

# DENTAL EDUCATION

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## Evaluation of the effect of photodynamic therapy on chemotherapy induced mucositis

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**Aim:** The aim of this study is to investigate the effect of photodynamic therapy on chemotherapy induced mucositis.

**Materials & Methods:** This clinical study evaluated the effect of PDT with methylene blue on 10 patients with chemotherapy induced bilateral oral mucositis. They were divided into 2 groups (control side and intervention side). Methylene blue was applied on the lesions of both sides; after 10 minutes, the lesion in the intervention side was irradiated with a 660 nm diode laser InGaAlP (Azor-2K) for 10 minutes (power: 25 mW, dose: 19.23 J/cm<sup>2</sup>, probe diameter: 0.78 cm<sup>2</sup>) for three sessions (day 1, 3, 5) and followed on day 12. In the control side of the oral mucosa, only sham laser was used. Data were analyzed by Wilcoxon and Mann-Whitney test using SPSS version 22.

**Results:** According to the result of this randomized clinical trial on the effect of PDT on each group of intervention and control, there was a significant difference between most of the sessions (0, 1, 2 and 3).

**Conclusions:** Photodynamic therapy can improve chemotherapy induced oral mucositis lesions. This effect is clinically significant even after the first sessions of photodynamic therapy by improving National Cancer Institute scores more effectively.

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