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Nerve Stimulation in the Treatment of Occipital Neuralgia

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Purpose: To evaluate the effectiveness of occipital nerve stimulation using a novel percutaneous technique in the treatment of refractory occipital neuralgia.

Methods: In 1992 Dr. Weiner began selective occipital nerve stimulator implants in occipital neuralgia patients. We performed a retrospective analysis of 28 consecutive patients who received occipital nerve stimulator implants. All patients had been diagnosed with occipital neuralgia after a positive response to an occipital or C2 nerve diagnostic blockade. Patients had remained unresponsive to medication. The implanted systems included both 4 and 8 electrode lead systems (Medtronic Inc., and Quest-ANS Inc. respectively). We collected patients satisfaction ratings, lead revision rates, and stimulator explantation rates.

Results: Patient satisfaction ratings at the time of follow up were as follows: excellent relief of pain in 18 (61%) patients, good relief of pain in 9 (32%) patients, poor relief of pain in 2 (7%) patient. In one patient the lead had to be reimplanted because it was severed during an unrelated surgical procedure. Lead migration occurred in 3 patients. These 3 patients reported excellent and good results after their leads had been revised. We did not see lead migrations after we modified our surgical technique to include an anchoring loop. One patient requested explantation because the pain had resolved. One patient continued to have pain in the distribution of the lesser occipital nerve.

Conclusions: In patients with occipital neuralgia, occipital nerve stimulation may be an effective treatment if other more conservative treatments have failed. A controlled trial as well as further study of the long-term efficacy of occipital nerve stimulation are indicated.