CASE REPORT

Anything but a shocking solution – the effectiveness of Cefaly® in non-migrainous headache

Uma solução chocante - a eficácia de Cefaly® em cefaleia não-migranosa

Pedro André Kowacs[1,2], Paulo Sergio Faro Santos[3], Elcio Juliato Piovesan[4], Helio Afonso Ghizoni Teive[5,6]

[1]Neurologist, Coordinator of the Headache Outpatient Clinic and Medical Residency in Pain Medicine, Neurology Division, Internal Medicine Department, Hospital de Clínicas, Federal University of Paraná, Curitiba, Brazil
[2]Head of the Neurology Division, Neurological Institute of Curitiba, Curitiba, Brazil
[3]Neurologist, Head of Headache and Orofacial Pain Clinic, Neurology Division, Neurological Institute of Curitiba, Curitiba, Brazil
[4]Neurologist, Assistant Professor of Internal Medicine, Faculty of Medicine, Federal University of Paraná, Curitiba, Brazil
[5]Neurologist, Associate Professor of Neurology, Faculty of Medicine, Federal University of Paraná, Curitiba, Brazil
[6]Coordinator, Movement Disorders Outpatient Clinic, Neurology Division, Internal Medicine Department, Hospital de Clínicas, Federal University of Paraná, Curitiba, Brazil

Kowacs PA, Faro Santos PS, Piovesan EJ, Teive HAG. Anything but a shocking solution - the effectiveness of Cefaly® in non-migrainous headache. Headache Medicine. 2017;8(4):138-139

ABSTRACT

Background: The transcutaneous supraorbital nerve stimulation with the Cefaly® device has demonstrated safety and efficacy for the prevention of episodic migraine. However, there isn't description of its efficacy in other headaches. Case report: A 78-year-old man was seen because of a 55-year history of daily headache. His medical history revealed Parkinson's disease, dyslipidemia and mild cognitive impairment. Physical examination revealed bradykynesia and asymmetric resting tremor of both arms, the right more affected than the left. There was mild pain on palpation of both upper trapezius muscles adjacent to the occipital bone. Cervical spine X-ray, CT and MRI: no findings. Various therapeutic approaches were done, but without success, so it was decided to prescribe Cefaly®. At his three-month follow-up, he reported an improvement of about 80%. Conclusion: The case described here shows that Cefaly® may be effective in headaches other than migraine.

Keywords: Headache; Non-migrainous headache; Cefaly; Transcutaneous supraorbital nerve stimulation

A 78-year-old man was seen because of a 55-year history of daily headache with intense bilateral nuchal pain, without autonomic symptoms, and that occurred from the moment he awoke until the moment he fell asleep. The headache would sometimes become worse when he lay his head on the pillow to sleep at night. His medical history revealed Parkinson's disease, dyslipidemia and mild cognitive impairment. He regularly used levodopa/benserazide 100/28.5 mg q.i.d., a rotigotine patch 4 mg/24hours o.d., donepezil 5 mg o.d., aspirin 100 mg o.d., rosuvastatin 20 mg o.d., ezetimibe 10 mg o.d., lactulose 667 mg o.d. and esomeprazol 20 mg as needed. Physical examination revealed bradykynesia and asymmetric resting tremor of both arms, the right more affected than the left. There was mild pain on palpation of both upper trapezius muscles adjacent to the occipital bone. Cervical spine X-ray, CT and MRI imaging failed to clarify the nature of the pain, which was interpreted as myofascial. According to the International Classification of Headache Disorders, the diagnosis was cervicogenic headache (code 11.2.1). Various therapeutic approaches, such as simple or combined analgesics (acetaminophen), NSAIDs, codein, tramadol and 5% lidocaine patch, failed

to control the pain. Cyclobenzaprine, amitryptiline, cyproheptadine, topiramate and sodium divalproate were also ineffective in modulating pain, as were analgesic blocks with 5% lidocaine associated with dexamethasone and onabotulinum-A toxin injections in the upper trapezius muscles. To achieve partial pain relief the patient had to use a tramadol/acetaminophen combination daily. Before referring the patient for bilateral occipital nerve stimulation, it was decided to prescribe Cefaly®,[1] since convergence mechanisms are believed to be reciprocal, i.e., occipital nerve stimulation is reported to relieve headaches occurring in the trigeminal nerve territories.[2,3]

Since the first day using Cefaly®, the patient experienced a decrease in headache intensity. He continued using Cefaly® program 1 daily for 20 minutes at bedtime, with a progressive decrease in the occipital headache and nuchal pain and was able to stop using 5% lidocaine patches and most of the OTC analgesic drugs immediately. At his three-month follow-up, he reported that he was still experiencing an improvement in the region of 80%.

Cefaly® has been used for episodic migraine, but its usefulness for chronic migraine or other headaches has yet to be determined. This confirms the findings about the mode of action of Cefaly® showing that it modulates areas in the pain matrix (anterior cingulate, orbitofrontal cortex) and that is thus likely to be effective for other pain syndromes besides migraine, or even headache.[4] The case described here shows that Cefaly® may be effective in headaches other than migraine and should perhaps be tried before referring the patient for invasive neurostimulation procedures.

REFERENCES

1. Schoenen J, Vandersmissen B, Jeangette S, Herroelen L, Vandenheede M, Gérard P, Magis D.. Migraine prevention with a supraorbital transcutaneous stimulator: a randomized controlled trial. Neurology. 2013 Feb 19;80(8):697-704.
2. Jenkins B, Tepper SJ. Neurostimulation for primary headache disorders, part 1: pathophysiology and anatomy, history of neuromodulation in headache treatment, and review of peripheral neuromodulation in primary headaches. Headache. 2011 Sep;51(8):1254-66.
3. Schwedt TJ, Vargas B. Neurostimulation for Treatment of Migraine and Cluster Headache. Pain Med. 2015 Sep;16(9):1827-34.
4. Magis D, D'Ostilio K, Thibaut A, De Pasqua V, Gerard P, Hustinx R, et al. Cerebral metabolism before and after external trigeminal nerve stimulation in episodic Migraine. Cephalalgia. 2017 Aug;37(9):881-91.

Correspondence

Pedro André Kowacs, M.D., MSc
Head of the Neurology Division
Neurological Institute of Curitiba
Rua Jeremias Maciel Perretto 300
Curitiba, Brazil ZIP CODE 81210-310
pkowacs@gmail.com

Received: November 20, 2017
Accepted: December 28, 2017