



Low Level Laser Therapy & snake bite clinical research

Effect of low-level laser therapy in the inflammatory response induced by Bothrops jararacussu snake venom.

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This article reports the effect of low-level laser therapy (LLLT) on the edema formation and leukocyte influx caused by *Bothrops jararacussu* snake venom as an alternative treatment for *Bothrops* snakebites. The inflammatory reaction was induced by injection of 0.6mg/kg of *B. jararacussu* venom, in gastrocnemius muscle. Cell influx and edema were evaluated at 3 or 24h after venom injection. Mice were irradiated at the site of injury by a low-level laser (685nm) with a dose of 4.2J/cm². A therapy that combines LLLT and antivenom was also studied. *B. jararacussu* venom caused a significant edema formation 3 and 24h after its injection, and a prominent leukocyte infiltrate composed predominantly of neutrophils at 24h after venom inoculation. LLLT significantly reduced edema formation by 53% and 64% at 3 and 24h, respectively, and resulted in a reduction of neutrophils accumulation ($P < 0.05$). The combined therapy showed to be more efficient than each therapy acting separately. In conclusion, LLLT significantly reduced the edema and leukocyte influx into the envenomed muscle, suggesting that LLLT should be considered as a potentially therapeutic approach for the treatment of the local effects of *Bothrops* species.

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