Research Days

May 2nd, 11:30 AM - 1:30 PM

Soft palate teratoma: 5 month old presenting with failure to thrive and severe obstructive sleep apnea

Anna Lawrence

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Submitting/Presenting Author: Anna Lawrence, MD, PGY2
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☐ **Medical Student**
☐ **Resident/Psychology Intern (≤ 1 month of dedicated research time)**
☐ **Resident/Ph.D/post graduate (> 1 month of dedicated research time)**
☐ **Fellow**

Primary Mentor: Jill Arganbright, MD

IRB Number: not applicable, consent obtained from mother

Describe role of Submitting/Presenting Trainee in this project:
Second year Otolaryngology resident at University of Kansas on Children's Mercy rotation.

Introduction:

Oropharyngeal teratomas are an extremely rare congenital tumor. They are often diagnosed prenatally and can cause significant airway obstruction and feeding difficulties at birth. We present a 5-month old female that was diagnosed with a palatal teratoma that presented with failure to thrive, difficulty feeding and eventually with severe obstructive sleep apnea.

Case Description:

We present a 5 month old term, otherwise healthy female who initially was breastfeeding well. After an episode of RSV at one month old she become stridulous and had difficulties with feeding. She was seen by an otolaryngologist at 3 months old who performed both an awake and sedated airway evaluation. Findings showed only mild laryngomalacia and no surgical intervention was recommended. Due to continued poor weight gain, at 4 months old a nasogastric tube (NGT) was placed. Despite enteral feeds, working with a lactation consultant and a feeding specialist, she failed to gain weight and her breathing become increasingly noisy. She was subsequently admitted for further work-up at age 5 months. At the time of admission she had severe stridor, failure to thrive, and was in the 0.07th percentile for weight. A sleep study showed severe obstructive sleep apnea with an AHI of 172.5 and oxygen nadir of 74%. Evaluation by a pediatric otolaryngologist revealed a palatal mass obstructing her left oropharynx. Flexible nasopharyngoscopy showed a patent right nasal passage and a large mass obstructing the left nasopharynx. She was taken to the OR for biopsy and debulking of the visible intraoral portion of the mass. A subsequent MRI revealed a 2.2 x 2.2 x 1.8cm expansile left soft palate mass with significant extension into the soft palate musculature. There was no evidence of extension into other structures. Pathology resulted as a mature teratoma with evidence of glial and intestinal tissue. Post-operatively she had significant improvement in her breathing, feeding, and sleeping. Plans for full excision of palatal mass are underway.

Discussion:

Teratomas occur in 1:4,000 births and display a female predominance. The head and neck region only represents 5-15% of these tumors and only 2% are located in the oropharynx. There is no pathognomonic characteristics found on imaging and diagnosis is made pathologic identification of two of the three germ cell layers. Identification of various tissues such as bone, muscle, exocrine glands, solid organs, intestinal tissue, neuroglial, skin, and teeth are possible within the tumor. Although most teratomas are benign, there is potential for malignant transformation involving any of the represented germ cell layers. Many teratomas are diagnosed prenatally and can be quite large, often requiring Ex Utero Intrapartum Treatment or, EXIT, procedure at birth to establish a safe airway. Overall, this case highlights the importance of a thorough head and neck exam including a bilateral flexible laryngoscopy when evaluating an infant with airway obstruction. Providers evaluating these patients should consider oropharyngeal masses, such as teratoma as part of the differential to ensure accurate and timely diagnosis.