

Comparative Clinical Response of Two Peroxide Tooth Whitening Strips

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ABSTRACT

Objective: This research compared the clinical response of two different peroxide-containing gel formulations delivered using self-applied whitening strips. **Methods:** A randomized, double-blind clinical trial was conducted to compare a 1-week 10% hydrogen peroxide thin bleaching gel (Crest® Whitestrips® Premium) to a marketed 2-week 6% hydrogen peroxide strip control (Crest® Whitestrips®). The maxillary arch was treated twice daily for 30 minutes. Efficacy ($L^*a^*b^*$ color change) was measured objectively by digital image analysis after 1 & 2 weeks. **Results:** A total of 40 adults ranging from 19-48 years of age participated in the study. Both treatments were effective in whitening teeth, as evidenced by a statistically significant improvement from baseline ($p < 0.001$) beginning at 1-week. At that time, the adjusted mean Δb^* (SE) for the 10% strip was -2.42 (0.147) compared to -1.91 (0.143) for the marketed control, with the treatments differing significantly ($p < 0.05$). At Week 2, the adjusted mean Δb^* (SE) for the 10% strip was -3.31 (0.182) compared to -2.49 (0.167) for the marketed control. After 2-weeks, treatments differed significantly ($p < 0.02$) for Δb^* , ΔL^* , ΔE^* and ΔW^* . Comparing 2-weeks of the 6% control strip and 1-week of the 10% strip, the mean Δb^* treatment difference was -0.07 (90% confidence interval from -0.44 to $+0.31$). Both treatments were generally well tolerated, with mild and transient tooth sensitivity or oral irritation representing the most common adverse events. **Conclusion: Vital bleaching with 10% hydrogen peroxide strips for 1-week was as effective as 6% hydrogen peroxide strips for 2-weeks.**

OBJECTIVE

This research compared the clinical response of two different peroxide-containing gel formulations delivered using self-applied whitening strips.

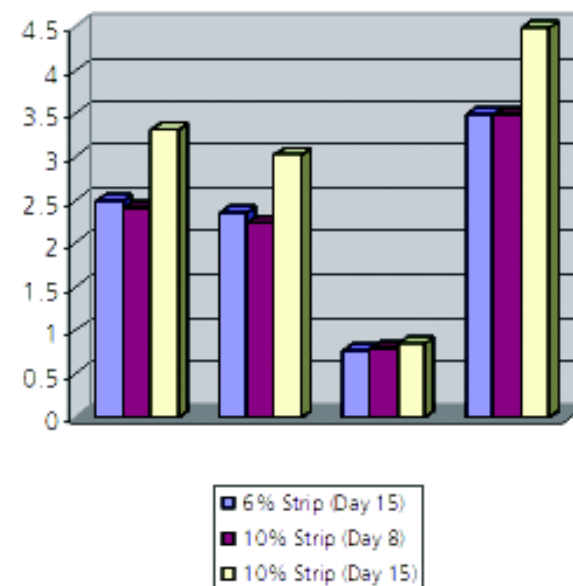
MATERIALS AND METHODS

A randomized, double-blind clinical trial was conducted to compare a 1-week 10% hydrogen peroxide thin bleaching gel (Crest® Whitestrips® Premium) to a marketed 2-week 6% hydrogen peroxide strip control (Crest® Whitestrips®). The maxillary arch was treated twice daily for 30 minutes. Efficacy ($L^*a^*b^*$ color change) was measured objectively by digital image analysis after 1 & 2 weeks. A total of 40 adults ranging from 19-48 years of age participated in the study.

RESULTS

Both treatments were effective in whitening teeth, as evidenced by a statistically significant improvement from baseline ($p < 0.001$) beginning at 1-week. At that time, the adjusted mean Δb^* (SE) for the 10% strip was -2.42 (0.147) compared to -1.91 (0.143) for the marketed control, with the treatments differing significantly ($p < 0.05$). At Week 2, the adjusted mean Δb^* (SE) for the 10% strip was -3.31 (0.182) compared to -2.49 (0.167) for the marketed control. After 2-weeks, treatments differed significantly ($p < 0.02$) for Δb^* , ΔL^* , ΔE^* and ΔW^* . Comparing 2-weeks of the 6% control strip and 1-week of the 10% strip, the mean Δb^* treatment difference was -0.07 (90% confidence interval from -0.44 to $+0.31$). Both treatments were generally well tolerated, with mild and transient tooth sensitivity or oral irritation representing the most common adverse events.

Mean Color Change from Baseline



CONCLUSION

Vital bleaching with 10% hydrogen peroxide strips for 1-week was as effective as 6% hydrogen peroxide strips for 2-weeks.