Peripheral Nerve

11 June—92. EFFICACY OF PERIPHERAL NERVE STIMULATION IN THE PREVENTION OF PHANTOM PAIN AFTER LOWER LIMB AMPUTATION: A CASE REPORT STUDY

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Introduction: Before limb amputation preoperative analgesia with epidural administration of analgesics may prevent or reduce post-amputation phantom pain onset. We evaluated the efficacy of peripheral nerve stimulation implant in the prevention of phantom pain after lower limb amputation.

Materials/Methods: In August 2011 we implanted a peripheral nerve neurostimulator (NeuroimpulseTM) in a 67 yrs old patient with critical ischemia without the possibility of a surgical revascularization. A neurostimulator was implanted with ultrasound guided percutaneous technique on the sciatic nerve. The patient refused to implant a spinal cord stimulation because it was considered too invasive. We noted the intensity of pain due to vascular disease using a 10 cm VAS at baseline and after 3, 6, 12 18 months from implant. We registered phantom or stump pain if present.

Results: No adverse events occurred during the implant. Before implanting pain intensity due to vascular disease was 9. After 6 weeks trial period, pain decreased by 50% and we decided to implant the definitive IPG Lightpulse100 TM that was programmed as follow:

polarity of lead: + – – +
stimulation threshold: 0,16 V
programming: 48 Hz; 0,122 ms ; 0,24 V
cyclic stimulation 5″ ON ; 5″

Amputation of lower limb at half thigh occurred after 90 days after the implant

During all follow-up period pain intensity continued to decrease and after 18 months' pain due to ischemia was absent. Patients reported no phantom pain or stump pain.

Discussion: Peripheral nerve stimulation demonstrated to be effective both in reducing vascular pain and preventing phantom and stump pain after amputation.

Conclusions: In patients with indication for peripheral nerve stimulation it offered an efficacy and less invasive alternative to spinal cord stimulation. A clinical study with a larger sample was needed to confirm this data.

Keywords: Phantom pain, Peripheral nerve stimulation, Prevention treatment

Objectives:

1. To evaluate efficacy of peripheral nerve stimulation in the prevention of phantom pain.
2. To evaluate efficacy of peripheral nerve stimulation in the treatment of pain due to vascular disease.
3. To show a new possibility to treat vascular diseases and phantom pain.

Conflict of Interest Disclosures and Acknowledgements:
I do not have any relevant financial relationships.

