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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2026, 43(Συμπλ 1):155–157

Impacted third molar

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Έγκλειστος τρίτος γομφίος

Περίληψη στο τέλος του άρθρου

Key words: Impacted tooth, Infections, Management, Surgery, Third molar

The surgical removal of impacted mandibular third molars (IMTMs) has raised diverse concerns, including the use of glucocorticoids and prophylactic antibiotics, besides risk factors including older age, prolonged surgical procedures, and the use of filling materials.[1–7] The objective of the recent literature data presented below is to raise awareness among health professionals in the fields of dentistry and medicine. One study evaluated the removal of horizontally IMTMs through buccal plate extirpation and replacement was evaluated among 25 patients with 18 to 46 years of age (20 women and five men). A portion of the buccal cortex was removed, preserved in sterile status and refixed after tooth removal to reduce some bone loss.[1] The main criterion was the viability of the buccal cortex and the lack of complications; one patient lost the buccal cortex, and two complained of paresthesia for up to four months.

The authors concluded that the removal of a small part of the buccal cortex lateral to a horizontal IMTM is highly favorable since accurately performed, and the tissue must be secured properly; therefore, one may subsequently reduce the amount of bone removed.[1] Another study including 804 patients undergoing prophylactic third molar (TM) extraction evaluated factors potentially playing some role in the postoperative pain (PO), by the visual analog scale (VAS) at 1, 3, 7, and 30 days; and postoperative infections were also documented.[2] The pain gradually decreased over time (1d, 3d, 7d, 30d), lower body mass index (BMI) and male gender were related to lower early PO VAS scores (1d, 3d), while older age and use of filling materials were related to the higher early and intermediate PO VAS scores (1d, 3d, 7d). The use of glucocorticoids was associated with increased intermediate and late PO VAS scores (7d, 30d), whereas postoperative antibiotics did not reduce the incidence of infections.[2]

A review assessing the quality of life associated with the TM surgeries examined 31 studies from April to July 2024. The most affected parameters were feeding, appearance, and pain, which had significant correlations with edema, trismus, and use of analgesics; other important factors included gender, tobacco use, and surgeon skill level.[3] The authors emphasized the useful role of the Postoperative Symptom Severity Scale to quantify the multiple effects of molar surgeries on patient quality of life, and the needed further research to optimize surgical practices and improve the longstanding outcomes.[3]

A retrospective study included 1,503 digital panoramic radiograph (orthopantomagram, OPG) scans of 749 men and 754 women, aged between 13 to 70 years of age and the total root of impacted teeth.[4] The images showed 27.7% with impacted TMs, mainly the mandibular ones, and male patients were prevalent; the majority of impacted teeth was in ages between 18 and 30 years, and impaction characteristics differed between maxillary and mandibular teeth.[4] The authors highlighted these data, which favor the knowledge about impacted teeth, and contribute to support the dental professional works for improving the patient's outcomes.[4]

A prospective study included 74 adult patients who were submitted to the extraction of impacted mandibular TMs by residents of oral surgery and implantology, and

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Figure 1. Image of dental arcade showing both horizontally impacted lower third teeth (arrows).

the outcome variables involved the operative time besides the surgeon-reported difficulties.[5] There was a significant improvement in operative times, with less incidents after 10 procedures performed by postgraduate students with experience in tooth extractions.[5] Surgical difficulties were related to the necessity for crown/tooth sectioning, with a high impaction against the second molar. Further studies are needed to confirm these findings.[5]

A cross-sectional study included 48 patients aged from 18 to 45 years, with panoramic images confirming the impacted TM, and underwent the respective surgery.[6] Imaging evaluations focused on the TM distance to the occlusal plane, angulation, eruption space, and alveolar inferior canal; difficulties were surgical time and technique.[6] Findings showed that males have greater TM eruption space, and the maxillary TMs presented with a greater distance to the occlusal plane than the mandibular.[6] Eighteen adults submitted to the IMTM extraction were randomly distributed between an experimental group (EG) undergoing 2 g of amoxicillin, and a placebo group (PG), one hour before the surgery and taking of the first prostaglandin E2 (PGE2) salivary sample.[7] Eighteen adults submitted to the IMTM extraction were randomly distributed between an EG undergoing 2 g of amoxicillin, and a PG, one hour before the surgery and of first PGE2 salivary sample taking.[7] Primary outcomes were pains at diverse times and salivary PGE2 before, 24 hours and seven days postoperatively. Secondary outcomes were maximum mouth opening (MMO) soon after, on the first day, and a week post-surgery, and facial swelling at 24 hours and seven days postoperatively.[7] The data showed no differences between the EG and PG in terms of pain levels, salivary PGE2 determinations, MMO changes, or facial swelling at different time points; there was a unique surgical site infection in the PG at the seven-day follow-up, higher number of sutures and difficulty index of surgery were related to increased pain, and longer surgery duration and osteotomy were causes of more MMO changes and facial swelling.[7] Besides, longer surgeries and needed tooth sections were associated with lower concentrations of PGE2, which were positively correlated with the levels of pain.[7]

The authors concluded that administering prophylactic amoxicillin did not affect the postoperative clinical or laboratory outcomes in healthy patients undergoing IMTM surgery.[7]

ΠΕΡΙΛΗΨΗ

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Οι έγκλειστοι τρίτοι γομφίοι είναι αυτοί που δεν έχουν αρκετό χώρο για να αναδυθούν φυσιολογικά και εξελίσσονται με ποικίλους βαθμούς έγκλειστων, ευνοώντας διαταραχές ανάπτυξης στην παρακείμενη οδοντοστοιχία, τερηδόνα και λοιμώξεις, περιοδοντικές παθήσεις και απορροφήσεις ριζών. Εκτός από τον στοματικό, τον προσωπικό και τον κροταφογναθικό πόνο, μπορεί να εμφανιστούν παθολογικά κατάγματα ή/και κύστεις. Η επιβεβαίωση της διάγνωσης πραγματοποιείται εύκολα με πανοραμική ακτινογραφία, ενώ η έγκαιρη διάγνωση και η άμεση και ακριβής θεραπεία συνιστούν ακρογωνιαίους λίθους για καλά αποτελέσματα.

Λέξεις ευρετηρίου: Αντιμετώπιση, Έγκλειστο δόντι, Λοιμώξεις, Τρίτος γομφίος, Χειρουργική επέμβαση

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