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Photodynamic Therapy with 460 nm Diode Lamp for Oral Mucosa Lesions: A Case Series

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ABSTRACT

Photodynamic therapy is a process that involves the presence of a photosensitizer that selectively attaches itself to the surface of bacterial, fungal, viral or fungal cells, a laser or non-laser light that activates the photosensitizer with a specific wavelength, in the presence of oxygen. ROS are generated, which however are not harmful to the host's cells, which is why it is considered very safe. Photodynamic therapy has been successfully proposed in the treatment of malignant and potentially malignant lesions and autoimmune diseases, including in the oral cavity. The most commonly used dyes for oral diseases are methylene blue, toluidine blue and indocyanine green. The wavelengths of the light used are 660, 630,810 nm respectively. We propose cases of infectious and autoimmune pathologies (Hairy tongue, HPV lesion and oral lichen planus) of the oral cavity treated with diode light at 460 nm and such photosensitizers curcumin and hydrogen peroxide. This type of light is known in dentistry especially in the restorative field for the polymerization of the composite. This type of photosensitizer is extremely recent and still little studied, but we believe that it can be very useful to evaluate it in subsequent studies also for its ease of use and low toxicity.

Keywords: Photodynamic therapy, Photosensitizer, Diode light, Curcumin, Hydrogen peroxide

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