

Access to the Mandibular Angle Using a Sagittal Split to Address Pathologic Displacement of a Mandibular Third Molar

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Access to the mandibular angle for removal of pathology poses a unique challenge to surgeons. Intraoral approaches result in considerable bone removal and potential damage to the inferior alveolar nerve (IAN). Extraoral approaches are associated with a cutaneous scar and the potential for facial nerve damage. This report describes the case of a 53-year-old man with a deeply impacted third molar associated with a cystic lesion that was treated by enucleation using an intraoral sagittal split osteotomy. This approach allowed for complete access and visualization of the cyst and displaced third molar and protection of the IAN with minimal surgical morbidity.

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Proximity to important structures such as the inferior alveolar nerve (IAN) has been described as a relative contraindication to third molar removal.¹ However, in the presence of pathology, removal of deeply impacted teeth is necessary. Extraoral approaches have been described as an alternative technique for third molar removal.^{2,3} Such a technique creates an external scar and can result in facial nerve injury. In addition, a considerable amount of the osseous structure must be removed and complete visibility while protecting the IAN might be limited. Intraoral approaches also can produce serious morbidity and visibility is often decreased, especially when a lesion has displaced a tooth to the inferior border of the mandible. Removal of the tooth and associated pathology using such an approach can result in a mandibular fracture or permanent IAN injury. Third molars have been successfully extracted as part of bilateral sagittal splits for orthognathic surgery.⁴ A sagittal split osteotomy (SSO) allows the surgeon to directly visualize and protect the IAN and gain complete access to the displaced tooth and surrounding lesion.

This report describes a case in which an SSO was used to approach a deeply impacted third molar with associated pathology.

Report of Case

A 53-year-old man presented with an expanding mass in his left mandible. He complained of a pressure sensation and tinnitus, but denied any pain or dysesthesia.

He had no noteworthy medical history. On physical examination, he had no swelling and cranial nerve V3 was intact bilaterally. Intraorally, his occlusion was stable and he had no swelling or drainage.

His panoramic radiograph showed a deeply impacted lower left third molar with roots at the level of the inferior border. A pericoronal radiolucency also was noted (Fig 1).

A cone-beam computed tomogram (CBCT) confirmed the presence of a pericoronal radiolucency in close proximity to the IAN and bony expansion (Fig 2).

An intraoral biopsy examination was performed and was consistent with an inflamed dentigerous cyst

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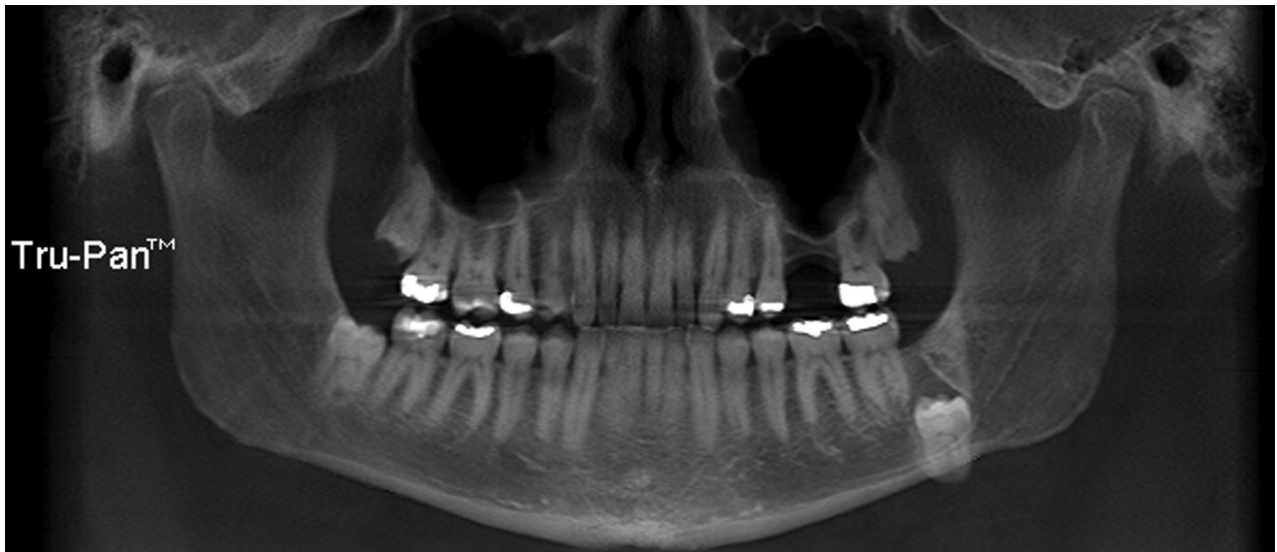


FIGURE 1. Preoperative orthopantomogram.

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(Fig 3). He was referred to the authors' institution for further management.

Owing to the extent of the lesion and amount of displacement of the tooth, the decision was made to perform an SSO to gain access for removal.

He was brought to the operating room and nasally intubated. Local anesthesia was administered (1% lidocaine 10 mL with 1:100,000 epinephrine, 0.25% bupi-

vacaine 4 mL with 1:200,000 epinephrine) and a dart incision was made. A subperiosteal dissection was carried out on the buccal and lingual and the mandibular lingula was identified. A corticotomy was performed from the medial surface of the ramus down the external oblique ridge and the lateral surface of the mandible anterior to the antegonial notch. A sequence of osteotomes and a 3-prong spreader were used to

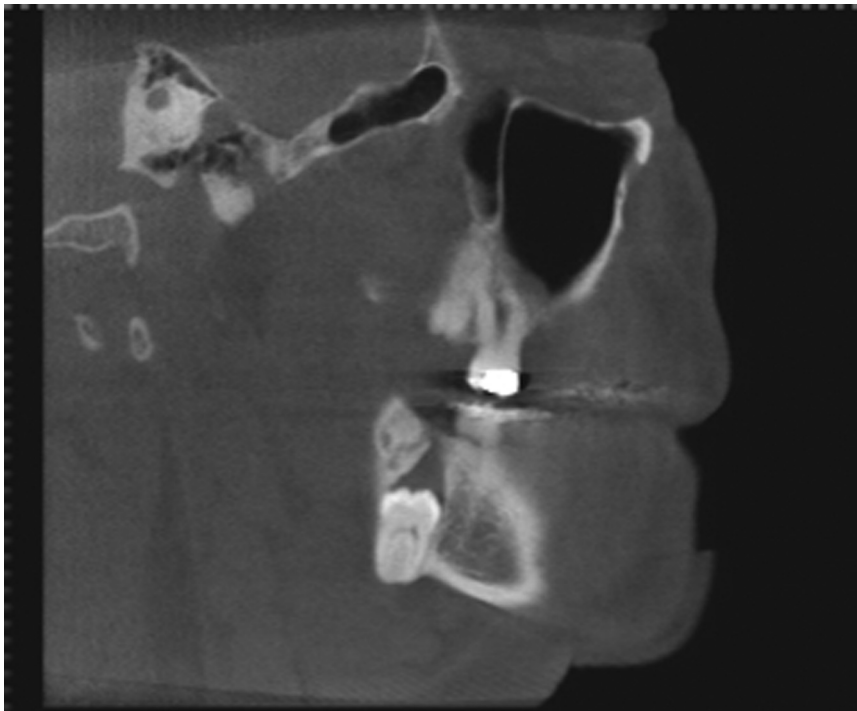


FIGURE 2. Sagittal cut of preoperative cone-beam computed tomogram.

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