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Occipital nerve stimulation for intractable chronic primary headache disorders

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Objective There is now clear evidence of functional coupling between nociceptive meningeal afferents and cervical afferents in the greater occipital nerve (GON) at the second-order neuron level (1). The objective of this study is to evaluate the safety and efficacy of occipital nerve stimulation in patients with medically intractable chronic primary headache disorders.

Methods Five patients with medically intractable chronic cluster headache (2 patients), chronic migraine (2 patients), and hemicrania continua (1 patient) underwent a detailed medical, neurologic, psychiatric assessment. Each patient underwent surgical placement of occipital nerve stimulating electrodes.

Results Mean duration of CDH prestimulation was 4.8 years and mean duration of follow-up was 6.2 months. Mean pre and poststimulation MIDAS were 237 (205–270) and 15.5 (0–50). Three of five patients had excellent outcome (90–100% reduction in headache frequency or disability and off medication); one patient had a very good outcome, and one patient had a fair outcome.

Conclusions Occipital nerve stimulation may be safe and effective for patients with disabling primary chronic daily headache disorders. A placebo-controlled study of ONS is warranted in this population of patients.

Reference

- 1 Bartsch T, Goadsby PJ. Stimulation of the greater occipital nerve induces increased central excitability of dural afferent input. *Brain* 2002; 125 : 1496–1509.