

Pediatric Dysphagia and the Instrumental Exam

Michelle Sanders, NSC Graduate Student, Dale Whitman, MA, CCC-SLP

BACKGROUND

A toddler born full term and diagnosed with a cardiac condition in utero underwent three out of state surgeries, with the final completed early in the year. Per mother's report, post-operative results included difficulty breathing (h/o intubation), vocal fold (VF) cyst and VF damage with extent unknown. Breathing difficulty resolved shortly after surgery. Nasogastric (NG) tube was inserted for full nutritional needs and subsequently required continuous placement of NG tube for more than one month. Patient was referred to an urban hospital in the Western United States by her primary care physician for an outpatient Modified Barium Swallow (MBS) exam to determine difficulty for swallowing/feeding, treatment strategies, and decisions regarding alternate route(s) for feeding, specifically to determine safety for initiating oral feeding at home with mother and removal of NG tube.

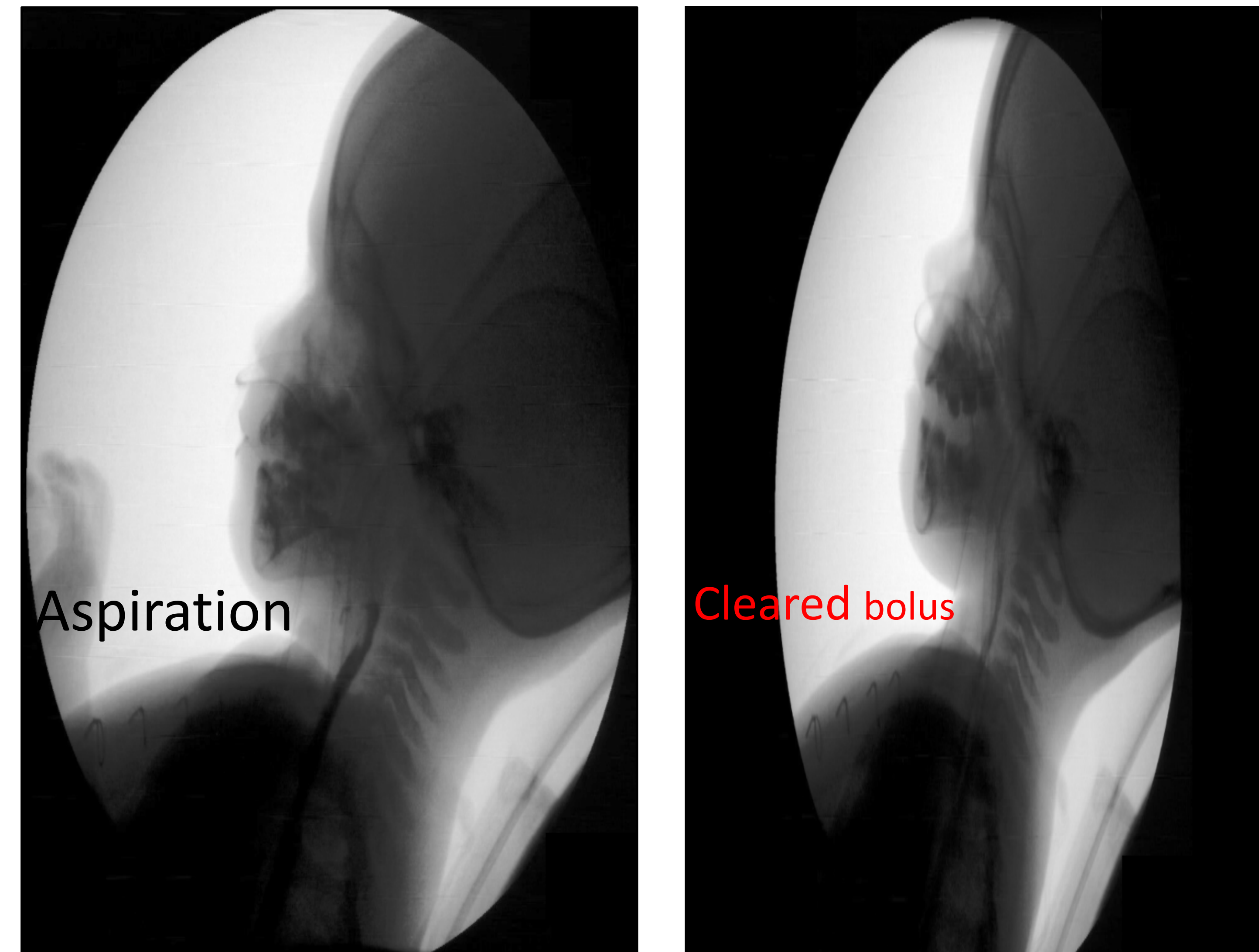
PURPOSE

To demonstrate use of instrumental examination (i.e., MBS) for basing swallowing/feeding treatment decisions for pediatric patients with dysphagia and risk for poor nutrition, leading to recommendations that support optimizing nutrition, development, and health outcomes. Instrumental exam allows for a safe method to evaluate patients to reduce aspiration risk. Clinicians can determine safe feeding/swallowing strategies and need for alternate feeding route, as well as recommend diet based on the International Dysphagia Diet Standardization Initiative (IDDSI) Framework (Steele et al., 2021). Management of pediatric feeding difficulty is essential to promote nutrition, developmental and health outcomes [2-25% of those typically developing and up to 80% of those identified for developmental disorders have history of feeding difficulty (Raatz et al., 2019)].

