

Research Report

Efficacy of CURODONT™ D'SENZ to reduce tooth sensitivity when applied before professional dental cleaning

Investigational Site

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Introduction

CURODONT™ D'SENZ forms a protective layer on the tooth surface. The layer is made up of a biomatrix and minerals. The layer occludes the open dentinal tubuli and causes the painful hypersensitivity sensation to cease.

Aim of the Study

The effect of CURODONT™ D'SENZ (including the CUROLOX TECHNOLOGY) was investigated and tested against a control. It was applied on patients with dentine hypersensitivity before professional dental cleaning. In addition, patients with dentine hypersensitivity caused by thermal stimuli (sub-group) were tested for reduction of pain on those thermal stimuli.

Materials and Methods

70 patients with dentine hypersensitivity were randomly assigned to two groups of 35 patients. One group was treated with CURODONT™ D'SENZ, the other group with a control toothpaste.

Before and immediately after the application of the products and professional dental cleaning, the tooth sensitivity of the patients was evaluated by a blinded assessor.

Results

Patients with dentine hypersensitivity, which were treated with CURODONT™ D'SENZ before professional dental cleaning, experienced a significantly more pleasant treatment when compared to the control group ($p=0.03$).

Patients from the CURODONT™ D'SENZ group with hypersensitivity towards thermal stimuli showed a significantly greater reduction of sensitivity on thermal stimuli than patients from the control group ($p=0.02$).

Study Design

Randomised, controlled, double-blinded (patient & assessor) clinical investigation

Patient Number

70 patients; 35 test group (CURODONT™ D'SENZ) and 35 control group (Fluoride toothpaste).

Main Selection Criteria

Patient must present at least one tooth with exposed cervical dentine and must exhibit a pain reaction triggered by mechanical stimuli (active Airscaler) on the dentin in the order of ≥ 4 on a scale from 0–8.

Patients (with thermal hypersensitivity) who showed an additional pain reaction on cold air (airblast) of grade ≥ 2 were included into the subgroup analysis.

Treatment

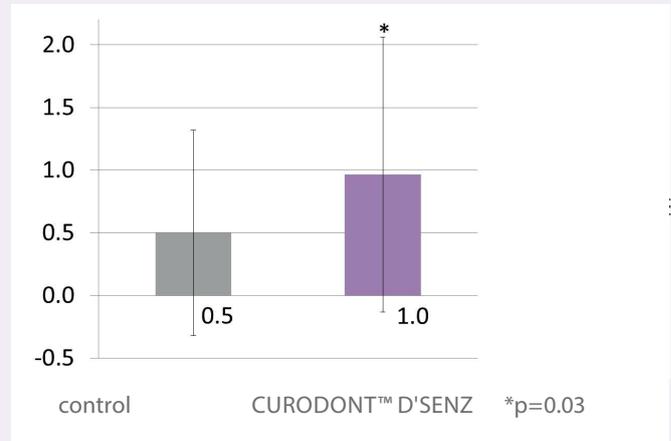
- The test and control products were applied with the rubber polishing cup prior to professional dental cleaning.
- 2 minutes waiting period for activation and attachment.
- Removal of surplus and short rinse.

Diagnostic

- All assessments were performed by a blinded assessor (VW).
- Patient Questionnaire (Global Impression of Change).
- Sub-group analysis: The patient's pain reaction on thermal stimuli was objectively assessed by a blinded assessor (VW) before the application and the professional dental cleaning, as well as afterwards. The pain was assessed on a scale 0–8 (0: no reaction, no pain; 8: strong Reaction, great pain).

Graphic 1

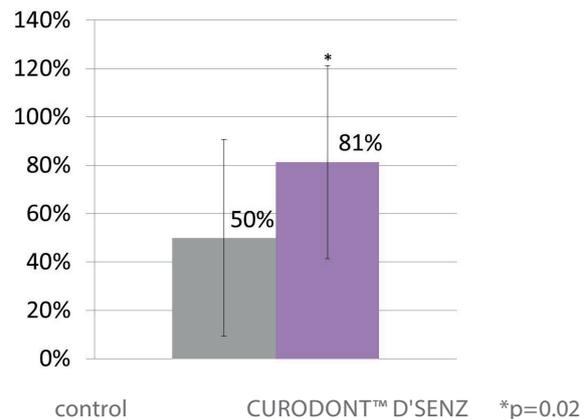
Patients with dentine hypersensitivity (n = 35 / treatment group) treated with CURODONT™ D'SENZ before professional dental cleaning, experienced the treatment as significantly more pleasant than patient of the control group (p=0.03).



Sub-group: Patients with dentine hypersensitivity responding to thermal stimuli (n=20 / treatment group, linear extrapolation).

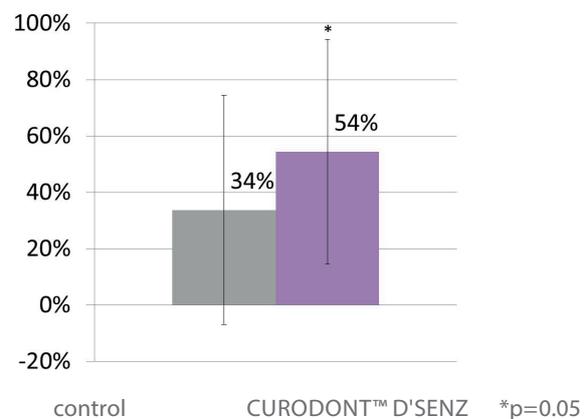
Graphic 2

81% of patients experienced significantly reduced pain sensation on thermal stimuli after the application of CURODONT™ D'SENZ; compared to 50% in the control group (p=0.02).



Graphic 3

The pain intensity on thermal stimuli was reduced by 54% in the CURODONT™ D'SENZ group; compared to 34% in the control group (p=0.05).



Note:

All Curodont™ D'SENZ and control data are significantly different to baseline.

Conclusion

- CURODONT™ D'SENZ applied before professional dental cleaning with patients suffering from dentine hypersensitivity results in a significantly more pleasant treatment for the patient
- CURODONT™ D'SENZ effectively reduces the pain of hypersensitive teeth