EVALUATION OF AN IN-OFFICE DESENSITIZING PASTE AND ER:YAG LASER IN HYPERSENSITIVITY
TREATMENT: A RANDOMIZED CLINICAL TRIAL

Burcu Yağuz, Başak Doğan, Bahar Kuru
Marmara University, Periodontology Department, Istanbul, Turkey

AIM:
Dentin hypersensitivity is a sharp, short-lasting pain arising from exposed dentin in response to thermal, evaporative, tactile or chemical stimuli and can not be associated with any other dental pathology. Although there are several treatment options such as chemical agents like tetracycline, fluoride varnish, resin composites, occlusal adhesive, and oral hygiene instructions, none of these procedures is 100% effective. However, laser treatment is a promising option for dentin hypersensitivity. The aim of our study was to evaluate the effectiveness of a desensitizing paste containing 8% arginine and calcium carbonate compared to Er:YAG laser in dentine hypersensitivity.

MATERIALS and METHODS:
The study design was approved by Marmara University Institute of Health Sciences Clinical Research (June 01, 2010). Thirty patients presenting hypersensitivity in at least 2 teeth were randomly assigned into one of the 2 treatment groups. Patient group was divided into two groups (Paste group and Er:YAG laser group). The measurements were repeated after 1 week, 1 month, and 3 months.

RESULTS:

1. Initial descriptive data:
   - The mean age was 30.7 ± 6.1 years, mean number of sensitive teeth was 1.3 ± 0.1.
   - The mean tactile sensitivity score of all groups was 0.85 ± 0.58.

2. The timed multiple comparison of VAS scores within the groups of all measurement time-points revealed significant differences (p<0.001).

3. Regarding the pairwise comparison at individual time-points, immediate alleviation effect was found significantly higher in the paste group (p=0.037).

4. At the end of 3 months, the measured VAS scores in both groups were not significantly different from each other, but still revealed significantly lower values compared to baseline (p=0.006 for the Paste group). (Table 2).

CONCLUSION:
Both applications were found effective in alleviating the hypersensitivity up to 3 months follow-up period. However, the in-office desensitizing paste containing 8% arginine and calcium carbonate demonstrated superior immediate effect compared to Er:YAG laser.

REFERENCES: