

ANXIETY ASSESSMENT DURING CAVITY PREPARATION WITH ER:YAG LASER AND CONVENTIONAL ROTARY INSTRUMENTS

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Introduction: Fear of drill is a principal cause of children`s dental anxiety. Wide ranges of instruments have been developed to measure dental anxiety in children effectively. Laser therapy in pediatric dentistry is an alternative method.

Aim: To evaluate and compare subjective and objective methods for anxiety assessment in children during cavity preparation with an Er:YAG laser and conventional rotary instruments.

Material and methods: Fifty 6-12-years-old patients with matched carious lesions (D3) were divided into two equal treatment groups. In the intervention group the cavities were prepared with Er:YAG laser and in the control group with conventional rotary instruments. Dental anxiety degree of each child was assessed measuring the heart rate, during treatment and modified Faces Anxiety Scale.

Results: In each subgroup the mean heart rate is higher on the dental chair before the start of the cavity preparation and lower at the end of the treatment. But only in the laser treatment group a significant decrease in the objective stress parameter is found. The mean heart rate in the intervention group (103.26 ± 13.48) demonstrated significantly lower degree of dental anxiety compared to the control group (109.74 ± 8.65), ($p < 0.005$).

The analysis of the self-reports of anxiety on the Faces Anxiety Scale showed significantly lower degree of dental anxiety in the intervention group ($p < 0.01$), while in the control one the results were similar ($p = 0.05$).

Conclusions: The Er:YAG laser is a less anxiety-provoking treatment method compared to the conventional mechanical preparation. Laser cavity preparation is a therapy of choice for managing anxious patients.

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