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Abstract

The Efficacy of Super Pulse Low Level Laser Therapy in the Treatment of Inferior Alveolar Nerve Injury Caused by Surgery: A Case Study

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Abstract

Background and aim: The inferior alveolar nerve or inferior dental nerve is a mixed sensory and motor branch of the posterior division of the mandibular division of the trigeminal nerve, located in the pterygomandibular space of the oral cavity. This nerve supplies sensation to the lower teeth. Inferior alveolar nerve injury is one of the most serious complications in implant dentistry. Injury to the inferior alveolar occurs in humans as a result of trauma and a variety of surgical procedures, including wisdom tooth removal. Several methods have been proposed to reduce inferior alveolar nerve injury caused by anesthesia or paresthesia. Recently low level laser therapy has been reported to be conducive to the reduction of inferior alveolar nerve injury. Although, a lot of research has been carried out showing that continuous low-level laser therapy plays a significant role in inferior alveolar nerve injury reduction, therapy requires multiple sessions (20-30 sessions) to achieve the desired result.

Materials and methods: In our study, we investigated the treatment effects of low level super pulse laser on inferior alveolar nerve injury in 3 patients (2 patients had implant surgery and 1 patient had wisdom tooth extraction surgery). Patients were clinically followed to observe the repair in inferior alveolar nerve injury.

Results: Our findings showed that all three patients were treated using low level super pulse laser. After 2 sessions, the patients showed significant signs of recovery and after 10 sessions, the maximum return of sensation was achieved.

Conclusion: The present case study revealed the significant efficacy of low level super pulse laser therapy on inferior alveolar nerve injury in short period of time compared to other similar therapies.

Keywords: *Super pulse low level laser, Therapy, Inferior alveolar nerve, Injury*

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