Preventive conduct for ectopic third molar extractions - Clinical case report

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ABSTRACT

Third molars are one of the great challenges in oral surgery due to the most diverse positions that these teeth find in the dental arch, as suggested by the classifications described by Pell and Gregory*, according to MEDEIROS et al.1. Added to this, we also have morphological variations of the roots in number and shape. This case report aims to bring a preventive approach to the extraction of ectopic third molars, which are at high risk of migrating to other anatomical spaces during the operative act, bringing more tranquility to the dentists action in outpatient or hospital surgeries.

After confirmation of the need through Computed Tomography, the patient underwent surgery to remove the third molar tooth following normal surgical protocols until the exposure of the dental element, where a ligature wire was passed through the tooth after drilling it, to guarantee its traction without the possibility of taking it to the submandibular space.

The surgical act was performed with tranquility by the approach used, the patient was followed up in the trans and postoperative period, with excellent results.

We conclude that the strategy used enshrines an efficient method to reduce the occurrence of intraoperative accidents in relation to noble spaces of the facial anatomy.

Keywords: Molar, Third, Preventive Dentistry, Tooth Extraction, Wisdom Tooth, Impacted Tooth, Ectopic Third Molars.

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INTRODUCTION

The third molars are one of the great challenges in oral surgery due to the most diverse positions that these teeth are found in the dental arch, as suggested by the classifications described by Pell and Gregory, according to MEDEIROS et al.(1). Added to this, we also have morphological variations of the roots in number and shape.

Other difficulties arise from ectopic positions, creating greater problems for the professional who will perform the removal of these teeth in an outpatient clinic, even for specialists in oral and maxillofacial surgery and traumatology.

Among these difficulties are the anatomical spaces, such as the submandibular space, where the third molars can migrate during the surgical procedure, often requiring the performance in a second surgical stage, often in a hospital environment.

This case report aims to bring a preventive approach to the extraction of ectopic third molars, which have a high risk of migrating to other anatomical spaces during the surgical procedure, bringing more tranquility to the action of the dental surgeon in outpatient or hospital surgeries.

The case presented here was carried out in a clinic for improvement and specialization in surgery.

CASE REPORT

The following case is addressed in a clinic of improvement and specialization in surgery, with the performance of extraction surgery of the mandibular third molar on the right side in a vertical position.

A computed tomography scan was obtained with axial sections of 0.125 mm thickness using the Small Volume Volumetric Technique, with orientation parallel to the occlusal surface, followed by transaxial reformatting. The report showed the presence of the impacted right mandibular third molar in a vertical position, displaced in the basal direction, with its crown inclined to the buccal position, located in the region of the right retromolar trigon, and with its apical portion in continuity with the lingual cortical bone. Extensive pericoronal bone rarefaction was observed associated with the same tooth, with interruption of the alveolar bone crest and lingual cortical bone; thinning of buccal and lingual cortical bones. (Figures 1 and 2)

