



Poster Session II (cont.)

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NON-OPERATIVE MANAGEMENT OF EXTRALOBAR PULMONARY SEQUESTRATIONS: A SAFE ALTERNATIVE TO RESECTION?

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Purpose: This retrospective cohort study compares the natural history of patients with extralobar sequestrations (ELS) that do not undergo intervention with those that are resected in order to assess the safety of non-operative management.

Methods: 126 patients with pulmonary sequestrations or congenital pulmonary airway malformations (CPAM) born between 1999-2016 were identified. 49 had ELS on postnatal imaging, with 2 patients excluded for associated congenital diaphragmatic hernia. Demographic and clinical data were retrospectively reviewed, with phone follow-up for non-operative ELS patients with no clinical records for >1 year. Statistical analysis was by Fisher's exact test (two-tailed $P < 0.05$).

Results: 40% (19/47) were managed non-operatively and 60% (28/47) underwent resection based on surgeon preference. Patients managed non-operatively were less likely to have an intrathoracic ELS: 47% (9/19) vs. 75% (21/28), $p = 0.07$. No patients developed high-output cardiac failure or pulmonary hemorrhage. No symptoms were attributed directly to the ELS; however, 2 patients had pneumonia in different locations than the ELS and 3 premature infants required ventilator support after birth. Follow-up of non-operative patients was mean 3.5 years (range 2 weeks to 10 years), during which time 1 lesion increased in size, 7 were stable and 10 were smaller on serial imaging (CT and/or ultrasound). There was 100% concordance between CT imaging and intraoperative findings. 50% (14/28) of resected lesions had foci of non-aerated CPAM on final pathology. No specimens had evidence of inflammation, infection or malignancy.

Conclusions: In our cohort of ELS patients, the ELS was asymptomatic on presentation. In those observed, no symptoms were attributable to the ELS on long-term follow-up. In those undergoing surgical resection, no concerning pathology findings were observed, even if they had a component of associated non-aerated CPAM. Although further longitudinal study is required, this study supports non-operative management of ELS as a safe, and potentially preferred, option.