Irradiation Effect of Low-Level Laser on Functional Outcome in Children with Bell's Palsy

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ABSTRACT

Background: There are many evidences that low-level laser therapy (LLLT) may stimulate nerve regeneration. Objective: The aim of the study was to evaluate the effectiveness of LLLT in enhancing functional recovery in children with Bell’s palsy (BP). Subjects: Twenty patients with BP of axonotemetic type were included (thirteen males and seven females). They ranged in age between 12 and 15 years old. They were randomly divided into two groups of equal number, study and control. Methods: The severity of BP was assessed by “House-Brackmann grading scale”. Also, facial symmetry was measured at rest by using tape measurement. Both groups received physical therapy program. Additionally, the control group received placebo laser while the study group received continuous infrared (IR) laser 830 nm, 100mW with dose of 6.0 J/cm², at five points overlying the main facial trunk and four motor branches of the facial nerve. The study continued for four week, three times / week, every session continued for 60 minutes. Results: The results revealed no significant difference between the study and the control groups after treatment, neither in House-Brackmann grades nor in facial symmetry measurement. Conclusion: It can be concluded that infrared laser, with the parameters used in the current study, was not effective in improving functional outcome in BP.

Keywords: House-Brackmann grading scale, infrared laser, Bell's palsy.