

Studying of OTC Bleaching Material effects on Microhardness of Enamel

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Abstract

Background and Aim: Changing the microhardness of enamel after using the materials is one of the most concerns on the dentists. Many researches were performed regarding the comparison of different bleaching materials but it seems that there is no information about OTC bleaching yet. The aim of this research was to compare the effect of three bleaching materials on the microhardness of enamel.

Materials and Methods: In this invitro study , 45 human third molar were divided in three groups. The microhardness of enamel of each sample was calculated by Vickers. Afterwards the samples of each group were treated with the determined bleaching material as per the instruction of the manufacturing company. In the next step, the microhardness of samples was measured again in order to studying the effect of the bleaching materials. Finally the data were analyzed by using the Repeated Measure ANOVA and LSD tests.

Result: The treated samples with Paint on and White strip bleaching materials and Toothpaste have 16 ± 4 , 10 ± 3 and 3 ± 4 decreases in microhardness. The microhardness of all groups was decreased significantly after bleaching ($P < 0.001$). Mutual Comparison of evaluated groups of this research showed the similar negative effect of Paint on and White strip bleaching materials ($P = 0.001$), the effect of White strip and Paint on were evaluated more than the toothpaste ($P < 0.001$).

Conclusion: The three materials used in this research decreased the microhardness of enamel. The toothpaste has less effect on microhardness of enamel than the paint on and White strip bleaching materials.

Keywords: *Enamel, Hardness, Tooth whitenings*