TRAUMATIC SUBMANDIBULAR SIALOCELE IN A PEDIATRIC PATIENT

Sarah Maurrasse, MD; Victoria Banuchi, MD; Alison Maresh, MD

Traumatic injury to the submandibular gland and region is very rare due to the anatomical protection provided by the mandible. While the management of more common injuries related to the salivary glands—such as parotid fistulas and sialoceles—is well described in the literature, there are very few cases, and none involving pediatric patients, that address submandibular and sublingual trauma.

We present a case of submandibular sialocele in a 6 year-old girl due to blunt trauma from a helmet strap after a fall from a horse. The patient presented with swelling in the right submandibular region that developed acutely after the fall and persisted for several months. The sialocele was initially thought to be due to rupture of the submandibular gland, but characteristic findings on magnetic resonance imaging (MRI) and dental records showed that the collection actually resulted from rupture of a pre-existing sublingual ranula.

Case Presentation
A 6 year-old girl presented to our office for evaluation of a right neck mass. The mass developed acutely after she fell from a horse and the chin strap on her helmet pulled up into her neck. Prior to presentation, she had been observed by another physician for three months and the mass persisted and had not changed. Exam was notable for a 4 cm fluctuant mass in level I and II with no surrounding erythema, induration, or overlying skin changes. It was nontender and the floor of mouth was normal.

Imaging
Ultrasound demonstrated a mildly complex cystic structure adjacent to the right angle of the mandible. A subsequent MRI (Figure 1) showed a 4.1 x 2.9 x 5.0 cm multi-lobulated cystic lesion spanning the right sublingual and submandibular spaces that was contiguous with the submandibular duct. It was associated with ill-defined soft tissue which was thought to represent a disrupted submandibular gland, most compatible with a traumatic sialocele.

On review of the images with a senior neuroradiologist, the mass was thought to represent a plunging ranula due to a characteristic radiologic feature—called a "tail" (Figure 2)—connecting the cystic structure to the sublingual space.

Management
Needle aspiration was performed with an 18 gauge needle, which resulted in removal of approximately 15 cc of clear saliva-like fluid that was positive for amylase. One week after aspiration, a small amount of swelling recurred, and at one month follow up, the mass had reaccumulated to its original size. The patient is now scheduled for trans-oral resection of the mass and sublingual gland.

Discussion
The patient’s dental records confirmed a history of right sublingual ranula. Therefore, the blunt trauma from her helmet strap during the fall likely caused her pre-existing sublingual ranula to progress into a plunging ranula.

The management of sialoceles due to parotid gland trauma is well described in the literature. However, trauma to the submandibular space is much less common. There are only two documented cases of traumatic submandibular gland fistula [1-2] and one of traumatic sialocele [3] in the literature. There are no reports of plunging ranula developing after trauma.

Conclusion
To our knowledge, this is the first case of a sublingual ranula progressing into a plunging submandibular sialocele due to blunt trauma.

References