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Oral

Effects Of Impacted Lower Third Molar Removal On Alveolar Bone Height And Periodontal Parameters Of Adjacent Second Molar

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Introduction: The effect of surgical removal of impacted third molars on the periodontal parameters of adjacent second molar revealed inconsistent results. Some authors suggested improvement of periodontal parameters distal to second molar, whilst others demonstrated loss of attachment and reduction of alveolar bone height. This study was conducted to evaluate the alveolar bone height (ABH) and periodontal status of second molar after the surgery. **Materials and Methods:** Out of 42 subjects selected, 33 subjects completed the study. Only subject who had mesio-angular or horizontal impaction of third molar with available previous records of digital orthopantomogram (OPG) were recruited into the study. ABH of adjacent second molar on the previous OPG were compared with the current OPG using technique described by Krausz et al., (2005). Other parameters such as probing pocket depth (PPD), bleeding on probing (BOP), recession (REC) were also recorded. **Results:** There was significant reduction ($p < 0.001$) in mean ABH at distal of second molar between pre-surgery (4.30 ± 1.09 mm) and post-surgery (2.80 ± 2.05 mm). No significant difference was found in ABH between 47 and 37 at baseline; (4.09 ± 1.09 mm vs 4.30 ± 2.55 mm) and post-surgery (3.00 ± 2.20 mm vs 2.70 ± 2.35 mm) where $p < 0.423$. Distal sites of second molars consistently showed significantly higher mean PPD (3.76 ± 1.32 mm) when compared with mesial, mid buccal and mid lingual sites ($p < 0.001$). Higher frequency of BOP (90.9%) were also recorded for distal sites. **Conclusion(s):** Within the limitation of this study, surgical removal of impacted third molars demonstrated significant reduction in ABH of second molar post surgically. Significantly deeper PPD were also recorded at distal sites as compared to other sites.

KEYWORDS: impacted molar, alveolar bone height, periodontal parameter