

Successful treatment of oral verrucous hyperplasia with topical 5-aminolevulinic acid-mediated photodynamic therapy

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摘要

Previous studies have shown a selective accumulation of 5-aminolevulinic acid (ALA)-derived protoporphyrin IX (PpIX) in oral premalignant and malignant tissues. This provides a biologic rationale for the clinical use of ALA-mediated PDT (ALA-PDT) for oral premalignant and malignant lesions. In this study, five patients with oral verrucous hyperplasia (OVH) were treated with a new protocol of ALA-PDT composed of multiple 3-min irradiations with a light emitting diode (LED) red light at 635 \pm 5 nm separated with several 3-min rests for a total of 1000 s (fluence rate, 100 mW/cm²); light exposure dose, 100 J/cm²) after topical application of 20% ALA for 1.5 or 2 h. Topical ALA-PDT was repeated once a week until the complete regression of the lesion. Complete regression of all OVH lesions was observed after 1-3 treatments (average, 2 treatments) of topical ALA-PDT. At an average follow-up of 5.6 months (range, 3-11 months), all the five OVH patients were free of tumor recurrence. We conclude that topical ALA-PDT with fractionated irradiations by an LED red light at 635 \pm 5 nm is an effective and successful treatment modality for OVH.