

Clinical Outcomes of Nerve Block Treatment in a Brazilian Outpatient Headache Clinic: A 12-Month Cohort Study.

Rhaná Carolina Santos¹, Amanda da Silva Araújo¹, Adrian Vasconcellos Ortiz¹, Caroline Saldanha Custódio¹, Renata Gomes Londero^{2,3}. ¹University of Vale do Rio dos Sinos; ²Hospital de Clínicas de Porto Alegre; ³Hospital Moinhos de Vento. Contact: santoscrhana@gmail.com.

Objective: To evaluate the clinical outcomes of patients undergoing occipital nerve blocks in a Brazilian headache outpatient clinic, with emphasis on monthly headache frequency (MHF), analgesic use, and response after 6 and 12 months follow-ups.

Methods: A prospective cohort study was conducted based on patient records from a specialized outpatient clinic within the public health system. Data collected included patient demographics, headache diagnosis, date and type of nerve block, MHF, and use of symptomatic medication. Follow-up assessments were conducted at 6 and 12 months. Statistical analysis was performed using the Wilcoxon signed-rank test for paired data, comparing MHF at baseline, 6 and 12 months. Analyses were conducted in SPSS Statistics version 18. Only patients with complete follow-up were included.

Results: Preliminary data from 76 patients show a significant reduction in MHF from a mean of 8.4 days at baseline to 5.5 at 6 months and 4.3 at 12 months. The mean reduction was 2.7 days at 6 months ($p<0.05$) and 3.9 days at 12 months ($p<0.001$). Figure 1 illustrates this trend, with lower medians and reduced interquartile range over time, suggesting not only lower frequency but also a more consistent response across patients. Analgesic use decreased significantly, from 25.8 days/month at baseline - near-daily use - to 19.7 and 20.4 at 6 and 12 months, respectively ($p<0.001$), with over 89% of patients reporting decreased use. Among 57 patients who underwent more than one block within 12 months, the mean interval between procedures was 140 days (range: 7-337 days), reflecting variable treatment patterns from monthly to near-annual applications. Procedures involved mostly greater and lesser occipital nerve blocks. No serious adverse events were reported.

Conclusion: Nerve block treatment in this public outpatient setting demonstrated reductions in headache frequency and analgesic use over 12 months. Most patients underwent two or more procedures within one year, with variable intervals between sessions. These findings support the role of nerve blocking as a valuable therapeutic option for patients with chronic headaches in low-resource settings.

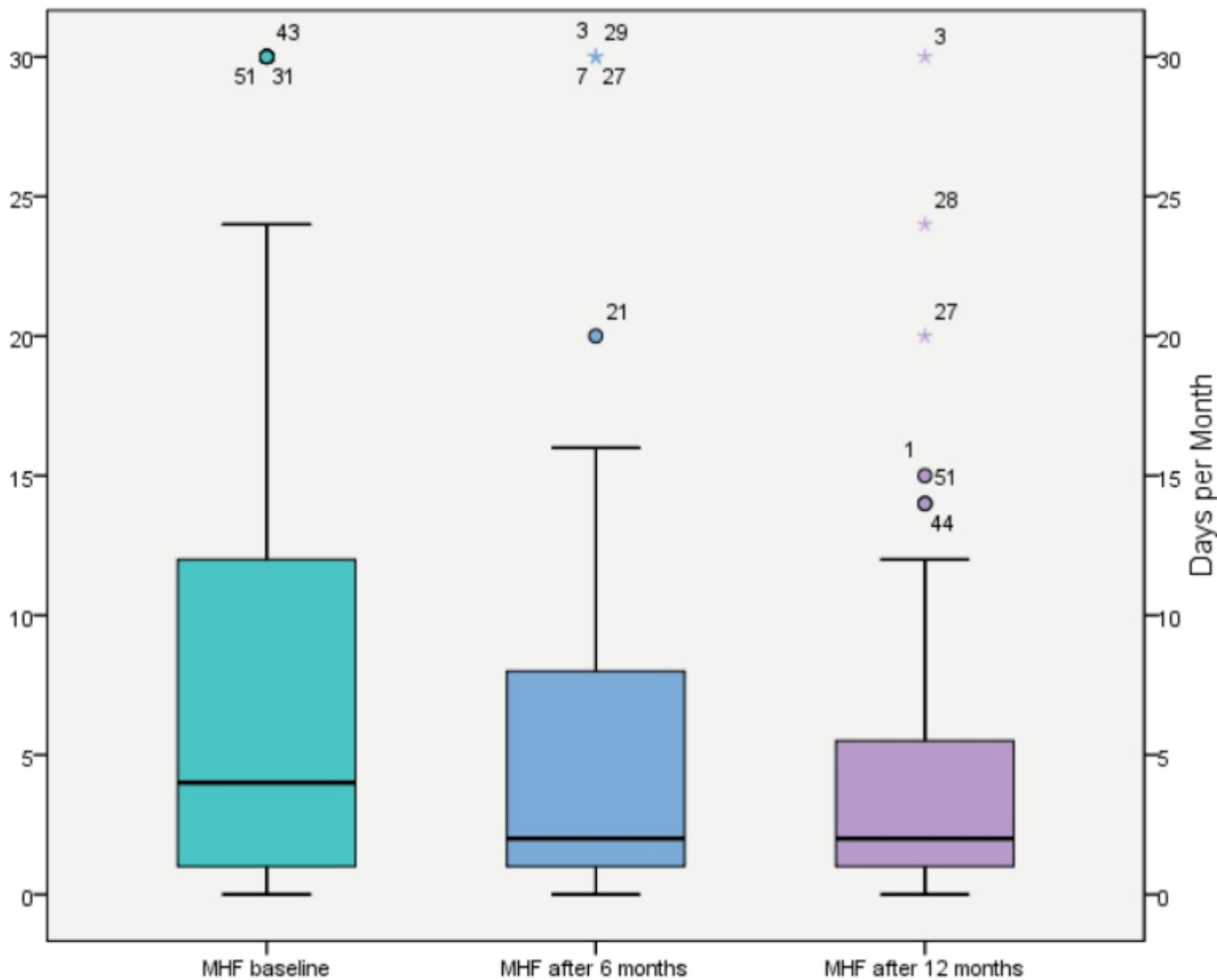


Figure 1. Monthly headache frequency (MHF) at baseline, 6 months, and 12 months after occipital nerve block. Boxplots show a downward shift in median values and reduced interquartile range over time, indicating both lower frequency and more homogeneous patient responses.