

GLUMA® Desensitizer PowerGel

Clinical study – University of Bologna, Italy

In vitro and in vivo evaluation of the effectiveness of three dentine desensitizing treatment regimens

Several clinical trials have demonstrated GLUMA Desensitizer's effective and long-lasting reduction of dentine hypersensitivity. The following study confirms as well the efficacy of GLUMA Desensitizer PowerGel in reducing dentine hypersensitivity.

Giving a hand to oral health.



KULZER
MITSUI CHEMICALS GROUP

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Objective

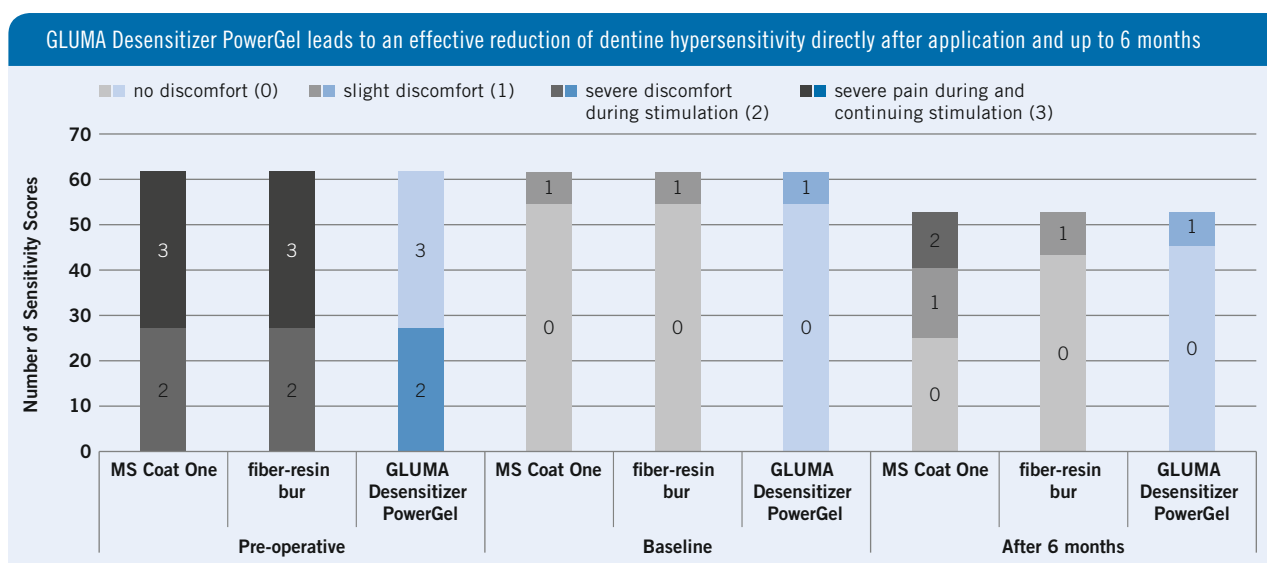
To evaluate the in vitro and in vivo effects of 3 different treatments on dentine permeability and reduction of dentine hypersensitivity.

Materials & Methods

The desensitisation treatments were: GLUMA Desensitizer PowerGel, MS Coat One (Sun Medical) and dentine burnishing with fiber-resin burs. A split-chamber device was used to investigate the permeability of dentine slices cut from human molars in vitro.

Fluid flow through dentine was recorded with a photochemical method after EDTA cleaning, albumin soaking and desensitisation treatment (n=10). 61 study participants with three severely hypersensitive teeth each were recruited. Sensitivity was determined with an air stimulus before, immediately after treatment, and after 6 months, using a verbal rating scale.

Results



52 out of 61 patients were available for the 6-month recall. All treatments reduced fluid flow through dentine ($P > 0.05$). All treatments reduced dentine hypersensitivity significantly. Statistical results revealed significant differences among the treatments ($P = 0.03$). Statistical analysis revealed that GLUMA Desensitizer PowerGel and the fiber-resin bur led to a superior hypersensitivity reduction than MS Coat One.

Conclusion

Both the topical desensitiser applications and the dentine burnishing treatment were effective in reducing dentine hypersensitivity for 6 months. GLUMA Desensitizer PowerGel and dentine burnishing with fiber-resin burs showed consistently high reduction in sensitivity. Whereas teeth treated with the oxalate containing MS Coat One regained some sensitivity over time.

Comment

GLUMA Desensitizer PowerGel is very effective in reducing cervical dentine hypersensitivity.

Source

Dondi Dall'Orologio *et al.*: In vitro and in vivo evaluation of the effectiveness of three dentine desensitizing treatment regimens. Am J Dent, 2014, 27:139-144.

The study was abbreviated, summarised and commented and all diagrams and titles have been established by Kulzer.