Efficacy of intracoronal bleaching techniques with different light activation sources.

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AIM: To evaluate ex vivo the efficacy of 35% hydrogen peroxide for intracoronal bleaching when activated by LEDs, halogen lamp or by the walking bleach technique. METHODOLOGY: Forty extracted human maxillary central incisors had their crowns resected 1 mm below the amelo-cemental junction and were submitted to artificial staining in centrifuged rat haemolysed blood. A 2-mm thick glass ionomer cervical plug was placed inside the canal, at the level of the amelo-cemental junction. Samples were divided randomly into five groups: group I received 35% hydrogen peroxide gel activated by LEDs. Group II received 35% hydrogen peroxide gel activated by a halogen lamp-based light curing unit. Group III received 35% hydrogen peroxide gel followed by the walking bleach technique. Group IV was neither artificially stained nor bleached (positive control) and group V was stained, but not bleached (negative control). The shade of the teeth was assessed visually by three independent and calibrated evaluators, before and after bleaching. The results were analysed using Kruskal-Wallis one-way analysis of variance and Dunn's post-test. RESULTS: No statistical differences regarding sample shades were found amongst groups for the tested internal bleaching techniques (P > 0.05). CONCLUSIONS: Hydrogen peroxide for intracoronal bleaching when activated either by LEDs, halogen lamp or by the walking bleach technique presented similar efficacy.

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