



In Vitro Evaluation of the Efficacy of Two Different At-home Bleaching Agents: Solo or Combined

Manal Hussain Abd-alla (BDS, PhD)¹ and Huda Ahmed Abdullah (BDS, M.Sc)²

Abstract

Background: Combining at-home and in-office vital teeth bleaching techniques has proven to be effective; however, the efficacy of combining at-home bleaching agents is still unclear.

Objective: To compare the effectiveness of 10% and 35% carbamide peroxide at-home bleaching agents solo or in combination.

Materials and Methods: Forty enamel samples from human premolars were divided into four groups (n=10) to receive different at-home bleaching protocols. The samples were bleached for two weeks as follow: G1 bleached with 10%CP for 8h/day; G2 bleached with 35%CP for 30 minutes/day; G3 starting with 35%CP for three days and continue with 10%CP for the last 11 days; and G4 bleached with 10%CP for the first 11 days and with 35%CP for the last three days. Teeth color measurements were recorded by a colorimeter in reference to the CIE L*a*b* at different periods. Student's t-test was used to compare between the groups at each measuring period.

Results: No significant differences were seen among the four groups neither in E*1& E*2 nor in E*6 (p>0.05).

Conclusion: Both 10% and 35%CP, used for two weeks, were effective in teeth whitening. Compared with 10% CP, combination treatments whether starting with 35% CP or ending with it produced no significant difference in teeth whitening during the treatment or one month post operatively.

Key words: Combination, 35% carbamide peroxide, at-home bleaching agents, colorimeter.

Corresponding Author: manaer11@yahoo.com

Received: 27th March 2016

Accepted: 31th May 2015

^{1,2} Department of Operative Dentistry - College of Dentistry - Al-Mustansiriya University - Baghdad - Iraq.