

Ectopic Mesiodens Near the Anterior Nasal Spine and Nasopalatine Canal: A Rare Case Report

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ABSTRACT

Mesiodens, a type of supernumerary tooth, are typically located in the maxillary midline, positioned between the two central incisors. Although these teeth are commonly impacted within the dental arch, cases where they erupt ectopically into unusual anatomical sites, such as the nasal cavity or adjacent to the anterior nasal spine, are exceedingly rare. This report details a unique case involving the ectopic eruption of a mesiodens located near the anterior nasal spine in a 14-year-old male patient. The mesiodens was successfully surgically removed under local anesthesia. This report discusses the patient's clinical presentation, radiographic findings, the surgical approach employed, and the postoperative outcome, providing insights into the management of such a rare condition.

Introduction

Supernumerary teeth, also referred to as hyperdontia, represent additional teeth beyond the normal count, deviating from the standard dental formula. Among these, mesiodens is the most frequently encountered, typically manifesting in the maxillary midline between the central incisors. While mesiodens commonly remains impacted or follows a typical path of eruption within the oral cavity, there are exceptional cases where they erupt

in ectopic locations such as the nasal cavity, the orbit, or the maxillary sinus. Ectopic mesiodens, particularly those located near the anterior nasal spine, are extremely rare, with the majority of cases remaining asymptomatic. However, some can lead to complications such as delayed eruption of adjacent teeth, nasal obstruction, facial pain, or interference with normal dental development. Early detection and timely intervention are critical

in preventing potential complications. The present case report focuses on the clinical presentation, diagnostic findings, and successful surgical management of an ectopic mesiodens near the anterior nasal spine in a 14-year-old male patient, highlighting the importance of early diagnosis and appropriate surgical intervention.

Case Presentation

A 14-year-old male patient was referred from Department of Orthodontics to our Department of Oral & Maxillofacial Surgery at CKS Theja Institute of Dental sciences and Research, Tirupati, for an assessment of irregularly arranged upper and lower teeth, along with the presence of a supernumerary tooth in upper anterior region. During the routine radiographic examination, an incidental finding revealed an unerupted supernumerary tooth, identified as a mesiodens, located near the nasal floor, close to the anterior nasal spine.

Clinical Examination:

- **Facial Asymmetry:** No significant facial asymmetry or visible swelling was noted on inspection.
- **Intraoral Findings:** The patient exhibited anterior mal alignment of the upper teeth, with a supernumerary tooth in 11 position and right permanent central incisor was buccally placed.
- **Palatal and Nasal Evaluation:** No swelling or abnormalities were noted in the palatal or nasal regions. There were no signs of nasal discharge or sinus-related issues.
- **Anterior Maxillary Region:** The maxillary anterior region exhibited no signs of infection, and there was no mobility of the teeth in the affected area.



Fig 1. (A) Frontal Profile



Fig 1. (B) Lateral View





Fig 1. (C) Intraoral Profile with Anterior Malalignment



Fig 1. (D) Supernumerary Tooth Irt 11 Position

Radiographic Findings:

- **Orthopantomogram (OPG):** A panoramic radiograph revealed the supernumerary tooth irt 11 and the presence of another supernumerary tooth located approximately 3-4mm above and between the roots of the maxillary central incisors.



Fig 2. Panoramic view revealing a supernumerary tooth irt 11 and a supernumerary tooth consistent with a mesiodens located approximately 3-4 mm above and between the roots of maxillary central incisors.

- **Cone-Beam Computed Tomography (CBCT):** The CBCT scan provided a detailed three-dimensional view, showing a well-defined hyperdense tooth like structure suggestive of a mesiodens . This mesiodens was located approximately 3-3.5mm superior to the apex of the right maxillary central incisor, in close proximity to the anterior nasal spine. The mesiodens was found to be horizontally placed and positioned palato-medial to 11, with crown facing towards nasal floor in the anterior nasal spine and no apparent connection to the oral cavity. The crown tip of mesiodens is in partial contact with nasopalatine nerve canal.

