Transoral Approach to Management of Plunging Ranula -- A Case Series

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Introduction

A ranula is a salivary extravasation pseudocyst lined with granulation tissue that emanates from the sublingual gland often secondary local trauma or obstruction. In some cases, saliva spreads through or around the mylohyoid muscle into the neck, termed a cervical (or plunging) ranula.
Transoral total sublingual gland excision has been elucidated to be the safest and most effective surgical intervention in treating plunging ranulas. However, the clinical presentation of a plunging ranula as a neck mass may lead the surgeon to the ill-advised decision of pursuing transcervical approach. The purpose of this case series is to share our experience in managing two patients with unique presentations of plunging ranula and to further validate transoral sublingual gland excision as a safe and effective management for this uncommon pathology.

Case 1

A 12-year-old female presented with anterior neck pain for approximately three weeks. On physical exam, there was a fluctuant mass to the submental neck with subtle edema to the left floor of mouth. Computed tomography (CT) (Fig. 1) showed a hypodense collection to the submental neck without significant intraoral component. Under general anesthesia, the submandibular duct was identified, dilated and cannulated with a stent to protect the duct for the duration of the case. An elliptical incision was made in the floor of the mouth. Using blunt dissection, the sublingual gland was isolated. Wharton's duct and the lingual nerve were identified and the sublingual gland was dissected free from the surrounding tissue. The pseudocyst was then opened with blunt dissection with subsequent expression of thick mucoid fluid. No complications were encountered and no recurrence was noted over the course of 3 years.

Case 2

A 46-year-old male presented with complaint of left-sided submandibular swelling for eight months. CT (Fig 2.) demonstrated an approximate 6 x 3 cm lesion consistent with a fluid collection that extended to the left submandibular space inferiorly and laterally to the left parapharyngeal space.

After a floor of mouth incision was created, the sublingual gland was identified and excised. The adjacent ranula was decompressed with an 18-gauge needle. Pressure was applied to the submandibular neck, resulting further release of fluid. There were no post-operative complications and no recurrence noted over the course of the subsequent two months.

