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11 LOW-LEVEL LASER THERAPY ON ORAL PERIPHERAL NEUROPATHY: A CASE REPORT

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Treatment scheme for relapsed multiple myeloma with drugs such as thalidomide and bortezomib may increase the risk of peripheral neuropathy occurring. Burning sensation, neuropathic pain and paresthesia are critical causes for drug discontinuation. Many studies have focused on the effects of low-level laser therapy (LLLT) on a broad range of pathological conditions such as wound healing, reduction of edema, and relief of pain from various etiologies. Laser irradiation of the oral mucosa may help to relieve neuropathic pain induced by drugs such as thalidomide and bortezomib. In this study, we reported the effects of LLLT in a patient suffering of oral peripheral neuropathy. A 54-year-old man with a history of recurrent multiple myeloma who received bortezomib and thalidomide in relapse, reported burning mouth sensation. The oral cavity was carefully examined without any clinical findings. The patient's received 9 minutes per session, direct laser treatment on entire mucosa for 6 consecutive days from a GalnAs laser emitting at $\lambda = 680\text{nm}$. The parameters used were power of 30mW during 6,5s per point, delivering a final energy density of 4 J/cm². Pain was measured by using a visual analogue scale (VAS). Before irradiation, patient reported maximal pain score (10) for lateral surface of the tongue, inferior and superior labial mucosa and grade 5-8 (severe), for dorsal and ventral surfaces of the tongue, buccal mucosa and palate. On day 6 of irradiation, patient reported pain relief (grade 0-2). The treatment protocol of the present study was successful in relieving neuropathic pain.