Lungs and Breathing

Letter to Editor



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Subcarinal bronchogenic cyst requires surgery urgently against respiratory compromise

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To the Editor

Bronchogenic cyst (BC) is one of congenital pulmonary airway malformation that develops from abnormal budding of the tracheal diverticulum then lose communication with tracheobronchial tree [1-3]. BCs can be located intra or extra-thoracic. 70% of intra-thoracic BCs are developed in mediastinal cavity. Most of these are located in para-tracheal region. Histopathology of lesions reveals respiratory system histology [1]. Inner cyst layer includes respiratory secreting epithelium and mucous glands, therefore increasing in cyst's size can lead the compression of the trachea and esophagus in early newborn period [1,2]. If life-threatening respiratory compressive complications are detected BC should be surgically excised urgently [1,2,4]. Chest radiogram signs can be easily confused with lobar emphysema due to bronchial compression [2]. CT or MRI reveals well-defined ovoid cystic mass that can compressed esophagus and trachea in the mediastinum. Esophagogram should be done to exclude other foregut duplication cysts such as esophageal duplication cyst or neuroenteric cyst [1,2,4]. Here, I aimed to emphasize the importance of the management of the CB to prevent unwanted complications in respiratory compromised newborn.

A 27-day-old male weighing 4100gr was admitted for progressive respiratory distress following birth. He was referred to our hospital for suspicion of mediastinal mass in chest x-ray. He had also feeding difficulty. Tachypnea and mild cyanosis were also detected. Tumor markers were within normal limits. Chest radiogram showed airtrapping in left hemithorax resulting from left main bronchial compression of mass (Figure 1A). MRI revealed 2x2cm in sized simple cystic lesion that was located posterior to carina and left main bronchus causing emphysema in left hemithorax (Figure 1B). Esophagogram showed external compression of esophagus from the left side without luminal connection (Figure 1C). Firstly, rigid bronchoscopy was done and narrowed left main bronchus lumen due to mass compression was seen. A thin well walled cystic mass which compressed left main bronchus and carina was excised totally without damaging of trachea or esophagus. Postoperative course was uneventful. He did not require ventilator support after operation. Histopathology revealed



Figure 1. A. Chest radiogram showing hyperinflated left lung and mild mediastinal shift B. MRI showing well demarcate mediastinal cystic mass C. Esophagogram showing esophageal mass compression from the left side

bronchogenic cyst. BCs can lead life threatening complications such as rupture, bleeding, infection or malign degeneration even sudden death due to compression [1]. Mediastinal BCs can easily lead tracheobronchial compression because the tissues are soft in newborn [3]. These patients required meticulous surgical excision to prevent esophageal or airway compression [1,2]. Although morphologies of the BCs are not resembled to malign masses, tumor markers should be study before surgery. Asymptomatic patients with intra-parenchymal BC should be regularly observed until elective surgery is done first 3-6 months. Since mediastinal BCs can grove after birth, patients with intrauterine diagnosed and having respiratory compromised should be closely follow-up [1,4]. In these cases Surgical excision should be done before unintended respiratory events such as tracheomalasia or bronchomalasia is developed.

References

- Scott Adzick N, Farmer DL (2012) Cyst of the Lungs and Mediastinum. pp (825-835) In Pediatric Surgery Arnold G. Coran (ed), 7th edition, Saunders company.
- Khemiri M, Ouederni M, Ben Mansour F, Barsaoui S (2008) Bronchogenic cyst: an uncommon cause of congenital lobar emphysema. *Respir Med* 102: 1663-1666. [Crossref]
- Kieran SM, Robson CD, Nosé V, Rahbar R (2010) Foregut duplication cysts in the head and neck: presentation, diagnosis, and management. *Arch Otolaryngol Head Neck Surg* 136: 778-782. [Crossref]
- Adzick NS (2003) Management of fetal lung lesions. *Clin Perinatol* 30: 481-492. [Crossref]

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