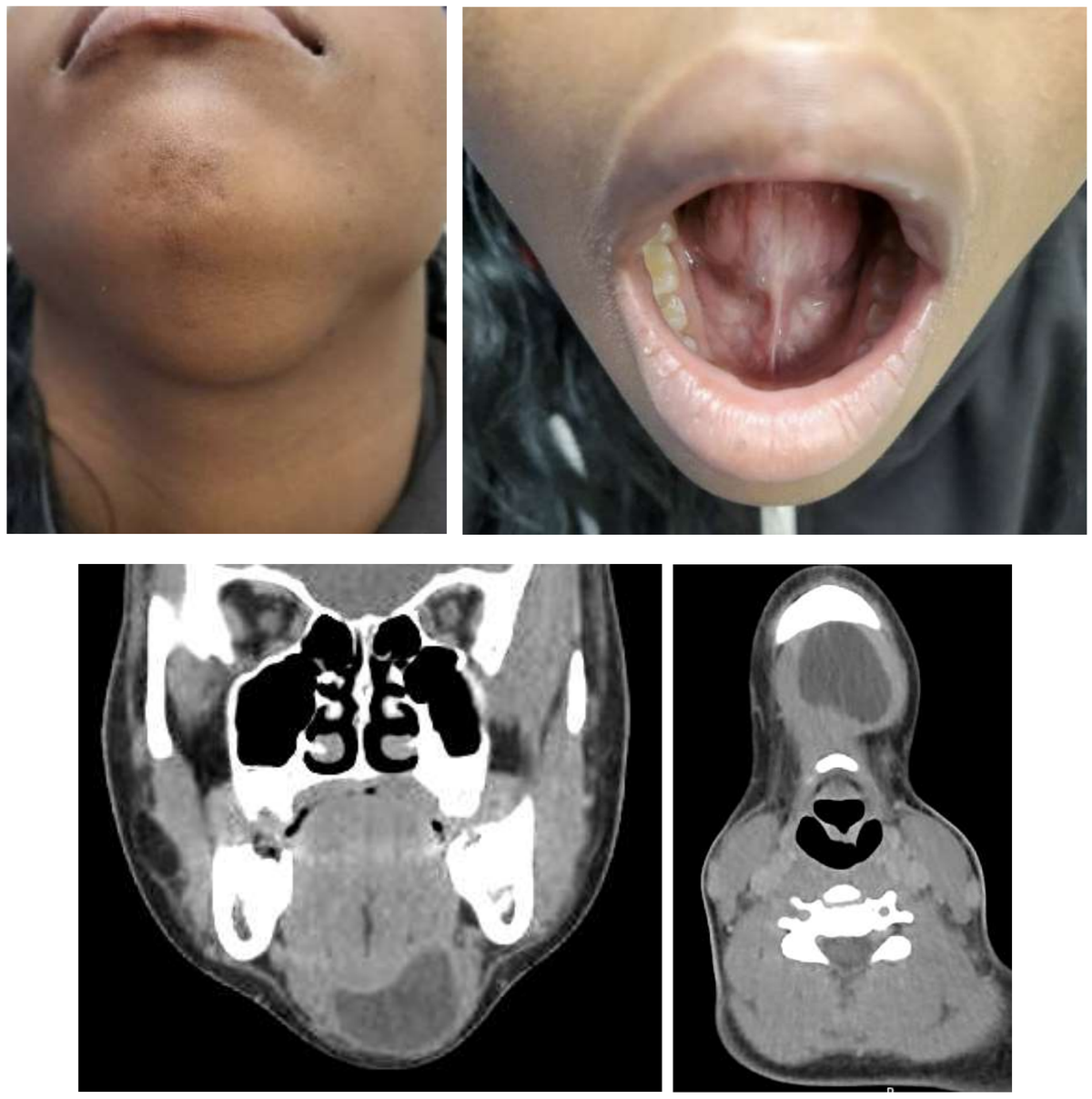

Fig 1: Plunging ranula to submental neck without significant intraoral component

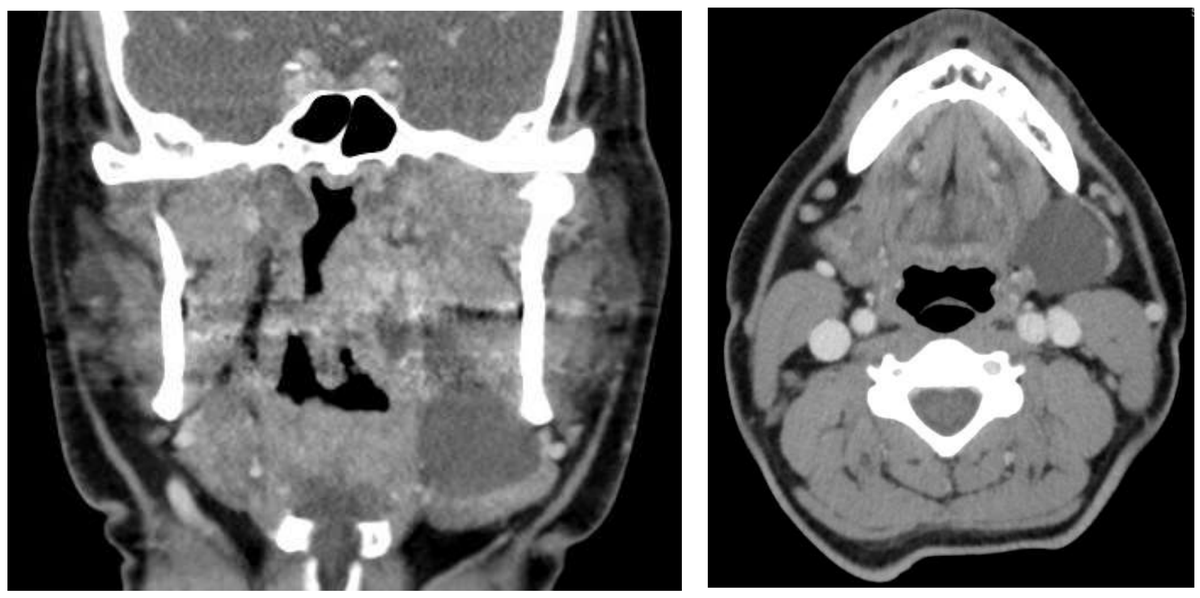

Fig 2: Plunging ranula with extension to the left parapharyngeal space

Conclusion

These two cases illustrate the effectiveness of sublingual gland excision in the treatment of plunging ranula. Multiple reports have demonstrated the efficacy and safety of ipsilateral sublingual gland excision compared to other surgical interventions. It is our hope that head and neck surgeons continue to adopt this approach for the treatment of this uncommon pathology.