Influence of Dental Prophylaxis in Tooth Color L*a*b* Values

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Resumo:
Objectives: To evaluate dental prophylaxis (DP) influence in tooth color L*a*b* values assessed by a
spectrophotometer.

Methods: For this diagnostic study, seventy volunteers were consecutively screened according to appropriate
inclusion/exclusion criteria. Tooth color assessment was performed by a spectrophotometer, Spectroshade (SS)
(MHT Optic Research, Italy; serial number HDL3973) in both upper incisives (11, 21) and canines (13, 23) of
each patient. Previous to DP procedure, two measurements were performed to evaluate reliability and baseline
?E for the SS. One week after DP, measurements with SS were done in order to determine changes in tooth
color. Results are presented as mean ± standard deviation (SD) of CIE L*a*b* values and ?E of global and
individual teeth. SS reliability was assessed by intraclass correlation coefficient (ICC). Differences between
baseline and after DP measurements were analysed with Student paired t Test with significance level set at ?=
0.05. The perceptibility and acceptability thresholds values were considered as ?E=1.2 and ?E=2.7,
respectively.

Results: Sixty-six patients were included. ICC values obtained excellent reliability ranging between 0.76-0.98.
Global ?E mean value ± SD after DP was 1.68±1.47 while individual teeth values were 1.51±1.05, 1.93±1.71,
1.59±1.42 and 1.70±1.59, respectively for 11, 13, 21 and 23. Paired t test revealed a significant difference
(P?0.01) between ?E mean value at baseline control (1.08±0.86) and after DP (1.68±1.47). After DP, a
decrease in b* values was detected in all teeth, although without significant differences when compared to
baseline.

Conclusions: After performing dental prophylaxis, tooth color values presented a statistically significant
difference in ?E units detected by a spectrophotometer.

Anexos disponíveis:

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