI barium study and echocardiography were within normal limits. Fibreoptic bronchoscopy under local anesthesia with video monitoring demonstrated dynamic compression of the trachea at the lower one-third, which was exaggerated during expiration consistent with moderate tracheomalacia. A similar finding at the orifice of the left main bronchus suggesting bronchomalacia was observed and the diagnosis of tracheobronchomalacia left side was made.

Beta-agonists were withdrawn and nebulized ipratropium and oral steroids were continued. Over a period of five days the wheeze and respiratory distress settled and the child was able to maintain SpO<sub>2</sub> of >92% at room air. The infant was advised chest physiotherapy and postural drainage, and discharged. During follow up the infant was asymptomatic with satisfactory weight gain. Repeat skiagram at follow up was normal except for hyperaeration of the left lung.

## DISCUSSION

The diagnosis of airway malacias presents a clinical challenge because of the frequent overlap of symptoms with more common childhood respiratory illnesses like asthma [1]. Fibreoptic bronchoscopy done under local anesthesia is the gold standard for the diagnosis of dynamic airway lesions [2].

Dynamic compression of the left main bronchus had presented as obstructive hyperaeration during the third episode of wheeze. It has been documented that severe bronchomalacia of the main bronchus acts as ball valve and produces hyperaeration of lung (obstructive emphysema) [3]. Impaired drainage of secretions caused by airway malacia results in backlog of secretions which may be responsible for the consolidation of the right upper lobe [4].

In airway malacias the contour of airways is maintained by the bronchial smooth muscle tone [5]. Infants with congenital airway malacias, presenting with wheeze may not improve with beta agonist nebulisation because in such lesions, beta agonists by reducing the muscle tone can aggravate the pathology. The child's improvement of respiratory problems with discontinuing of beta-agonist and continuation of semisynthetic anticholinergics (ipratropium) nebulization substantiates this. Though surgical interventions like aortopexy may be required in severe cases, majority of milder forms of airway malacias invariably improve with regular chest physiotherapy and postural drainage [1].

This case highlights the important principle that young infants presenting with recurrent wheeze and respiratory distress with poor response to bronchodilators may be advised flexible bronchoscopy as the initial investigation of choice for early diagnosis and effective management of airway malacias.

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## Double Fetus In Fetu

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Fetus in fetu (FIF) is an extremely rare cause of infantile abdominal mass where a rudimentary, malformed monozygotic-diamniotic twin grows inside the other twin. We describe a male infant with double or twin fetuses in fetu. The diagnosis was made on a computerized tomography (CT) scan of the abdomen and confirmed on surgery. Surgical excision was done and the baby did well post operatively.

**Key words:** *Computerized tomography, Double fetuses in fetu, Teratoma.*

**F**etus in Fetu (FIF) is an entity where one vertebrate underdeveloped twin develops inside the other normal host twin. Till date only about 100 cases have been reported. Most of the case reports describe a single FIF. We report a case of double FIF in a six-week-old infant.

#### CASE REPORT

A 6 weeks old infant presented to us with an abdominal lump and vomiting. The infant was born full term by

normal vaginal delivery with a birthweight of 2500g. The baby was well till 2 weeks of life when the mother noticed an abdominal lump, which gradually increased in size leading to abdominal distention. The infant also started vomiting after feeds but continued to pass normal stools. On presentation to our hospital, the child weighed 3500g and his vitals were maintained. On abdominal examination there was distension and there was a well defined firm, round, non-tender mass in the right upper abdomen, occupying the right hypochondrium and lumbar region