Figure 1: Panoramic view of tomographic sections

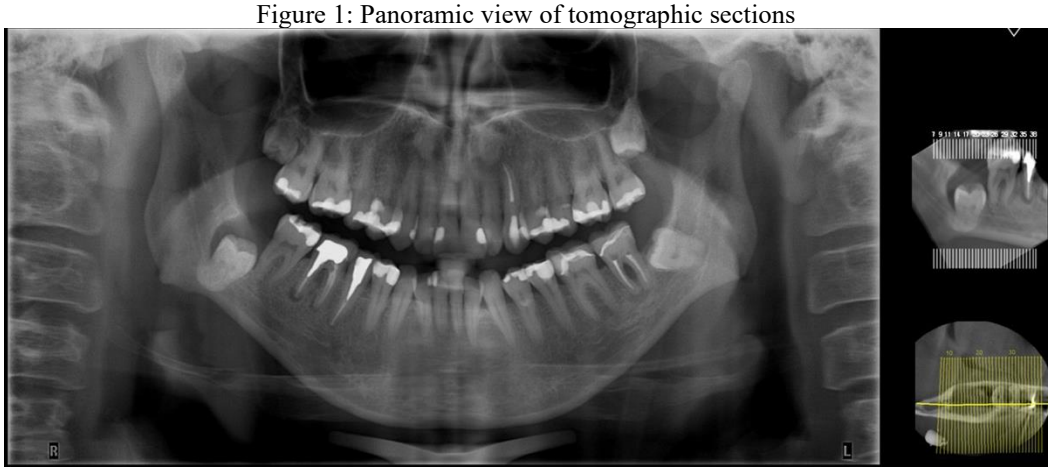
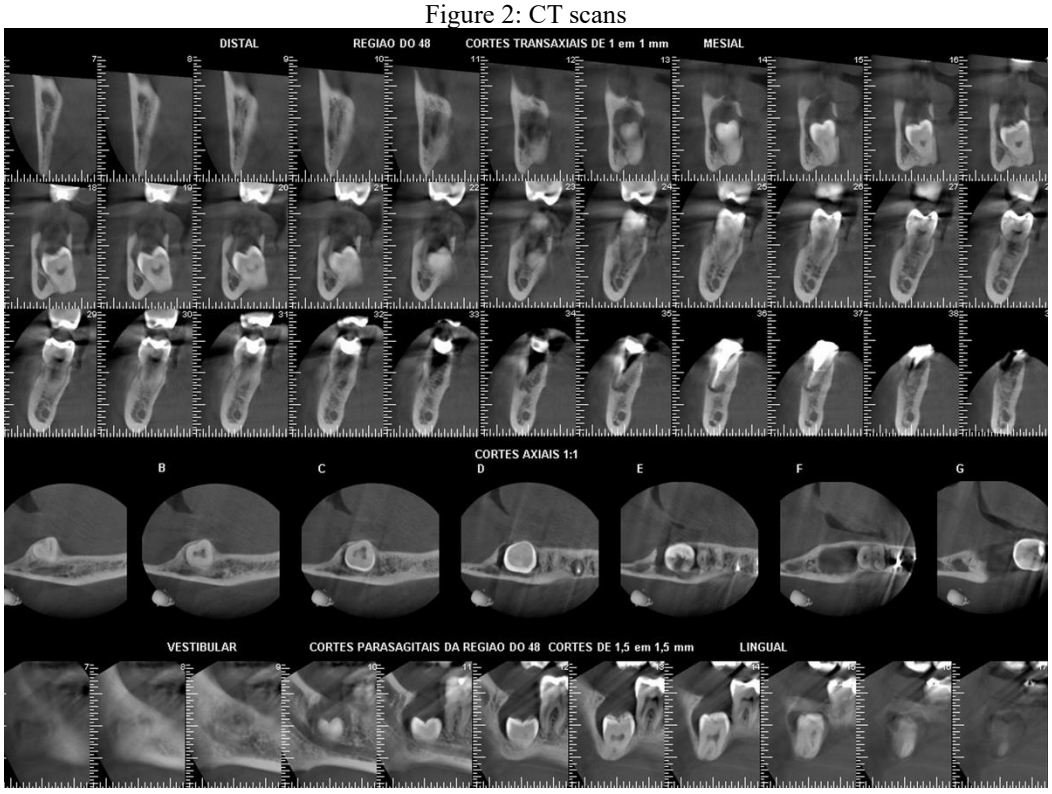


Figure 2: CT scans



The preoperative approach was recommended with Amoxicillin 1,500 mg daily, in doses of 500 mg every 8 hours for 7 days, starting 1 day before surgery; Nimesulide 200 mg daily, in doses of 100 mg every 12 hours for 3 days, starting on the morning of surgery and; Lysher drops, with a dosage of 35 drops every 6 hours in case of pain.

During surgery, intraoral antisepsis was performed with 0.2% aqueous chlorhexidine digluconate in 2-minute mouthwash and extraoral antisepsis with 2% alcoholic chlorhexidine digluconate around the mouth with Cheron forceps and gauze pads.

