

Surgical Management of Mesiodens Causing Delayed Eruption: A Case Report

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Introduction

Mesiodens are the most common type of supernumerary teeth and are typically located in the maxillary midline between the central incisors. The reported prevalence in previous studies ranges from 0.09% to 2.05%, with a higher occurrence found in males.^{1,2} Mesiodens are most commonly conical in shape and may present as erupted, unerupted, or impacted.³

Mesiodens are frequently associated with complications such as delayed or ectopic eruption of permanent incisors, root resorption of adjacent teeth, and potential for cyst development.^{1,5} Early diagnosis through clinical and radiographic examination is important to prevent these sequelae and guide appropriate management.^{2,5}

Case Report

Patient Background

Chief Complaint: Referred for an evaluation and extraction of a supernumerary due to delayed eruption of permanent incisor; parent denies sedation or General Anesthesia

Medical Condition: Attention-Deficit Hyperactivity Disorder (ADHD)

Medications: Risperidone

Allergies: None Reported

Birth: Full term, no complications

Clinical Findings:

- Delayed Eruption of #8, No soft tissue pathology or extra oral findings

Radiographic Findings:

PA (see Figure 1)

- Conical supernumerary tooth in the maxillary midline (between #8 and #9) consistent with Mesiodens
- Associated with delayed eruption of #8

CBCT

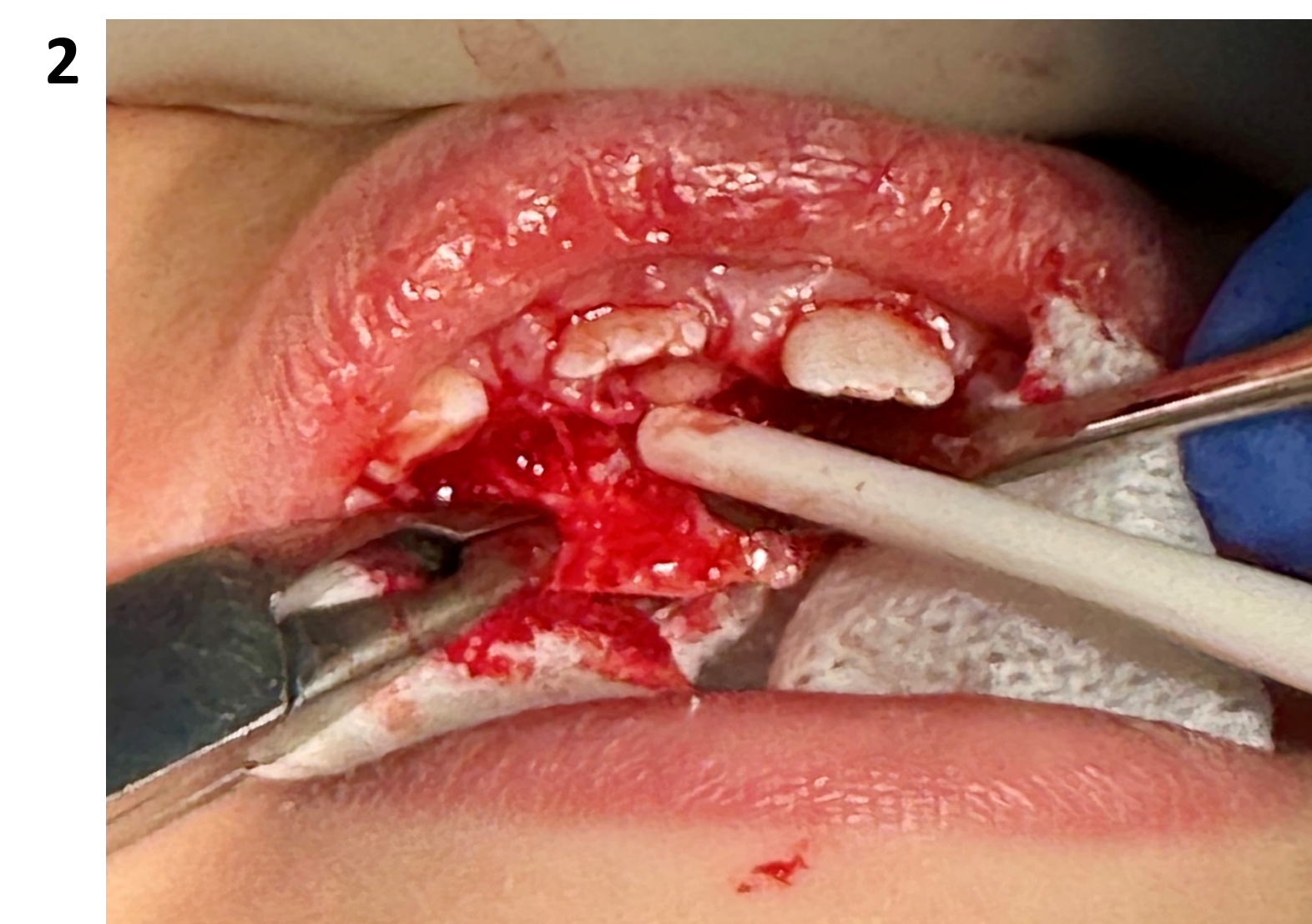
- Palatal position of supernumerary tooth

Diagnosis

Mesiodens — located palatal to #9

Treatment Plan

Extraction of Mesiodens under local anesthesia and nitrous oxide. Risks, benefits and alternatives to treatment were discussed and the treatment plan was approved by guardian of patient.



Surgical Procedure

- Local anesthesia with 4% Articaine with 1:100,000 epinephrine, achieving profound buccal and palatal anesthesia.
- A full-thickness palatal flap was reflected to expose tooth.
- The mesiodens was localized, and minimal bone removal (~1 mm) was performed to expose the tooth (see Figure 2).
- The supernumerary tooth was carefully elevated and removed atraumatically (see Figure 3 and 5).
- The surgical site was irrigated, flap was repositioned and flap was sutured (see Figure 4).

Post-Operative Management

- The patient will be monitored periodically at referring dentist office to evaluate spontaneous eruption of tooth #8.
- Orthodontic intervention may be indicated if eruption does not occur naturally or if alignment concerns persist.^{3,4}

Conclusion

Mesiodens are a common developmental anomaly that can interfere with the normal eruption of permanent incisors.^{1,2} As demonstrated in this case, the presence of a supernumerary tooth contributed to delayed eruption of the permanent dentition.

Due to its impact on the developing dentition, surgical extraction of the mesiodens was recommended and accepted by the patient's guardian. Removal of the supernumerary tooth is consistent with current recommendations when eruption is compromised.⁴

Although the patient has not yet returned for follow-up at our clinic, communication with the referring dentist indicates improvement in the eruption of the affected incisor. Continued monitoring is essential to evaluate eruption progress and determine the need for possible orthodontic intervention.^{3,4}

References

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