

# PULSED RADIOFREQUENCY OF THE OCCIPITAL NERVES FOR CHRONIC HEADACHE MANAGEMENT. PRELIMINARY RESULTS

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**Background and aims:** Pulsed radiofrequency (PRF) of the occipital nerves (greater & lesser, GON & LON) is used for chronic headache management.

The aim of this study was to evaluate the short-term effectiveness of the technique on patients with chronic headaches.

**Methods:** Patients, not responding to systemic pharmacotherapy were studied, after a positive (>50%) diagnostic occipital nerve block with local anaesthetic & corticosteroid. PRF was applied on GON and LON, bilaterally, using a standardized protocol (needle 22G, 54mm, 4 mm active tip, 40-60 V, 2Hz, impedance 150-400  $\Omega$ , plateau temperature 42°C, time: 6 min each).

Primary outcomes included: Pain intensity (Numeric Rating Scale, NRS 0-10) and the number of days with headache per month, before, after 1 and after 3 months post-treatment. Results were analysed using the chi-square test, with a significance of  $p < 0.05$ .

**Results:** 30 patients,  $52.5 \pm 12.4$  years old, suffering from migraine ( $n=24$ ), cluster headache ( $n=3$ ), occipital neuralgia ( $v=1$ ) and mixed headache ( $n=1$ ), of  $17 \pm 13.6$  years duration, were studied.

The baseline mean number of crises per month was  $14.8 \pm 10$ , with a mean pain intensity of  $8.4 \pm 1.2$  (NRS, 0-10).

1 and 3 months post-treatment the number of headache days per month was significantly reduced to  $8.7 \pm 9.1$  and  $8.1 \pm 6.8$ , as well as pain intensity to  $5.2 \pm 3.3$  and  $5.3 \pm 2.6$  respectively ( $p < 0.05$ ).

No adverse effects were recorded.

**Conclusion:** Pulsed radiofrequency of the occipital nerves bilaterally, was effective in chronic headache management, especially on chronic migraine.

The long-term effectiveness of the technique is to be further evaluated.

## References:

Chua NH, et al. Pulsed radiofrequency treatment in interventional pain management. Mechanisms and potential indications. A review. *Acta Neurochir* 2011;153:763-771

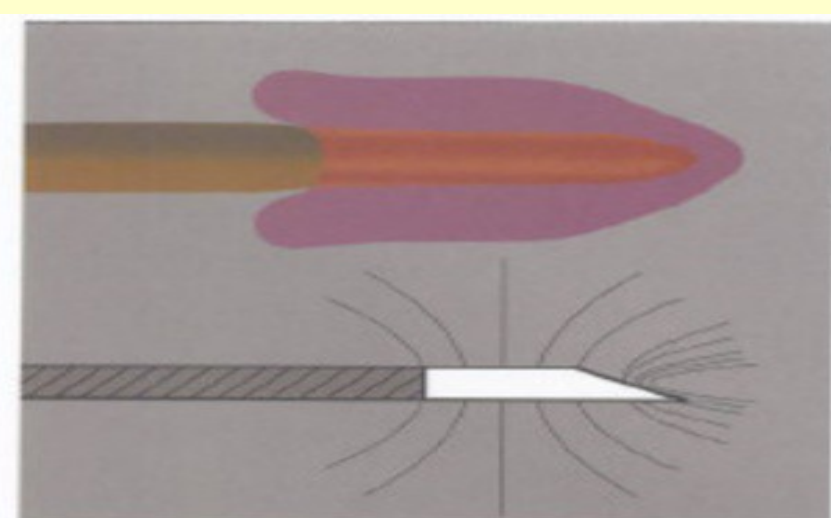
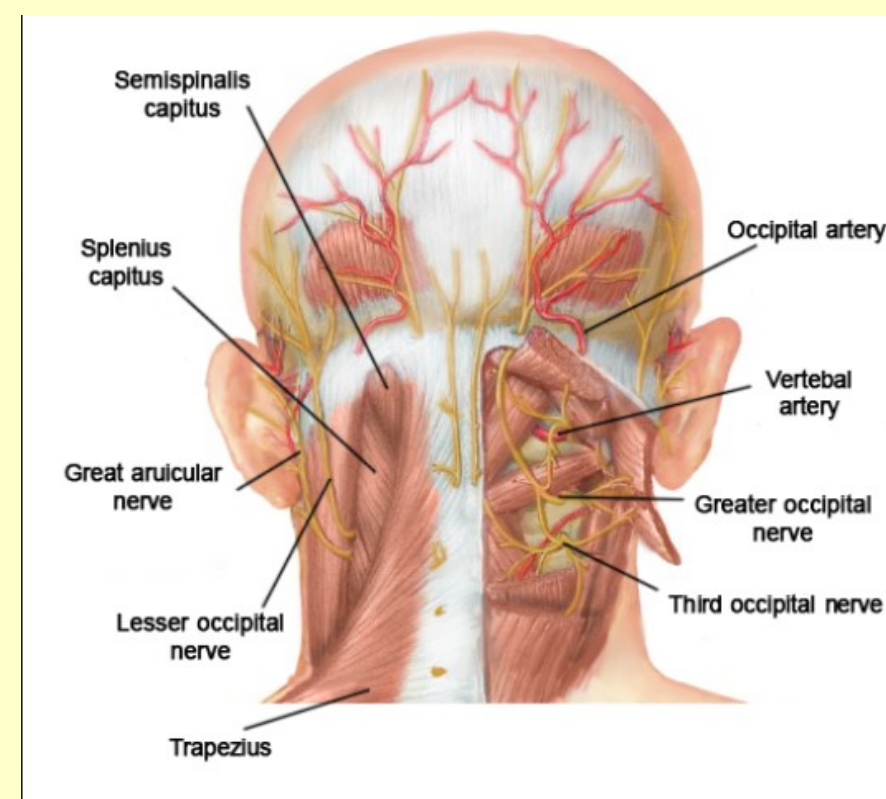


Fig. 1 RF current: lesion (above) and electric field (below)

