Wound healing of animal and human body sport and traffic accident injuries using low-level laser therapy treatment: a randomized clinical study of seventy-four patients with control group

Laser doux
Post#233; par: drdesforges
Publiée le : 24-06-2008

Simunovic Z, Ivankovich AD, Depolo A.
Department of Anesthesiology, La Caritá Medical Center, Laser Center, Locarno, Switzerland.
info@lasermedico.ch
PMID: 11800105 [PubMed - indexed for MEDLINE]

The main objective was to assess the efficacy of low level laser therapy (LLLT) on wound healing in rabbits and humans. The initial research was a randomized controlled animal study, to evaluate the effects of laser irradiation on the healing of surgical wounds in rabbits. The application of LLLT on the human body is analogous to those of similar physiologic structure in animal tissue. This study was continued on humans, 74 patients with injuries to the following anatomic locations: ankle and knee, bilaterally, Achilles tendon; epicondylitis; shoulder; wrist; interphalangeal joints of hands, unilaterally. All patients has surgery prior to LLLT. Two laser devices were used: infrared diode laser (GaAlAs) 830 nm continuous wave for treatment of trigger points (TPs) and HeNe 632.8 nm combined with diode laser 904 nm pulsed wave for scanning procedure. Both were applied as monotherapy during the study. Results were observed and measured according to these clinical parameters: redness, heat, pain, swelling and loss of function, and finally submitted to statistical analysis via chi2 test.

Results: After comparing the healing process between two groups of patients, the following results were noted: wound healing was significantly accelerated (25%-35%) in the patients treated with LLLT. Pain relief and functional recovery of those treated with LLLT were significantly improved compared to untreated patients. In addition to accelerated wound healing, LLLT for postoperative sport-and traffic-related injuries avoids side effects of drugs, accelerates functional recovery, allows earlier return to work, training and sport competition.