



The color change of composite resin after vital bleaching in vitro

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I. Introduction

Vital tooth bleaching is one of the most common esthetic procedures in dentistry. Bleaching agents penetrate into the enamel and the dentin through an oxidant effect, and accordingly, the application of bleaching agents affects human teeth and restorative materials. The bleaching agents may have a varying influence on the color behavior of composites and teeth, or even deteriorate restorative materials.

The purpose of this study was to evaluate the quantitative color changes that occurred in light-cured hybrid/microhybrid/flowable composites after application of 35% hydrogen peroxide bleaching agent. The color of samples was determined with a spectrophotometer (NF 999, Nippon Denshoku) according to the Standard Commission Internationale d' Eclairage (CIE Lab) Color System.

II. Case Presentation

1. Sex/age: F/28
2. Chief Complaint (C.C): whitening teeth
3. Past Dental History (PDH): Diastema closure on Mx. central incisor (8 years ago)
4. Present Illness (P.I): N-S
5. Impression: N-S
6. Tx Plan: In-office bleaching

The evaluation of color change in tooth and restoratives using a spectrophotometer
Composite resin restoration

III. Conclusion

35% hydrogen peroxide caused color changes of light-cured composites. The results of this study in vitro suggest that patients should be advised that replacement of existing composite restorations may be required after tooth bleaching.