Clinical Assessment of Low-Level Laser Treatment for Recurring Aphthous Stomatitis

The aim of the present study was to assess the effect of low-level laser on the pain management and the healing of recurring aphthous stomatitis (RAS). One of the most frequent pathologic conditions in the oral cavity is RAS. This multifactor immune/inflammatory lesion causes patient discomfort, and treatment is controversial because of its unknown etiology. A number of treatment modalities have been proposed, but none is definitive. Low-level laser treatment (LLLT) has been used for lesions of an inflammatory nature, not as an inhibitor of the process, but for its modulating action and reparative effect on tissues. Twenty patients with RAS were divided into two groups treated with a topical corticoid agent (n=10) and another group treated with laser (n=10). Group I received conventional treatment with triamcinolone acetonide 4 times per day. The patients in Group II received laser treatment with an InGaAlP diode laser with wavelength of 670 nm, 50mW, 3 J/cm² per point in daily sessions (once per day) on consecutive days. Both treatments were applied until the disappearance of the lesions. All patients were evaluated on a daily basis, and the following clinical parameters were determined during each session: pain intensity before and after treatment and clinical reassessment of lesion size. The results revealed that 75% of the patients reported a reduction in pain in the same session after laser treatment, and total regression of the lesion occurred after 4 days. Total regression in the corticoid group was from 5 to 7 days. The use of LLLT under the conditions administered in the present study demonstrated analgesic and healing effects with regard to RAS.

Key words: recurring aphthous stomatitis, laser, cortison