Poster V Thorax

PV1: MINIMALLY INVASIVE SURGERY FOR THE TREATMENT OF CONGENITAL LUNG MALFORMATIONS - EARLY EXPERIENCE

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Background The aim of this study is to present our experience with minimally invasive surgery (MIS) for congenital lung lesions.

Materials and methods We retrospectively reviewed medical records of infants under 2 years of age who underwent operation for a congenital pulmonary adenomatoid malformation (CPAM), internal lung sequestration (ILS), and external lung sequestration (ELS) from 2013 to 2016.

Results MIS was performed for 8 infants (male: female = 2:6): 3 with CPAM, 2 with ILS and 3 with ELS. 2 cases after detailed workup revealed hybrid lesions: ILS+CCAM and CCAM+bronchogenic cyst. In 5 patients pathology was diagnosed prenatally around gestational age of 24.7 weeks. In 3 patients it was incidental finding during diagnostic studies of comorbidities: eventeration of the diaphragm after congenital diaphragmatic hernia closure through laparotomy, suspicion of esophageal duplication or pneumonia accompanying systemic infection. The median gestational age was 38 weeks, and the median body weight was 3100 g. Four of them had respiratory distress after birth not directly associated to lung lesion. The median age at the time of operation was 7,4 months (range: 3–13 months). While awaiting operation all patients were closely monitored in outpatient clinic, none developed serious respiratory symptoms and 2 infants had experienced mild pneumonia treated routinely. The mean operative time was 156 minutes (range: 55–235 minutes). Operative time was the shortest for ELS cases (mean 82 minutes) and the longest for hybrid lesions (mean 220 minutes). Apart from ELS cases, there were 2 right lower lobectomies, 1 middle lobectomy and 2 lung sparing procedures (10 and 9,10 segmentectomies). There were one conversion: muscle sparing mini- thoracotomy for segmentectomy. There were no major perioperative complications. The infants were discharged within mean 5 days (range: 3 to 8 days). During the follow-up period, there were no cases of remnant lesions, one patient developed mild upper respiratory tract infection within 3 weeks after operation.

Conclusions MIS for congental lung malformations is safe and feasible, with excellent cosmesis and short hospital stays. Increasing experience with various MIS procedures enable introduction of lung sparing procedures in congenital lung malformations while conserving healthy lung tissue.

Key words congenital lung malformation, extra lobar sequestration, intra lobar sequestration, congenital pulmonary adenomatoid malformation, thoracoscopy, VATS