We opted for the anesthetic approach of inferior alveolar nerve block through pterygomandibular regional anesthesia with 1 tube of 2% mepivacaine HCL with epinephrine

1:100.00 (Mepiadre 100 DFL), complemented with half a tube of the same anesthetic in the oral nerve and the remaining half tube in the lingual nerve, according to EVERS and HAEGERSTAM([2]).

After the anesthetic response was verified by the patient, observing an extremely satisfactory anesthetic effect with a minimum amount of 2% mepivacaine HCL with epinephrine 1:100,000 (Mepiadre 100 DFL**), the Szymd incision was recommended, consisting of an intrasulcular incision with a number 3 scalpel handle and 15 blade, in the region of the first and second molars, with a relaxant starting from the distal wall of the second molar with an inclination of 45** º for vestibular positioning, positioning it on the upper wall of the angle and ascending branch of the mandible, according to SILVA[(3)] et al..

Gingival and periosteal tissue were divulsed with a Molt instrument and the surgical field was presented.

With the presentation of the area to be performed, the osteotomy was performed around the crown of the third molar with a short carbide drill FGOS 702 (Jet) at high rotation, improving visibility and access area for the placement of the instruments for extraction.

After the dental crown was exposed, a long diamond ball drill with diameter 3207 (KG Sorensen) was used at high rotation to drill the crown of the third molar in the distal mesian direction deep enough to avoid fracture of the enamel bridge.

The next step after the perforation, a 0.30 tie wire (Morelli) was passed without tension.

The tying wire was positioned so that the second surgeon could maintain the necessary support to maintain the tooth in case it migrated to the submandibular space during the surgical procedure. (Figure 3)

Figure 3: Tie wire positioned after drilling

The tooth was dislocated with straight and angled Seldin levers until the tooth was released from its socket and removed with the aid of the tying wire. (Figure 4)

Figure 4: Removal of the tooth element

After extraction, the alveoli was washed with saline solution, the edges were smeared, and curettage was performed with Lucas curette number 3 to remove possible bone spicules within the alveolus.

The suture was performed with 3.0 mononylon thread, 20 mm, 3/8 needle, triangular type, in single points along the incision path.

The patient was followed up in the postoperative period of 7, 15 and 30 days with excellent results and no pain symptoms and neural deficits related to the inferior alveolar nerve.

DISCUSSION

GREGORI and CAMPOS([4]) report the invasion of cincunvic anatomical structures as occurring more frequently during the extraction of unerupted teeth, especially of third molars, both upper and lower, due to the application of excessive force on the surgical instrument and fragile alveolar bone walls. They also include that, in the mandibular molars, in the event of a rupture of the alveololingual cortical, the tooth may slide into the submandibular space or even into the

lateropharyngeal space. The immediate approach should be, as always, to circumvent any emergency situation, such as stopping the bleeding. The removal of the depositioned tooth should only be done by a specialist with manual skill and experience to act surgically on these anatomical structures.

SIMÕES(5) et al., in a study with specialists in oral and maxillofacial surgery in Curitiba, found that 11% of these professionals reported having already had problems with dental displacement to neighboring regions in surgeries of mandibular third molars retained in their offices.

PAULESINI Jr. (6) et al. reported that tooth displacement during the surgical procedure of removal of third molars is a complication classically described in oral surgery textbooks. In inferior elements, displacement to the submandibular space, floor of the mouth, and cervical region may occur. Care in the manipulation of the instrument, avoiding untimely maneuvers, is essential.

FINAL THOUGHTS

During the surgery, greater safety was observed for the first surgeon and the entire team, since there were no limitations on the dislocation movements required for avulsion of the tooth element.

We emphasize that this procedure can also be used in the maxilla, to avoid possible migrations in extractions to other anatomical spaces such as maxillary sinuses, nasal cavities and sphenopalatine space.

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