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Persistent Wheezing due to Recurrent Bronchogenic Cyst

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Introduction: Bronchogenic cyst is a rare benign congenital developmental abnormality of the embryonic foregut. Due to its compression effect, stenosis and infection may occur in the tracheobronchial tree. It should be considered in the differential diagnosis, although it is rarely seen in children with recurrent stridor and wheezing that is unresponsive to the treatment.

Case Presentation: A one-year-old girl was referred to our outpatient clinic due to cough, respiratory distress and wheezing for a month, and fever for 3 days. The patient with dehydration, tachypnea and desaturation was hospitalized with a pre-diagnosis of viral bronchopneumonia. In her history, she had been hospitalized several times due to episodes of recurrent bronchiolitis since 3-month-old. Bronchogenic cyst was detected on computed tomography when she was 7-month-old. Partial resection and mucosal cauterization was applied due to common wall with the trachea. The patient was symptom free for 4 months following the operation. On physical exam, body weight was 10 kg (50-75p), body height was 73 cm (50-75p). Bilateral secretory rales, rhonchi and expiratory length were heard on pulmonary auscultation. In haematology and biochemistry studies, lymphocyte dominancy was found and CRP was found to be 6 mg/dL. Other biochemical parameters were normal. Hyperaeration and peribronchial infiltrates were seen on the chest x-ray film. Influenza and Coronavirus PCR were positive in the respiratory virus panel. The patient's respiratory distress findings did not regress, despite oseltamivir, hydration and bronchodilator treatments. With suspicious of the recurrence of the bronchogenic cyst, the patient was investigated with chest computed scan that revealed 1.5x2 cm cystic lesion which narrowed the mid-trachea. Excision of bronchogenic cyst and tracheoplasty were performed afterwards.

Conclusion: Bronchogenic cysts should be considered in the differential diagnosis in pediatric patients with recurrent wheezing and stridor. Early diagnosis and treatment are important for these cysts that may cause compression due to its location. The possibility of recurrence should be considered in cases with partial resection.

Keywords: Bronchogenic cyst, child, resection, stridor, wheezing