P-003  Cervico-mediastinal thymic cyst determined by prenatal diagnosis: a case report

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Introduction: Thymic cysts can be found along the anatomical course of the third pharyngeal pouch. They are rarely seen in the neonatal period. Case report: A cervico-mediastinal cyst was indicated in a fetus at 33 weeks gestation. US and MRI showed a unilocular cyst located from the left lateral cervix to the anterior mediastinum. Thus we strongly suspected a thymic cyst. At 40 weeks gestation, the baby was delivered by an emergent cesarean section because of cephalopelvic disproportion. Though without respiratory symptoms, CT at 7 hours after birth showed that air flowed into the cyst. An emergent operation was undertaken to avoid respiratory failure or an infection of the cyst. We made a collar skin incision for the operation carried out from the thyroid position. We found the cyst was without inflammation and there was no deep adhesion beneath the anterior cervical muscles. In the cephalic area, the cyst wall converged to the left dorsum of the thyroid cartilage, where we undertook a ligation of the cyst wall. We could then extract the remaining cyst wall in the mediastinal space without median sternotomy. Postoperative progress was mostly good without atelectasis. Histological findings showed that the lumen of the cyst wall was covered by a simple epithelium, and the wall contained thymic tissue and a small amount of thyroid follicular epithelium. Conclusion: We recommend early US or CT examination after birth to check for air inflow into a cyst, which if present indicates a patent thymopharyngeal duct and is predictive of progressive respiratory failure or infection.

P-004  A Case of Lobar Emphysema. Pathological evidence of bronchial atresia

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We were referred a 6-year old boy who had developed pneumonia eight times from 3 months old with a diagnosis of lobar emphysema in the left upper lobe on chest X-ray. Multi-row Detector CT (MDCT) revealed focal over inflation in the left upper lobe but the sub-segmental bronchi couldn’t be traced to the main-stem bronchus. On bronchoscopy, the basal segmental bronchi of the upper lobe appeared normal. With a preoperative diagnosis of bronchial atresia, we decided to perform a left upper lobectomy. One thousand serial sections were made to prove bronchial continuity. The histological findings demonstrated severe inflammation and fibrotic changes around some enlarged hilar lymph nodes. Cystic dilatation was identified in B1+2b and B1+2c segments without continuity with the proximal bronchus. The final diagnosis was bronchial atresia in the sub-segmental bronchi. We speculate that enlargement of the lymph nodes obstructed the sub-segmental bronchi, causing complete obstruction of the bronchial tree. There are many theories for lobar emphysema but repeated inflammation and compression of the sub-segmental bronchus is one of the theories to explain the bronchial atresia. The repeated pneumonias might have been secondary to a stricture in the bronchus but it is still unclear whether this was congenital or acquired.