

Laser therapy on the repair of a large-gap transected sciatic nerve in a reinforced nerve conduit

July 24 2014

Researchers at Central Taiwan University of Science and Technology, Taiwan, led by Prof. Liu, Dr. Shen and Mrs. Yang have developed a biodegradable nerve conduit containing genipin-cross-linked gelatin was annexed using beta-tricalcium phosphate (TCP) ceramic particles (Genipin-Gelatin-TCP, GGT) to bridge the transection of a 15 mm sciatic nerve in rats. The effects of LLL therapy on peripheral nerve restoration and regeneration have systematically investigated throughout the study period.

Very few studies have employed tubulation in combination with diode laser therapy to repair [nerve lesions](#). Furthermore, very few researchers have investigated the influence of LLL therapy on [neural regeneration](#) in a biodegradable nerve conduit.

The study, reported on *Neural Regeneration Research* (Vol. 9, No.12, 2014), confirmed that combining the GGT nerve conduit with an LLL therapy system may be beneficial for the regeneration of nerves across long gaps, as well as for accelerating the reinnervation rate of nerves and improving recruitment in muscles. These benefits may in turn lead to improve functional and morphologic recovery of peripheral nerves. Further studies on the use of LLL therapy as a noninvasive treatment modality for various nerve diseases and injuries could pave the way for mainstream acceptance and standardization of this innovative therapy.

More information: *Neural Regen Res.* 2014;9(12): 1180-1182.

Citation: Laser therapy on the repair of a large-gap transected sciatic nerve in a reinforced nerve conduit (2014, July 24) retrieved 2 May 2024 from

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