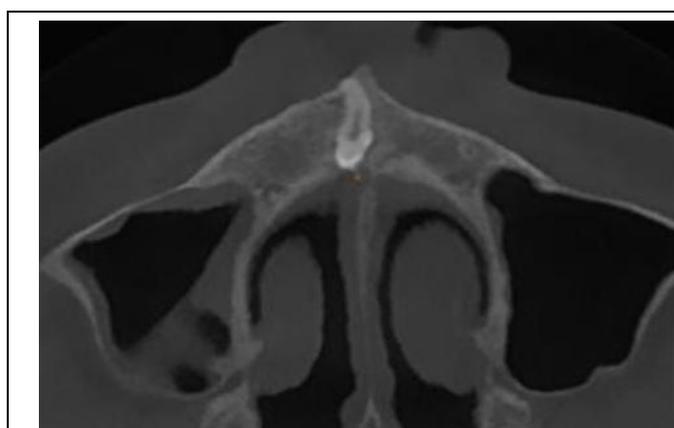


Fig 3. (A) Axial section demonstrating supernumerary tooth along maxillary midline.



Fig 3. (B) Saggital cross section-Impacted supernumerary tooth is positioned 3.0 – 3.5 mm above the root apex of the erupted supernumerary tooth in 11 region.

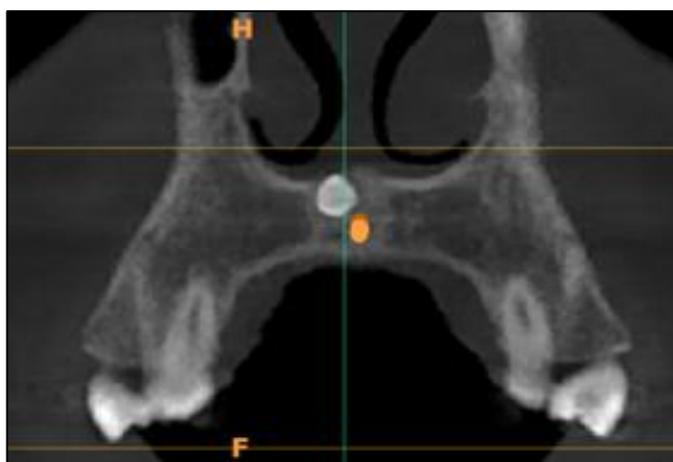


Fig 3. (C) Coronal section – Crown tip partially contacting nasopalatine canal, superior surface at nasal floor



Fig 3. (D) CBCT 3D Reconstruction- Erupted supernumerary tooth along maxillary midline (palato-medial to 11)

Diagnosis:

- Final Diagnosis: Ectopic mesiodens located near the anterior nasal spine in close approximation with the nasopalatine canal and its contents.

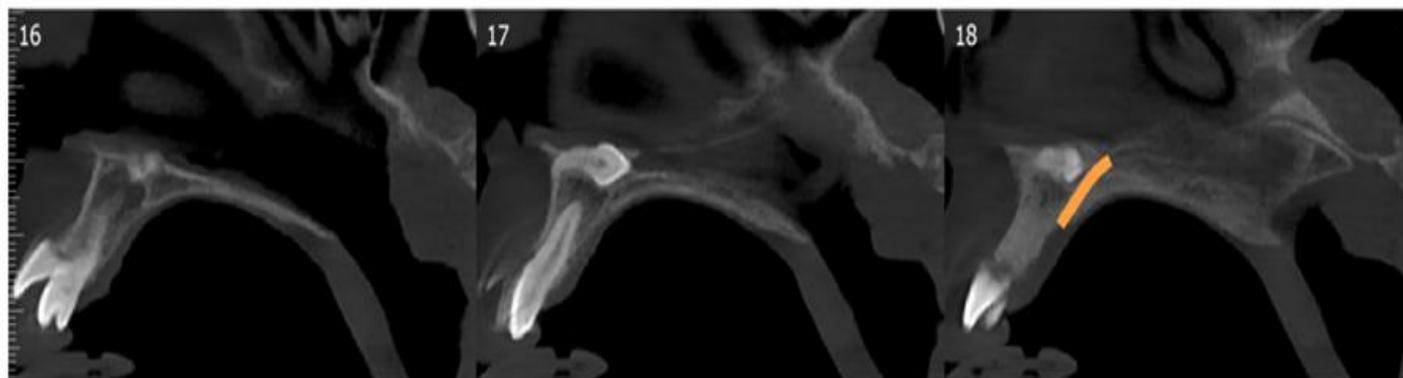


Fig 4. Ectopic mesiodens located near the anterior nasal spine

Surgical Methodology

The surgical management of the ectopic mesiodens and supernumerary tooth irt 11 was performed with great care to minimize trauma to surrounding tissues and to ensure optimal healing. The procedure was carried out under local anesthesia, with the patient being fully informed about the process, potential risks, and expected outcomes.

