

Peripheral Nerve

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Introduction: The neurostimulation of the occipital nerves is a now well established technique. The occipital nerves are the greater occipital nerve (GON) and the lesser occipital nerve (LON). We report our experience in the treatment with a new peripheral nerve stimulating system.

Materials/Methods: Six patients (4 female and 2 male) suffering from neuralgia resistant to drug therapy in the area of occipital nerves innervation where treated by a cylindrical quadripolar Lightline lead (Neurimpulse, Padova, Italy). After positive trial with improvement of at least 50% on Vas score, the patients underwent permanent implantation of non-rechargeable Lightpulse 100 IPG (Neurimpulse, Padova, Italy). The output current was reported as well as the poles configuration and the pattern of nerve implantation.

Results: All patients showed improvement on VAS score superior to 50% and underwent definitive IPG implantation. The pocket was in subcutaneous subclavian tissue in five patients but one. The mean of output current was 1,98 Volt in GON and 1,4 Volt in LON. The poles configuration was a quadripolar configuration in GON cases and a guarded cathode with three poles in LON cases. One patient had a dislocation of the electrocatheter implanted on LON.

Discussion: The use of neurostimulation in neuralgia from greater occipital nerve neuralgia is a well known technique with good results; in literature LON treatment by neurostimulation is rarely reported. Yet the output current is lower with LON: this value is not statistically significant. In patients with pain from GON the lead is implanted perpendicular to emergency of the nerve, in the LON patients the lead is implanted parallel to nerve course: this could enhance the dislocation of electrocatheter.

Conclusions: The neurostimulation of the occipital nerves by a new peripheral nerve stimulating system appears to be an effective therapy for neuralgia.

Keywords: pain, peripheral nerve stimulation, output

Objectives:

1. To study the PNS on occipital nerves
2. To report the complication
3. To evaluate the current output

Conflict of Interest Disclosures and Acknowledgements:

I do not have any relevant financial relationships.