

## Distal healing after extraction of impacted mandibular third molars in young adults.

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### Abstract

**Aim:** This study analyzes the clinical and radiographic response of periodontal defects in the distal aspect of a mandibular second molar (2Mm) following the extraction of a full impacted mandibular third molar (3Mm) and to detect the cut-point of periodontal healing.

**Methods:** Prospective clinical study, in 22 healthy young patients, with  $21.03 \pm 4.51$  years, performing 37 extractions of impacted 3Mm. The clinical and radiographic data included: probing pocket depth (PPD), clinical attachment loss (CAL), radiographic bone height (RBH), radiographic infrabony defects (RID) and bone loss (BL). Only one of five equidistant points in the distal surface of the 2Mm was considered and was previously selected before surgery as the deepest bone probing depth. The clinical and radiographic data were recorded before surgery, at 3, 6 and 12 months.

**Results:** Lingual-distal aspect of the adjacent 2Mm was the location with a higher frequency of periodontal defects, exhibiting  $RID \geq 4\text{mm}$  with mild/moderate BL and PPD values  $\geq 5\text{mm}$ . At 12 months, there was a bone and PPD average recovery of  $2.80 \pm 2.36\text{mm}$  ( $p < 0.001$ ) and  $1.93 \pm 2.46\text{mm}$  ( $p < 0.001$ ), respectively. PPD and RID averages of  $3.77 \pm 1.58\text{mm}$  and  $1.78 \pm 1.65\text{mm}$  were recorded, respectively. Differences were statistically significant for PPD, CAL, RBH, RID and BL before surgery and at each assessment ( $p < 0.05$ ) between all five evaluation points of the distal aspect of the 2Mm.

**Conclusion:** An intraosseous impacted 3Mm leads to periodontal complications that practically recover after surgery and are frequently located in the lingual-distal aspect of 2Mm. The first 3 months is considered the cut-off for periodontal healing.

**Keywords:** impacted third molar, oral surgery, periodontal healing, alveolar bone loss, osseous defect, periapical radiography, prospective studies.