1. Preoperative Preparation:

- **Patient Positioning:** The patient was seated in a semi-reclined position.
- **Sterilization and Draping:** The surgical area was thoroughly disinfected with 5% betadine antiseptic solution and sterile drapes were applied to create a sterile field. A sterile surgical tray containing necessary instruments such as syringes loaded with local anesthetic agent, scalpel blades, tissue forceps, gauze pieces and 4-0 vicryl resorbable suture material were placed in advance.
- **Anesthesia :** Local anesthesia was administered to ensure complete numbness of the surgical site. The chosen anesthetic was a mixture of lignocaine 2% with adrenaline 1: 80,000, which provided both

local pain control and vasoconstriction to minimize bleeding during the procedure.

2. Incision and Flap Elevation:

- **Incision:** A Crevicular incision was placed over the anterior maxilla, with vertical relieving incisions at 13 (upper right canine) and 23 (upper left canine) regions, as it provides optimal access to the maxillary anterior region, allowing for the safe extraction of both the mesiodens and the supernumerary tooth irt 11.
- **Full-Thickness Mucoperiosteal Flap Elevation:** After making the initial incision, a full-thickness mucoperiosteal flap was carefully reflected superiorly. This step involved gently lifting the soft tissues (mucosa and periosteum) away from the underlying bone, creating a surgical window to access the mesiodens and the supernumerary tooth irt 11. The flap was raised in a controlled manner, taking care to preserve the blood supply to the mucosa and periosteum, which are vital for postoperative healing.

- Intraoperative Monitoring: At this point, a visual inspection and palpation of the flap were performed to ensure no damage to the neurovascular structures and that the flap was adequately reflected to provide a clear view of the surgical site.

3. Extraction of Supernumerary tooth irt 11 :

- **Luxation and Delivery of tooth :** Following flap elevation, supernumerary tooth irt 11 was gently luxated with periosteal elevator.
- **Forceps Extraction:** After luxation, the supernumerary tooth was carefully grasped with upper anterior forceps and delivered out without causing damage to the surrounding tissues. Given that the tooth had been retained for an extended period, there was a risk of ankylosis or firm attachment to the surrounding bone, so gentle, progressive force was applied during extraction.

4. Identification and Extraction of Ectopic Mesiodens:

- **Identification of Mesiodens:** Following the extraction of the supernumerary tooth irt 11, bony window of 6-7mm was created on buccal side, about 8mm above the alveolar crestal margin between maxillary central incisors using surgical bur. The mesiodens was situated approximately 3 mm superior to the apex of the right maxillary central incisor, close to the anterior nasal spine.
 - The mesiodens was identified as a radiopaque, tooth-like structure on the preoperative radiographs and

was confirmed intraoperatively by inspection and palpation.

- **Mobilization of Mesiodens:** Using a periosteal elevator, the mesiodens was gently mobilized from the surrounding bone. Careful dissection was performed to free the mesiodens from its position without damaging the adjacent maxillary central incisors or the delicate structures near the nasal spine. The mesiodens was placed horizontally with crown facing towards nasal floor, adding complexity to its removal, as it needed to be extracted in the opposite direction of its natural eruption path. The inverted mesiodens was carefully rotated and extracted using forceps, ensuring minimal disruption to the surrounding tissues.

5. Wound Irrigation and Closure:

- **Site Irrigation:** Once both the ectopic mesiodens and the supernumerary tooth irt 11 were successfully removed, the surgical site was thoroughly irrigated with sterile saline to remove any blood clots, debris, or remnants of bone. This step is essential to reduce the risk of infection and promote a clean healing environment.
- **Suturing:** The mucoperiosteal flap was repositioned back into its original position, and the edges of the flap were carefully approximated. The flap was sutured using resorbable sutures (Vicryl 4-0) to ensure proper healing and minimize the risk of flap dehiscence. Sutures were placed in a simple interrupted pattern, allowing for a secure closure.
- **Hemostasis :** Hemostasis was carefully achieved using gauze packs and gentle pressure to control any bleeding.



