EFFECT OF PHOTOBIOMODULATION ON SOFT TISSUE TRAUMATIC INJURIES: DOUBLE-BLIND RANDOMIZED CONTROLLED CLINICAL TRIAL

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Photobiomodulation (FBM) is indicated as an adjuvant treatment to accelerate wound healing, however, there is still a lack of evidence regarding its effect on traumatic soft tissue injuries. This project aims to evaluate the effects of FBM in the resolution of complex soft tissue injuries of traumatic origin associated with tibial fractures. 84 adult individuals, aged between 18 and 60 years, hospitalized with tibial fractures awaiting resolution of soft tissue injuries will be included to undergo definitive surgery. The subjects will be randomized in two groups: FBM (treated with a device with 144 LED emitting diodes at wavelengths of 420, 660 and 850nm, 3J per point for 10 minutes) and Sham (simulation of the LED application, with a device with characteristics identical to that of the FBM group, for the same period of time). Subjects will be treated daily until release for surgery. The primary outcome will be the assessment of the wound healing process using the Bates-Jensen scale. Secondary outcomes will be: pain intensity; consumption of analgesic drugs; serum evolution of inflammatory markers C-reactive protein and creatine kinase, measurement of the lesion area, time needed for release for definitive surgery, presence of infection, and the effective effectiveness of FBM. The evaluations will be carried out before the beginning of the intervention and daily until the participant is considered ready for surgery (which will be considered the end of the experimental period). The data will be analyzed statistically considering a significance level of 5%.

Biography:

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