LOW LEVEL LASER THERAPY (LLLT) IN REPTILE MEDICINE

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ABSTRACT: Here we describe the employment of a low power diode laser unit with two different wavelength probes of 685nm and 830nm. Our trials show how LLLT can be beneficial in many situations in reptile medicine. The 685nm probe is very helpful to treat superficial and fresh wounds of the skin, exposed organs following carapacial fractures in Chelonians and lesions on the oral and cloacal mucosa. By contrast the 830nm probe can be employed to reach deeper tissues such as pericoalcal tissues in Chelonians to reduce swelling after bite trauma or in case of granuloma before surgery. In all the cases where LLLT was applied we could experience a less invasive surgery combined with a reduction of the bleeding in the surgical field. Moreover the healing process seems to be faster and complications are diminished. For wider wounds (between 6 and 25 cm²) we employed successfully a third probe (“cluster probe”) which is able to combine the two previous wavelength at the same time reducing considerably the frequency of application and shortening further the time of healing. As a general rule LLLT should be started with the lowest power able to induce photobiostimulation in the treated tissues. Other parameters to be considered are the energy applied (J/cm²), the time for each application and the frequency (Hz). Good response is biased through the effects on the tissues such as granulation tissue proliferation, scar formation and absence of necrotic debris.

KEY WORDS: low power diode laser