Fig 5. *Surgical procedure:*
 a) *Vertical relieving incision extending from 13 and 23 followed by Mucoperiosteal flap elevation*



Fig 5. b) *Preparation of bony window*



Fig 5. c) *Mesiodens removal via intraoral vestibular approach*



Fig 5. d) *Suturing*



Fig 5. e) *Extracted Mesiodens*

Postoperative Management:

- **Pain Control:** The patient was prescribed nonsteroidal anti-inflammatory drugs (NSAIDs), to manage postoperative discomfort. In case of severe pain, stronger analgesics could be prescribed as needed.
- **Swelling Management:** Ice packs were recommended to be applied to the affected area for the first 24 hours following surgery to help control swelling. The patient was also advised to rest and avoid any strenuous physical activity during the initial healing phase.
- **Antibiotics:** The patient was prescribed a course of antibiotics to reduce the risk of postoperative infections, depending on the patient's medical history and any allergies.
- **Oral Hygiene Instructions:** The patient was instructed on proper oral hygiene techniques, including the use of a soft-bristled toothbrush and antiseptic mouthwashes to maintain oral cleanliness without irritating the surgical site.

6. Postoperative Imaging and Follow-Up: Immediately following the procedure, an occlusal radiograph was taken to confirm the successful removal of the ectopic mesiodens and supernumerary tooth irt 11. This step ensured that there were no remaining fragments or complications, and the area was clear for normal healing

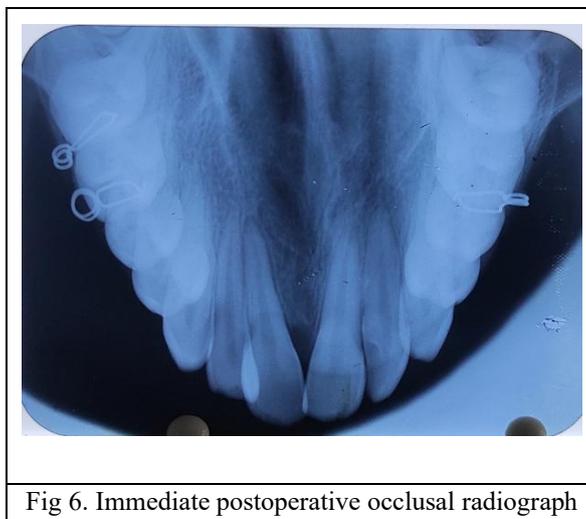
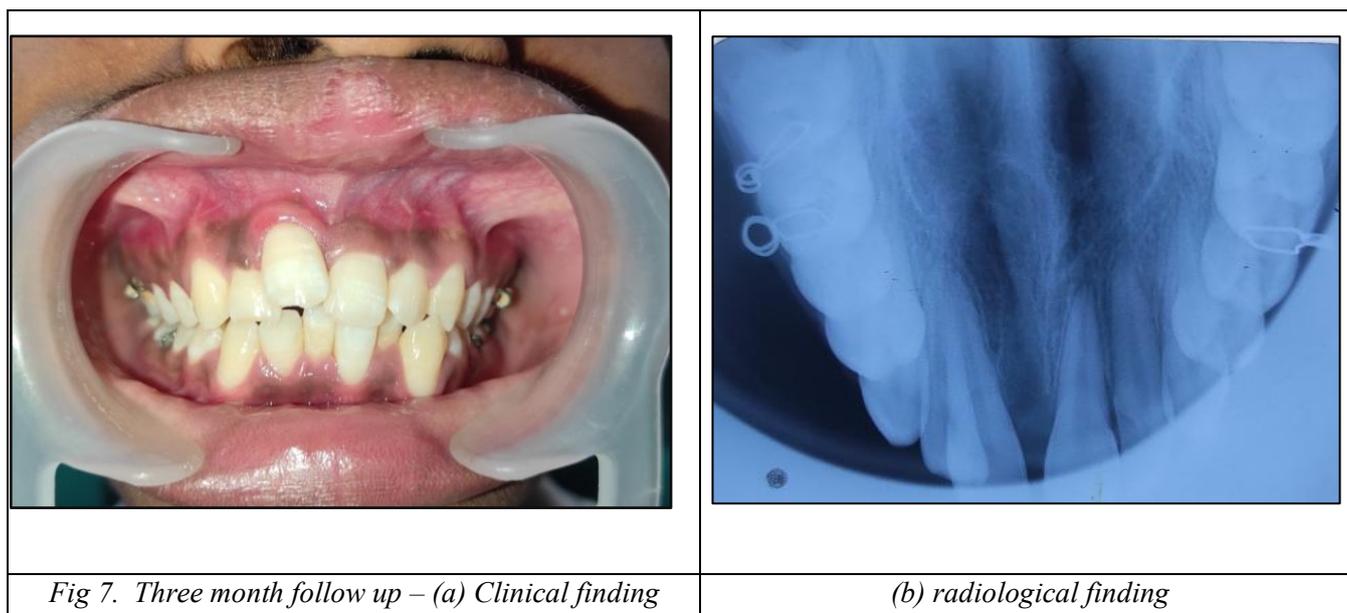


