COMMENTARY

SUCCESSFUL BLEACHING OF TEETH WITH DENTINOGENESIS IMPERFECTA DISCOLORATION: A CASE REPORT

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This case report is of unique significance in at least two aspects. First, it is a clinical success in bleaching a difficult case of dark tooth shade associated with dentinogenesis imperfecta. Second, the treatment involves long-term (4.5 months) home use by the patient of a bleaching gel containing 14% hydrogen peroxide (H_2O_2). Due to the fact that similar data are sparse in the literature, this case report, even though involving only one patient, provides useful information for bleaching management of difficult cases using a custom-designed home-use treatment regimen.

This case report also illustrates the importance of the role of dental professionals in tooth-bleaching treatment. The authors performed comprehensive clinical examinations of the dentition and gingiva, custom designed the bleaching regimen, provided detailed instructions, and conducted monitoring of the bleaching progress with adjustments accordingly. Obviously, the authors' careful planning and conduct of the treatment helped maximize the efficacy while minimizing potential risks, which is the key to ensuring the success of this difficult case. A recent publication[1] expressed concerns with readily available tooth bleaching options that are performed by individuals with no formal dental training and not licensed to practice dentistry, such as those offered by mall kiosks, salons, spas, and even cruise ships. However, tooth discolorations, particularly those caused by intrinsic stains, may not simply be an esthetic problem, and thus bleaching may not be the appropriate or the best choice of treatment. Bleaching can also affect restorative materials and result in color mismatch of teeth with existing restorations. Therefore, adequate dental examination and proper diagnosis, as done in this case report, are essential for the success of bleaching treatment.

The bleaching gel used for this case contains 14% H_2O_2, which is much higher than that in most home-use bleaching gels. It is known that an H_2O_2 solution at 10% or higher is an irritant to skin and mucosa, but the tolerance level may vary among individuals. The authors indicate that the patient reported transient sensitivity with no other adverse effects observed, suggesting that the 14% H_2O_2 gel was tolerable by this particular patient. However, this may not be applicable to other patients. It is imperative that the bleaching regimen be designed for individual cases.

This case report provides detailed descriptions of procedures and documentations of bleaching efficacy. By contrast, the information on adverse effects appears relatively inadequate. The patient reported transient sensitivity but no details were described, such as the severity of the sensitivity, occurrence in relation to the gel application, individual tooth or all treated teeth, any intervening measures (e.g., discontinuation of bleaching, reduced application frequency or time, use of desensitizer), or spontaneous dissipation with continued use. This information would be helpful in determining the level of clinical safety of the bleaching gel used for this patient.

Overall this is an outstanding case report, and I appreciate the efforts made by the authors to provide the information to fellow dental professionals. Similar efforts and well-designed research on the topic need to be encouraged.

REFERENCE

1. American Dental Association (ADA). Tooth Whitening/Bleaching: Treatment Considerations for Dentists and Their Patients. Council on Scientific Affairs. September, 2009.

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