ALVEOLAR REMODELLING AFTER POSTERIOR TEETH EXTRACTION USING LASER SCANNING CONFOCAL MICROSCOPY (CLSM)

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1. INTRODUCTION
Tooth extraction is a dental procedure widely used in dentistry. When the tooth is extracted, the alveolar process undergoes atrophy, due to the loss of its function [1]. Alveolar profile changes are fundamental in dental treatment planning and success, as the aesthetics of prosthetic restorations depends on them. Therefore, the aim of this work is to study the pattern of the remodelling process after the extraction of posterior teeth using the three-dimensional reconstructions of images obtained by CLSM technique.

2. EXPERIMENTAL PROCEDURE
After the extraction of an upper and a lower molar, silicone prints of the post-extraction sites were taken and emptied with plaster to obtain the study casts. One and three months after teeth extraction new silicone prints were taken [2]. The study of the post-extraction sites was carried out by the CLSM technique (OLS3100-USS, LEXT model, Olympus®). Three-dimensional reconstruction was performed using SigmaPlot® software (Systat Software Inc., USA), overlapping the profiles obtained at baseline, one and three months after tooth extraction in a single image. To compare the changes in the remodelling process one section in the middle of the overlapping image was realised.

3. RESULTS AND CONCLUSIONS
The overlapping of the post-extraction sites profiles shows that the alveolar thickness and height at baseline was higher than one and three months after tooth extraction in both upper and lower molar. No changes were observed in the lingual part of the alveolar thickness comparing one and three months after tooth extraction. In contrast, the buccal part decreased at three months after tooth extraction. The lingual and buccal alveolar height was higher at three months than at one month after tooth extraction in both teeth due to the healing of the post-extraction socket. Therefore, the remodelling of the post-extraction site was similar independently if the extracted tooth was placed in the upper or lower jaw.

4. REFERENCES

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