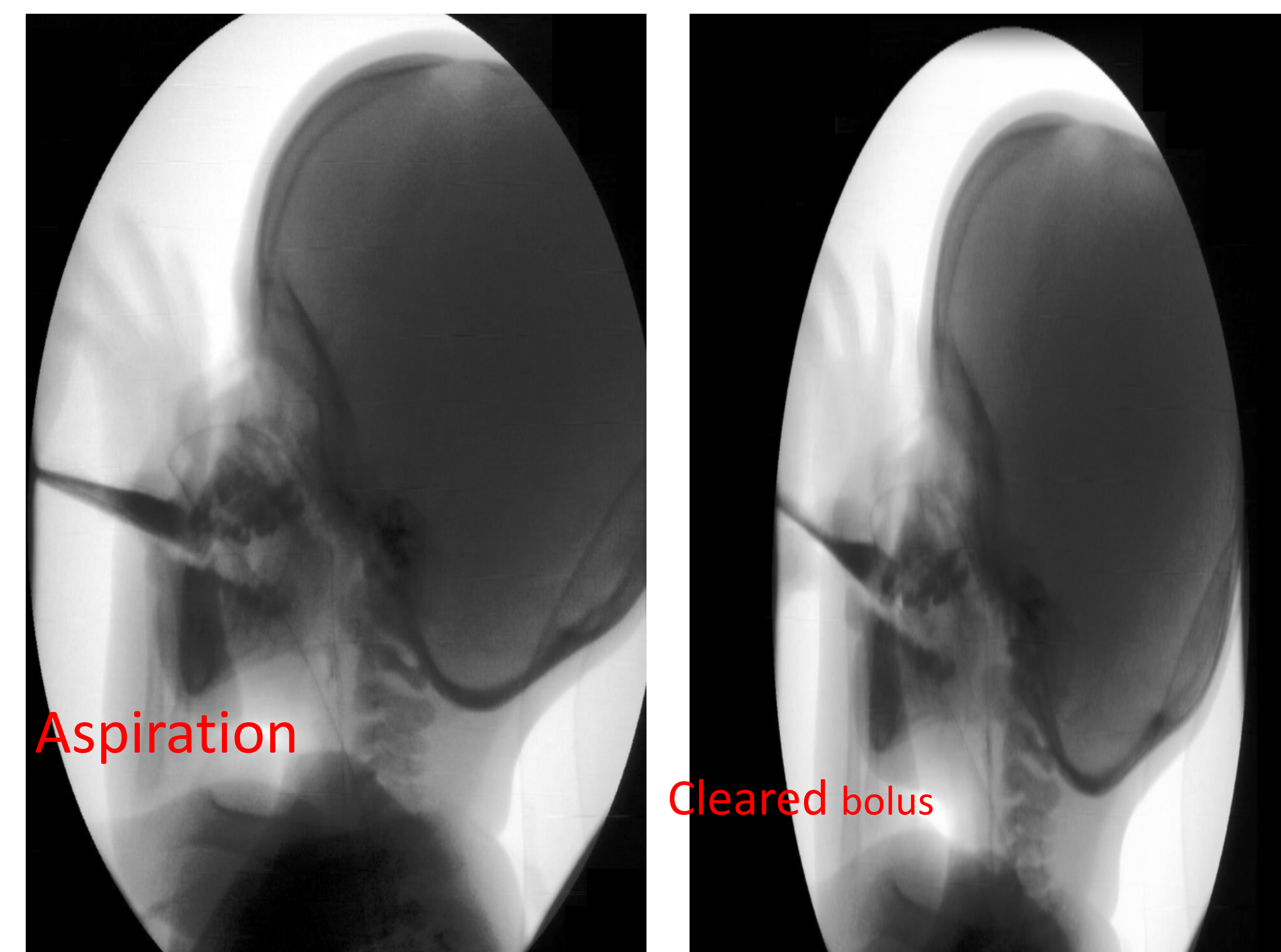
METHODS

Demonstrate use of MBS instrumental exam as a 'gold' standard approach to guide therapeutic swallowing/feeding treatment decisions for pediatric patients with dysphagia by following the treatment plan of a specific pediatric cardiac patient.

MBS #1 [aspiration with thin, cleared with thinned puree]



MBS #2 [aspiration with thin, cleared with thinned puree]



RESULTS

The initial MBS revealed aspiration with thin liquids indicating need for keeping NG tube in place and allowing supplemental/pleasure feedings with thinned pureed texture. Recommendations provided by Speech-Language Pathologist (ST) included diet modification and feeding strategies. Subsequently, the patient returned one week later for second MBS. Improved swallowing was observed as indicated by decreased prevalence of aspiration with thin texture, stronger VQ, and continued success with thinned puree [baby food pouch]. Based on results of the second MBS and consultation with the medical team and mother, team agreed to remove NG tube and initiate full oral feeds with thinned puree texture. Associated risk for tube feeding leading to infection, oral intake aversion, and traumatic effects of prolonged weaning on patient and caretakers (Mason et al., 2005) was considered. Additionally, Parent Report (s/p 2 months following MBS): Parent reported continued success with recommended diet and improved vocal quality.

CONCLUSIONS

As evidenced by patient case review and available research regarding MBS instrumental exam, it is an effective method for determining treatment decisions for pediatric patients with swallowing/feeding impairment.

References

- Mason S. J., Harris, G., & Blissett, J. Tube feeding in infancy: Implications for the development of normal eating and drinking skills. *Dysphagia*. 20 (1) 46-61.
- Raatz, M. K., Ward, E. C., & Marshall, J. (2020). Telepractice for the delivery of pediatric feeding services: A survey of practice investigating clinician perceptions and current service models in Australia. *Dysphagia*. 35, 378-388.
- Steele, C. M., Martin-Harris, B., Gosa, M., & Edwards Allen, B. (2021). Diagnosis and management of swallowing physiology: Standardized contrast, the MBSimp, & IDDSI framework. *Applied Radiology The Journal of Practical Medical Imaging and Management*. 1-12.
<https://appliedradiology.com/Articles/diagnosis-and-management-of-swallowing-physiology-standardized-contrast-the-mbsimp-the-iddsi-framework>

X-ray pictures were approved to share

