

Effect of office bleaching 40% on discoloration of 4 composite after aging

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Abstract

Background and Aim: Esthetic attention of teeth is increasing, nowadays. After aging, restorative composite materials lead to discoloration and bleaching is one of the effective ways to eliminate of restorative composite discolorations. The aim of this study was to investigate discoloration after office bleaching with Hydrogen peroxide 40%.

Materials and Methods: in this experimental in vitro study, From each composite (Z100, Z250, Z350, P90) A total of 24 composite discs were prepared with dimensions of 3 * 8. Aging and staining process is done for samples in 4 weeks, then spent the 5000 cycle in Thermocycling devices. The samples are numbered and base line color of each composite is record. Samples were divided into two subgroups with 12 member, and each subgroup exposed to different treatment: 1- untreated control group 2- hydrogen peroxide 40% (Office B.). After 14 days of treatment Composite recorded secondary colors and color changes were calculated. The data were analyzed by ANOVA and Tukey and a significance level of 0.05 was determined.

Result: Discoloration after bleaching in composite Z100, Z250, Z350 and P90 were (16.04±2.68), (21.13±3.43), (16.61±2.26) and (7.53±2.36), respectively which had significant difference with control group. (p<0.05). Discoloration of Z250 had significant difference compare with others.(p<0.001)

Conclusion: office bleaching causes significant color change in the all types of stained composites and The greatest effect was on the Z250.

Keywords: composite resin, bleaching, Aging, Hydrogen peroxide, tooth discoloration