

# Facing the Challenge: Recurrent Dental Aspiration in a Complex Medical Patient

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## BACKGROUND

Pediatric foreign body aspiration is a surgical emergency requiring prompt intervention. In the pediatric medically complex population, accidental aspiration of naturally exfoliating teeth has been cited. However, a definitive clinical treatment pathway has not been developed.

## METHOD

Case study

## PATIENT PRESENTATION

This case involves an 11-year-old male with a complex medical history of Batten's disease with associated seizures, gastrostomy tube dependence, sialorrhea, impaired airway clearance, and Noninvasive positive pressure ventilation (NIPPV) dependence. The patient presented to a community hospital with increased work of breathing. Chest X-ray revealed aspiration of three deciduous teeth (Fig 1)

## HOSPITAL COURSE

### Day of Presentation – Hospital Day 1

The patient was taken to the operating room (OR) where otolaryngology successfully removed the proximal tooth, but due to lack of subspecialty instrumentation, pulmonary service was unable to remove the two distal teeth at the community campus. Patient transferred intubated to a tertiary care center.

### Hospital Day 2

The patient had a second bronchoscopy and transplant pulmonology was required to remove the remaining teeth. Postoperatively, the patient remained intubated secondary to respiratory failure from his underlying *Streptococcus pyogenes* pneumonia.



**Fig 1:** Initial chest X-Ray on presentation with multiple radiopaque foreign bodies



**Fig 2:** Deciduous tooth removed from right main stem bronchus



**Fig 3:** Remaining two deciduous teeth in infrahilar bronchus after initial surgery



**Fig 4:** Sagittal CT scan showing subsequent exfoliation of another deciduous tooth into the airway following initial two surgeries to remove teeth from airway.

## HOSPITAL COURSE CONT.

### Hospital Day 6

A routine chest X-ray confirming endotracheal tube positioning noted concern for recurrence of radiopaque foreign body in the hypopharynx. This was removed successfully in the OR (third sedated procedure since admission).

### Hospital Day 8

The dental service was consulted for evaluation and treatment, including the distraction of remaining deciduous teeth to prevent future episodes of aspiration

## CONCLUSION

Dental aspiration has been reported in the literature for medically complex patients. However, there is no definite guideline to prevent aspiration of teeth in this patient population. We present this case to emphasize the need for prompt recognition and treatment. To prevent future episodes of dental aspiration and associated complications, early dental intervention is recommended. Routine dental maintenance for complex patients is key to preventing these complications.

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