Fig 6. Immediate postoperative occlusal radiograph

- **Follow-Up Visits:** The patient was scheduled for follow-up visits at 1 week, 1 month, and 3 months post-surgery. During these visits, the healing process was closely monitored, and radiographs were taken to confirm the absence of complications such as infections and displacement of adjacent teeth.



Discussion

Mesiodens, particularly those in the maxillary midline, are a common type of supernumerary teeth. However, cases where a mesiodens erupts ectopically—especially in locations like the

anterior nasal spine—are exceedingly rare. The pathogenesis of supernumerary teeth, including mesiodens, is believed to be multifactorial, with both genetic predispositions and environmental

influences contributing to the condition. It is hypothesized that abnormal proliferation of the dental lamina leads to the formation of additional tooth buds, which may result in supernumerary teeth. Ectopic mesiodens can be asymptomatic, but they are also capable of causing significant issues such as delayed eruption of adjacent permanent teeth, nasal obstruction, and even facial swelling or pain. The use of advanced imaging techniques, particularly CBCT, is crucial for the precise localization of ectopic teeth, enabling clinicians to plan the most appropriate and minimally invasive surgical approach.

In the present case, the mesiodens was asymptomatic, which highlights the importance of regular radiographic screening, especially in pediatric patients with delayed eruption of their permanent teeth. Minimally invasive techniques were prioritized to avoid damage to surrounding structures, which is particularly important in growing patients.

Conclusion

Ectopic mesiodens near the anterior nasal spine is an extraordinarily rare occurrence, but early diagnosis and intervention are essential for ensuring normal dental development and avoiding long-term complications. The use of advanced imaging techniques such as CBCT and timely surgical management played a key role in the successful outcome of this case. Regular follow-up and careful monitoring of dental development are crucial in pediatric patients, particularly in cases where delayed eruption is observed. This case underscores the significance of early identification and conservative surgical management in the prevention of future complications.

References:

- [1] Elseyoufi M, Alrabiaa AH. Removal of nasally impacted mesiodens by maxillary vestibular transnasal approach. *Advances in Oral and Maxillofacial Surgery*. 2023; 10:100420.
- [2] Urechescu H, Banu A. Intraoral Approach Through the Nasal Floor for Surgical Removal of Inverted Mesiodens: Protocol and Case Series. *Journal of Clinical Medicine*. 2024.
- [3] Mason C, Azam N, Holt RD, Rule DC. A retrospective study of unerupted maxillary incisors associated with supernumerary teeth. *Br J Oral Maxillofac Surg*. 2000; 38(1):62-65.
- [4] Alfayez N, AlRashed S, AlHumaid S. Ectopic nasal tooth: A case report. *Int J Surg Case Rep*. 2021; 88:106459.
- [5] Choi YS, Kim YD, Hoon C. Intranasal supernumerary tooth in a child: a case report. *Turkish Journal of Pediatrics*. 2021.