LASERS

LOW LEVEL LASER THERAPY TO PREVENTED WOUND COMPLICATION AFTER CARDIAC SURGERY

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Wound dehiscence and infection prevails in individuals who have cardiovascular risk factors, allied with surgery risk factors such as: time of surgery, extracorporeal circulation (CEC) and hemostats mechanisms, thus can increase morbidity after cardiac surgery. Therefore, we are looking forward to prevent it applying Low Level Laser Therapy (LLLT). We analyze forty patients after cardiac surgery by sternotomy divided into two groups: Control Group – submitted to conventional therapeutic Hospital scheme and Laser Group – submitted to Diode Laser irradiation with λ= 655nm, Dose= 8J/cm2, under preventive form surround the surgery wound and starting Immediately Post-Operative (IPO) and 2 more time, according hospital protocol guidelines. The risk factors related to wound dehiscence in our sample were: caucasian ethnic group with p-value = 0.048; increased triglycerides with p-value = 0.08; overweight (IMC average = 29.6 k/m2) with p-value = 0.004. Control Group 14 (35,0%) patients CEC, and 10 (25,0%) patients blood transfusion. In Laser Group 14 (35,0%) patients were on CEC, and 7 (17,5%) blood transfusion. Our clinical trial showed that 1 (5,0%) patient presented wound dehiscence, five times less incidence than Control Group, in which 5 patients (25,0%) presented wound dehiscence and infection (p-value = 0.077). The Laser Group presented huge pain relief, since the first days after the procedure, especially, when compared with the other group. The Control Group stayed in hospital twice longer than Laser Group (p-value=0.015). We can affirm that Low Level Laser Therapy provides an efficient, secure and a less invasive procedure, which can prevent dehiscence in sternotomy wound treatment, especially regarding the disease's natural history of such patients, with cost-effectiveness for patients as well as for medical institutions involved.