CORONECTOMY AS A SURGICAL APPROACH TO MANDIBULAR THIRD MOLARS: A 10-YEAR FOLLOW-UP STUDY

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Aim: the extraction of third molars is the most common surgical procedure performed in the oral cavity. Coronectomy is a surgical protocol to reduce the risk of neurologic lesions to the inferior alveolar nerve. Early (up to 6 month) and late (from 12 to 120 months) postoperative complications were evaluated.

Methods: the present prospective cohort study enrolled patients treated at the Unit of Oral and Maxillofacial Surgery, University of Bologna. The predictor variable was the time after coronectomy with up to 10 years' follow-up. To assess the rate of postoperative complications, the outcome variables were neurologic injuries, postoperative pain, swelling, fever, alveolitis, pulpitis, and root exposure. The success rate, need for a second surgical procedure, probing pocket depth, and bleeding on probing also were investigated.

Results: onehundredsixteen coronectomies were performed in 94 healthy patients (37 men and 57 women; mean age, 28.99! 8.9 years). At 10 years' follow-up, 48 patients with 62 coronectomies were re-evaluated. No cases of neurologic lesions to the inferior alveolar nerve or lingual nerve were observed after surgery. Residual roots were removed 3 years after surgery in 5 cases and 10 years in 2, without any neurologic complications. No periapical infections were observed around the residual roots.

Conclusions: this prospective study on coronectomy of third molars in a close relationship with the mandibular canal found no cases of neurologic lesions, no cases of late infection of the retained roots or the development of pathologies at 10 years.

CROWN-TO-ROOT RATIO IN ENDODONTIC SURGERY: A SURVIVAL STUDY

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Aim: to assess the influence of the crown height (CH), root length (RL) and crown-to-root ratio (CRR) on the survival of teeth subjected to surgical endodontic retreatment and classified as periapically healed.

Methods: a single operator performed all the endodontic microsurgery interventions. The present analysis selected the teeth classified as "complete periapical healing" according to the Molven-Halse-Grung scale. The periapical radiographs were analyzed by two independent calibrated examiners, who measured CH and RL in a blind manner. The CRR was calculated as the ratio of the two variables CH and RL. The measurements were performed by comparing the post-operative radiographs (t_0) with those taken for a previous retrospective analysis (t_1) and the most recent available (t_2). An independent statistician conducted a survival analysis using Kaplan-Meier plots and a log-rank test ($a = 0.05$).

Results: thirty-eight patients were evaluated, each one contributing to the study with a single tooth. The mean follow-up period was 5,96 ± 3,36 years. Comparing the CRR and RL values between t_1 and t_2, the difference was found statistically significant ($p = 0.03$). Survival was improved for the teeth with roots longer than 7 mm. There were no statistically significant differences among the remaining comparisons.

Conclusions: root length ≥ 7mm exhibited better chances of long-term survival. Over time, a risk of further decrease of clinical RL due to periodontal disease and consequent increase of CRR could be critical by a mechanical point of view. Other studies are needed.