DIFFICULT LUNG ISOLATION IN A CHILD WITH CYSTIC FIBROSIS

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INTRODUCTION

- Cystic Fibrosis is an autosomal recessive disorder caused by mutations in the cystic fibrosis transmembrane conductance regulator (CFTR).
- Impaired mucociliary clearance, inflammatory response and distal airway obstruction by mucus lead to colonization and proliferation of pathogens.
- Among those pathogens, Mycobacterium abscessus is one of the more prevalent nontuberculous mycobacterium which can cause debilitating lung disease.
- M. abscessus does not appear to be acquired nosocomially. It often shows limited susceptibility to treatment.

CASE REPORT

- 10 year old with CF and reoccurring respiratory infections unresponsive to medical management.
- Recent BAL showed Mycobacterium abscessus involving right lung
- Repeat CT scan shows progression of disease despite antibiotic treatment
- The patient was brought to OR for RUL and RLL lobectomy
- GA induced and peripheral IVs and arterial line were placed
- 26 F left sided double lumen tube was inserted into the trachea
- 2.2 mm fiberoptic scope was inserted in the tracheal lumen
- Visualization was found to be impossible due to thick copious secretions
- ETT was aggressively suctioned
- Despite multiple attempts by different providers the carina could not be identified due to secretions for approximately 45 minutes

INTRAOPERATIVE COURSE

- Lung isolation was achieved with the double lumen tube and the patient was turned to left lateral decubitus
- Single lung ventilation was started and provided adequate surgical conditions
- Purulent green colored secretions dripping out of DLT throughout case
- Several hours into the case tube malposition was suspected in the setting of large air leak
- Visualization of the carina was again unsuccessful due to secretions
- The DLT was blindly advanced 1 cm with improvement in ventilation
- The remainder of the procedure was uneventful and the patient was able to be extubated at the end of the procedure

DISCUSSION

- CF has an incidence of 1 in 3300 Caucasians
- Patients with CF have multorgan dysfunction and present for various OR procedures
- CF patients often have respiratory infections which lead to bronchiectasis
- Lung isolation may be difficult due to thick secretions
- In this patient, the lateral decubitus position made placement of DLT difficult due to the secretions dropping on lens of fiberoptic scope

REFERENCES

5. I. Sermet-Gaudelus et al, Emerging Infectious Diseases, Vol 9, No 12, Dec 2003