

PERAMPANEL AS PROPHYLAXIS TREATMENT IN REFRACTORY CHRONIC MIGRAINE

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Objective: Chronic migraine is a disabling disease, with high impact in their quality of life¹. Current prophylactic treatments are often not effective or bad tolerated². Glutamate is elevated in chronic migraine³, and AMPA receptor is implicated in the maintenance of the pain⁴. Perampanel, an antagonist of the AMPA receptor⁵ could have a preventive effect in chronic migraine.

Methods: We review the records of patients with refractory chronic migraine treated with Perampanel, and the results at third month.

CHARACTERISTICS

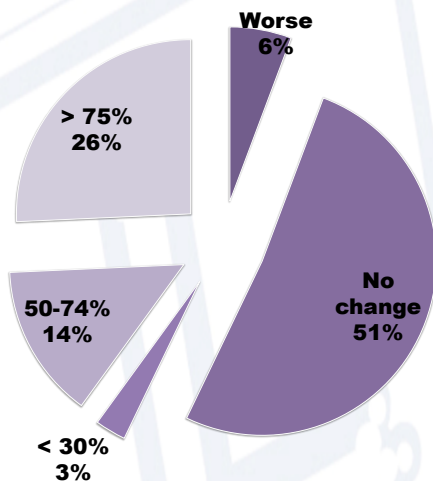
Patients	35 (25 Female)
Mean age (SD)	46,5 y. (11,8)
Mean MMD (SD)	25,8 (4,76)
Perampanel dose	4 mg *
Not tolerated	5 (14%) patients

SD: standard deviation

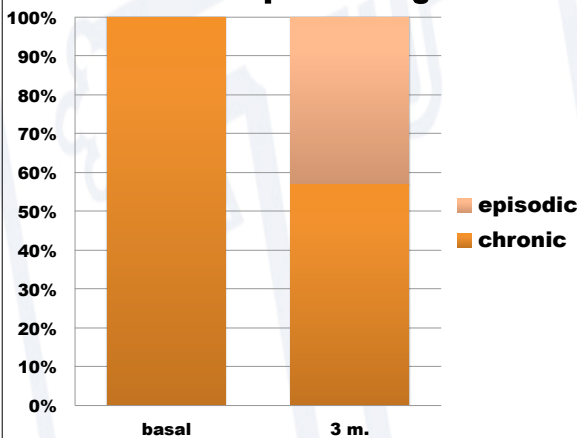
* (one patient 6 mg)

MMD: monthly migraine days

Reduction in MMD after 3 m.



Chronic vs episodic migraine



Results: There were 35 patients (25 females), mean age 46,5 years (SD 11,8). All of them were not responders to, at least, Propranolol, Flunazine, Topiramate, Amitriptyline and Onabotulinumtoxin. The mean monthly migraine days (MMD), were 25,8 (SD 4,76). The dose was 4 mg/24 h but one patient who tolerated 6 mg/24 h. Five patients (14%), could not complete it due to adverse events (AEs). Only 10 (14%), did not complain of AEs. The AEs were drowsiness, dizziness and irritability. After 3 months, 2 patients (6%), were slightly worse; one (3%), had reduced MMD by 30%; 5 (14%), by 50-74%; 9 (26%), $\geq 75\%$. