Introduction

Branchial anomalies are the second most common congenital pediatric head and neck mass. Conversely, enteric duplication cysts occur in 1:4500 births, and about 1% of these are cervical. We present an interesting case of two synchronous congenital neck masses resulting in facial nerve weakness.

Case Report

A 5 week old girl, fraternal twin, born at 37 weeks, presented to clinic for evaluation of a right facial mass that was diagnosed in utero at 10 weeks gestation. Exam revealed a 5 by 7 cm cervicofacial mass and a IV/VI House-Brackmann score.

MRI demonstrated a bilobed mass with two distinct components. The anterior portion abutted the parotid (Fig 1). Serial electromyogram (EMG) studies were performed to evaluate facial nerve function. Function initially improved after birth but then plateaued at approximately 11 months old. Surgery was recommended at this time. Intraoperatively, the lesion was found to be protruding between the digastric and sternocleidomastoid and extending to the retroesophageal space, skull base and mastoid ring.

Pathology demonstrated two distinct lesions: branchial cleft cyst and foregut inclusion cyst (Fig 2).

Discussion

First branchial anomalies are congenital malformations closely associated with the facial nerve. Enteric duplication cysts can occur anywhere along the alimentary tract but are rare in the head and neck. They form when foregut-derived epithelium persists during development.

Treatment of both of these congenital masses typically involves surgical resection. However, this case was complicated by the synchronicity of the lesions and their affect on facial nerve function. By following facial nerve function with serial EMG performed by the Neurology service, surgery was optimally timed for potential facial nerve function recovery.

Conclusion

When evaluating complex pediatric head and neck masses, Otolaryngologists should consider a broad differential in developing a treatment plan. We advocate for a multidisciplinary approach in decision making for pediatric head and neck cases with an unclear diagnosis. Collaboration both within the Otolaryngology department and with Neurology, as well as open conversations with the patient’s family, led to a safe and efficacious treatment plan.

References


