ABSTRACT

Objectives: A clinical study was conducted to evaluate cumulative use whitening response of 2% hydrogen peroxide pre-brush mouthrinse.

Methods: A randomized, examiner-blind, parallel-group, 6-week clinical trial evaluated the efficacy and safety of a whitening pre-brushing mouthrinse relative to normal toothbrushing without peroxide or pre-rinsing. The study population was 23 healthy adults with evident tooth discoloration (A2+), and no history of previous whitening. Subjects were randomly assigned 2:1 to a 2% hydrogen peroxide mouthrinse (Listerine® Whitening Pre-Rinse) followed by a regular anticavity toothpaste (Crest® Cavity Protection), or a regular anticavity toothpaste without pre-rinsing. Usage was unsupervised twice daily following manufacturers’ instructions over a 6-week period. Tooth whitening efficacy was measured in CIELAB units from standard digital images, while safety was assessed from clinical examination and interview.

Results: Groups were balanced on baseline demographics, behavior and tooth color. All subjects completed the 6-week study. For the maxillary teeth, Week 6 adjusted mean ± SE ΔL* (reduction in yellowness) was 0.09 ± 0.07 for the pre-rinse + dentifrice group and 0.60 ± 0.14 for the dentifrice group alone. Adjusted mean ± SE ΔL* was 0.25 ± 0.07 for the combination group and 0.02 ± 0.07 for the dentifrice control. Groups did not differ significantly with respect to end-of-treatment Δa* (p > 0.11) or Δb* (p = 0.97). Outcomes were similar on mandibular teeth (p > 0.12). Except for one report of stomatitis in the pre-rinse+dentifrice group, all adverse events were mild, and none contributed to dropout.

Conclusion: After 6-weeks adjunctive use, a 2% hydrogen peroxide pre-rinse showed no significant tooth color improvement versus regular toothbrushing.

RESULTS

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Methods: A randomized, examiner-blind, parallel-group, 6-week clinical trial evaluated the efficacy and safety of a whitening pre-brushing mouthrinse relative to normal toothbrushing without peroxide or pre-rinsing. The study population was 23 healthy adults with evident tooth discoloration (A2+), and no history of previous whitening. Subjects were randomly assigned 2:1 to a 2% hydrogen peroxide mouthrinse (Listerine® Whitening Pre-Rinse) followed by a regular anticavity toothpaste (Crest® Cavity Protection), or a regular anticavity toothpaste without pre-rinsing. Usage was unsupervised twice daily following manufacturers’ instructions over a 6-week period. Tooth whitening efficacy was measured in CIELAB units from standard digital images, while safety was assessed from clinical examination and interview.

Results: Groups were balanced on demographic, behavioral, and baseline tooth color parameters (Table 1). All subjects completed the 6-week study. For the maxillary teeth, Week 6 adjusted mean ΔL* was 0.09 for the pre-rinse+dentifrice group and 0.60 for the brushing alone group (Table 2). Adjusted ΔL* was 0.25 for the pre-brush rinse group and 0.26 for the brushing alone group. Groups did not differ significantly for color change (p > 0.11). Outcomes were similar on mandibular teeth (Table 3). For safety outcomes, both groups were well tolerated. Except for one report of stomatitis in the pre-brush rinse group, all adverse events were mild.

CONCLUSION

After 6-weeks adjunctive use, a 2% hydrogen peroxide pre-rinse showed no significant tooth color improvement versus regular toothbrushing.