

In Vitro Study for Effect of Different Desensitizing Agents on Dentin Remineralization

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Abstract:

Aim: The purpose of this in vitro study was to evaluate the effect of: Casein phosphor peptide-amorphous calcium phosphate (CCP-ACP) paste, Desensitizing agent containing fluoride (ACPF), Fluoridated calcium phosphate (FT). On dentinal tubule occlusion and remineralization. **Materials and Methods:** 42 sound anterior permanent bovine teeth were extracted from sacrificed bovine jaw, collected and cleaned from any residual tissues, were included in the study. The samples were divided to 3 group (n=14), demineralization process was performed for all samples using citric acid 1% (PH=3.8), then remineralization process was achieved group 1: treated with (CCP-ACP), group 2 treated with ACPF, group 3: treated with (FT), for one week and other two weeks. Each group was evaluated by ESEM and EDX for four times according to the treatment stages before any treatment, after demineralization, after one week and two weeks of remineralization. **Results:** all the remineralizing agents used in this study were effective in the remineralization process. Statistically, these results revealed no significant difference between the effect of 3 types of remineralizing agents. **Conclusion:** A. All the materials that were used in this study were effective in dentin tubule occlusion. The time factor had a positive effect on the remineralization process. The tested materials were really similar, so the use of the most available and cheaper material in the market is effective.