

Peripheral Nerve

STUDY TO EVALUATE CONSTANT CURRENT VERSUS CONSTANT VOLTAGE WITH A NEW NEUROSTIMULATION DEVICE IN PERIPHERICAL NERVE STIMULATION

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Introduction: To compare patients preference for the stimulation sensation elicited by constant current and constant voltage system using the same device (Lightpulse 100, Neurimpulse, Rubano, Italy. Stimulation frequency ranges from 1 to 50 Hz, pulse duration from 122 to 580 microns; pulse amplitude can be adjusted as voltage 0–5 V or current 0–10 mA).

Materials and Methods: Patient A received constant voltage stimulation and patient B received constant current stimulation both for 1 month and than crossover for another month. A psychosocial evaluation was conducted at baseline, at one month and at two months after implant.

Results: Lightimpulse 100 shows to be effective in reducing pain with a PAIN RELIEF $\geq 50\%$ at 1 month and 2 month after the implant. At follows up both patients present a significant improvement in quality of life but the two types of stimulation (constant voltage vs constant current) show no difference in all the parameters considered.

Discussion: Neurostimulation confirms to be effective in reducing peripheral neuropathic pain and consequently in improving the quality of life. From a subjective perception point of view the two types of stimulation show no differences, both patients refer the two stimulations aren't annoying during activity and relax.

Conclusion: Further studies will be necessary.

Keywords: pain, neurostimulation

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