0288 Clinical Trial Evaluating Two Peroxide Whitening Strips Used by Teenagers

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Objective: Double-blind clinical research in teenagers was conducted to compare the clinical response of a thin, concentrated peroxide whitening strip relative to a control with preceding safety and efficacy data in this population. Methods: Informed consent and child assent was obtained from 48 teens, 13-17 years of age. After baseline measurements, subjects were randomized to a thin 10% hydrogen peroxide whitening strip, or a 6.5% hydrogen peroxide strip with a thicker gel layer. Strip use was 30 minutes twice per day for 22 days on the maxillary arch, followed by 22 days on the mandibular arch. Efficacy was measured objectively as L*a*b* color change from digital images taken every 11 days. Results: Mean (SD) age was 15.1 (1.5) years. Relative to baseline, both strip groups experienced significant (p < 0.0001) color improvement for yellowness (Δb*) and lightness/brightness (ΔL*) beginning at the first visit (Day 11). Continued use resulted in significant color improvement through Day 22. At end-of-treatment, the adjusted Δb* means ± standard errors for the combined arches were –3.7 ± 0.31, and –3.8 ± 0.30 for the higher and lower concentration strips, respectively. Comparative results were similar for ΔL*, with adjusted means ± standard errors for the combined arches of 2.7 ± 0.19 for the thin 10% peroxide gel and 2.8 ± 0.18 for thicker 6.5% peroxide gel. Groups did not differ significantly (p > 0.59) with respect to combined Δb* or ΔL* at end-of-treatment. Tooth sensitivity and oral irritation represented the most common adverse events. No subject discontinued early due to a treatment-related adverse event. Conclusion: Twice daily use of thin 10% hydrogen peroxide gel whitening strips by teens over 44 days resulted in significant tooth whitening, without serious adverse events. This research was supported, in part, by The Procter & Gamble Company.

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