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**COMPARISON BETWEEN LOW LEVEL LASER THERAPY AND VISIBLE INCOHERENT POLARISED LIGHT IN THE TREATMENT OF LATERAL EPICONDYLITIS - TENNIS ELBOW: A PILOT CLINICAL STUDY ON 20 PATIENTS.**

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Recently there has been an increase of application of visible incoherent polarised light in the treatment of various sport injuries. The efficacy of Low Level Laser Therapy (LLLT) on sport injuries has already been established. We have decided to conduct current pilot clinical study in order to compare the efficacy of LLLT and the visible incoherent polarised light in the treatment of lateral epicondylitis-tennis elbow. Patient population comprised 20 patients, which were equally and randomly allocated in two groups according to received irradiation: (1) laser beam, and (2) visible incoherent polarised light. Laser treatment was conducted using infrared diode laser 830 nm continuous wave, with maximum output power of 120 mW. Visible incoherent light source had nominal output of 20 W and wavelength between 400 and 2000 nm, with the degree of polarisation >95%. The energy density applied in both groups was 4 J/cm<sup>2</sup>. All patients received 12 treatments daily, except weekends. Indication was chronic lateral epicondylitis. Observed local clinical symptoms were pain and dysfunction. Pain intensity was estimated and analysed using visual analogue scale (VAS). Additional pain intensity measurements were verbal rating scale, 101 rating scale, patient's pain diary. The results have showed that over 40% of patients irradiated with laser beam achieved 100% pain relief and adequately restored functional ability. None from the second group of patients reported 100% of pain relief after 12 treatments, while the top of the pain relief reported was 70%. No harmful or side effects of both types of lights on human body were observed in current pilot study. However, further multicenter clinical studies are necessary in order to assess the efficacy of visible incoherent polarised light in longer course of treatment compared to the control, mostly due to the cost benefit of acquisition.