

## 1. Patients with moderate chemotherapy-induced mucositis: pain therapy using low intensity lasers.

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**BACKGROUND:** Intensive cancer therapy normally affects malignant and normal cells with high replication rates. Cells in the gastrointestinal tract are therefore commonly affected by cytotoxins. This often results in the development of chemotherapy-induced oral mucositis (COM). COM is the inflammatory response of the oral mucous membrane to the chemotherapy drugs. Low level laser therapy (LLLT) has proved to be effective in treating and repairing biologically damaged tissue and to reduce pain. LLLT has also proven to be an efficient method for the prevention of oral mucositis.

**OBJECTIVE:** To investigate the effect of LLLT on pain relief among patients who have developed COM.

**METHOD:** The study was performed as a clinical test with a sample consisting of 13 adult patients receiving oncology treatment. The patients were treated during a 5-day period, and the pain was measured before and after each laser application. The laser used was an AsGaAl, with a wavelength of 830 nm and a potency of 250 mW. The energy given was 35 J cm<sup>-2</sup>.

**ANALYSIS:** The results were analysed using the Wilcoxon test.

**RESULTS:** There was a significant (P = 0.007) 67% decrease in the daily average experience of pain felt before and after each treatment, confirming that LLLT can relieve pain among patients who have developed COM.

**STUDY LIMITATIONS:** The low number of COM patients at the hospital did not allow a control group to be included in the study, and therefore the results contain a potential placebo effect.

**IMPLICATIONS FOR NURSING CARE:** The most important benefit the authors consider to be the value for the patients of better and quicker treatment with a drastic reduction in painful mucositis..