



## CLINICAL EVALUATION OF LASER IRRADIATION ON THE HYPERSENSITIVE TEETH

*Kovacevska Ivona\*, Georgiev Zlatko\*\*, Dimova Cena\*, Petrovski Mihajlo\*, Nacevski Ivan\**

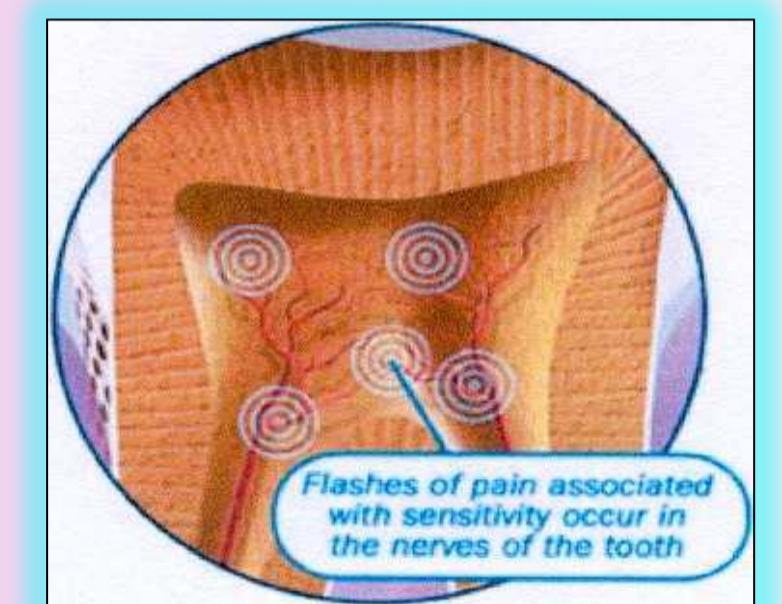
### Introduction

Dentinal hypersensitivity (DH) is a common clinical condition manifested with a sharp, short pain caused by one of the several different external stimuli. The use of a laser light can cause morphological and chemical changes on the dental hard tissue.



### Objective

The aim of this study was to evaluate the clinical effectiveness of Nd: YAG laser in the therapy of dental hypersensitivity.



### Study design

64 patients with 82 hypersensitive teeth were randomly selected for our clinical examination. On all hypersensitive surfaces Nd: YAG laser was used with adequate treatment protocol-three times after five days. We applied laser irradiation on the teeth's gingival third with the fiber – optic hand piece.

- ✿ the distance between the fiber and the target tissue was 1.5 mm.
- ✿ the whole neck surface of the teeth was exposed with slow motions in a period of 60 s
- ✿ the procedure was repeated 3 times per session
- ✿ control of the sensitivity with cold water
- ✿ the patients were instructed to restrain from rinsing and brushing in the first 12 hours
- ✿ the whole procedure was repeated after 5 or 10 days depending on the subjective discomfort
- ✿ specific sensitivity without pathological irritation was detected on the oclussal plain in 10 teeth
- ✿ we applied laser therapy with slow circular motions 3 times with duration of 60 s
- ✿ the whole procedure was repeated after 5 or 10 days depending on the subjective discomfort

### Results

The results of this study showed that Nd: YAG is decreasing dentine hypersensitivity in 90% of the patients treated by Nd: YAG laser teeth also has an immediate clinical effect in reducing the dentine hypersensitivity. Only in four cases a need occur to repeat the laser irradiation three times. In the same time, no side effects were recorded.

### Conclusion:

Using the Nd: YAG laser can cause immediate success in dental hypersensitivity reduction and has two very important advantages as well: a shorter treatment and prompt patient satisfaction. Due to the fact that there were no recorded side effects of the treatment, it can be used in everyday practice.

