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Case Report of Bronchogenic CYST

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ABSTRACT

KEYWORDS: Bronchogenic cyst, Hemivertebrae, Tracheal diverticulum, Respiratory distress

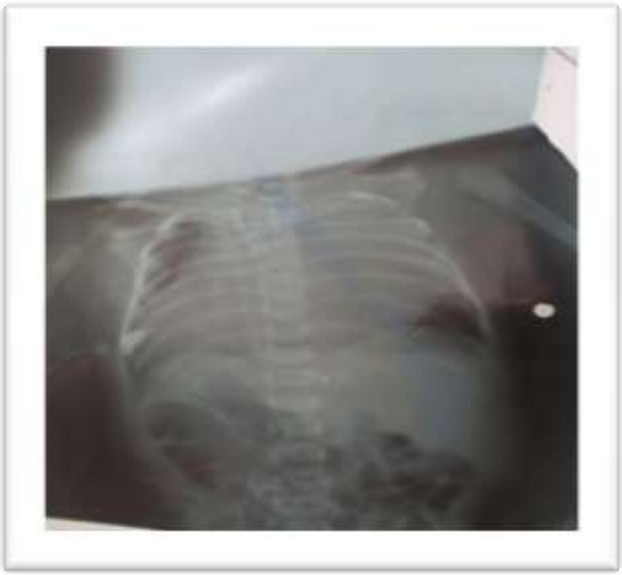
I. INTRODUCTION:

Bronchogenic cysts arise from ventral foregut due to abnormal budding of the tracheal diverticulum before the 16th week of gestation and are originally lined with ciliated epithelium. They are more commonly found on the right and near a midline structure (trachea, esophagus, carina) but peripheral lower lobe and perihilar intrapulmonary cysts are not infrequent. Bronchogenic cysts are generally benign lesions, which tend to produce few to no symptoms. However, when they present with severe and life-threatening episodes, diagnostic and therapeutic strategy can be extremely challenging.

II. CASE REPORT:

11 days newborn male baby referred from Navsari civil hospital on bag and tube as patient's ANC USG S/O probable bronchogenic cysts with severe respiratory distress due to perinatal asphyxia. Patient kept on ventilator IMV mode with sedation and IV fluid and antibiotic. CXR done suggest fairly large homogenous soft tissue opacitynoted in entire right lung which S/O benign congenital bronchogenic cystic lesion.

Ultrasound thorax was done which suggest approx. 55 x 44 mm² sized anechoic cystic lesion without vascularity, solid component and septations in right hemithorax P/O bronchogenic cyst likely. Screening 2D echo done which was normal.



A. CHEST X-RAY OF BRONCHOGENIC CYST

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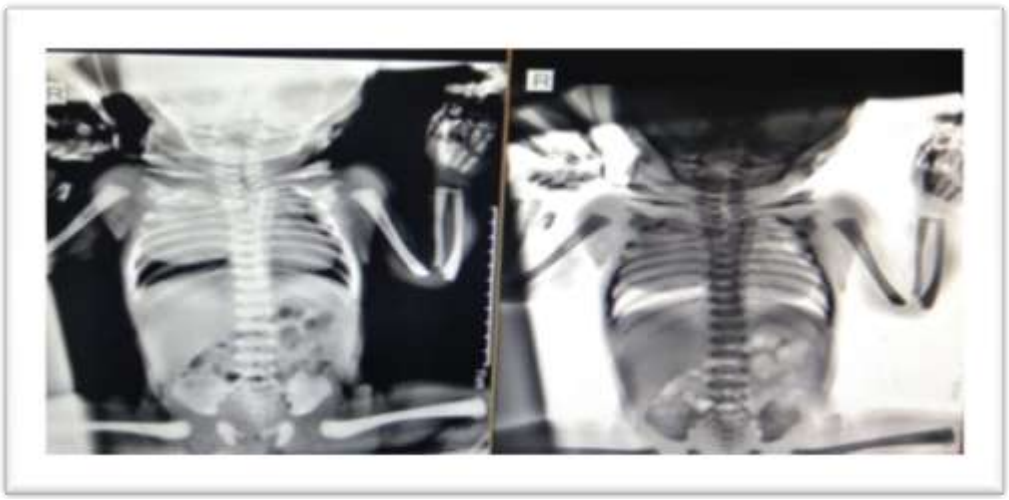

B. CT plates of bronchogenic cyst

HRCT Thorax was done suggest approx. (55x 48x 43) mm(APX MLX SI) sized well defined fluid density lesion with mediastinal origin noted in right upper and mid hemithorax extending from T1 and T9 vertebral level and causing mediastinal shift towards left side. Right upper lobe bronchus is not well visualized. Patch of collapsed lung noted in medial and lateral segments of right middle lobe P/O bronchogenic cyst more likely.

Surgery reference done. They advised higher center refer for further management. So patient was transferred to Civil hospital Ahmedabad for surgery. Patient was operated there by pediatric surgeon. Patient died due to post operation complication and catecholamine resistant shock.

C. PATIENT

III. DISCUSSION:

Bronchogenic cyst is aconsequence of an abnormality in development of a cell bud detached from the tracheobronchial tree.

They represent 15% of benign mediastinal tumors, 22% of congenital bronchopulmonary malformations and 10% to 15% of pulmonary malformations in children. Their prevalence varies from 0.04% to 0.06%.

The specific fetal timing of cyst formation likely determines the location of the cyst: early formation would seem to result in a centrallocation (i.e., trachea or main stem bronchus), whereas later

formation would likely place the cyst in the periphery (first generation,second generation of bronchi).

Location of the cyst is important in theclinical presentation. Centrally located cysts usually present early inlife with respiratory distress resulting from compression of the relatively soft tracheobronchial tree or rupture into the pleura as appearsto be the case in this infant. Cysts located in the periphery usuallypresent with infection or hemorrhage later in life, or remain asymptomatic.

The diagnosis of pulmonary malformations is currently possible thanks to advances in antenatal ultrasound which carried out during the fetal period, makes it possible to visualize it in the form of hyperechogenicity and/or cysts. When an antenatal diagnosis has not been possible, clinical symptoms are variable, depending on the size of the cyst which gradually increases with age and/or the effect of mass on adjacent structures. Thus, the cyst may be discovered by unexpectedly, when it is asymptomatic, in particular for those with a peripheral location. When the location is mediastinal, respiratory distress is earlier and the severity varies.

Bronchogenic cysts often seem to have check valves that lead totheir progressive enlargement. Such enlargement produces symptomsof air compression, which is most common in neonates and younginfants, although it does happen occasionally later in life.

Treatment, mainly surgical, consists of excision of the cyst even when it is asymptomatic. This choice is guided by the always possible occurrence of severe complications including tracheal compression or tracheobronchial obstruction, superinfection promoted by communication between the cyst and the tracheobronchial tree, rupture of the cyst, the occurrence of pneumothorax by hyperinflation of the contralateral lung sometimes accompanied by hemoptysis as well. that the occurrence of cardiac arrhythmias.

IV. CONCLUSION:

The bronchogenic cyst is a rare pulmonary malformation.In the symptomatic presentations, it can be misleading for a clinician in front of a patient with breathing difficulty and Fast breathing. Standard radiography, CT scan or chest MRI guide the diagnosis, which is confirmed by histology. Successful removal of the cyst for this clinical case is the only therapy indicated regardless of the clinical presentation. In all cases, antenatal ultrasound when done helps for further management.

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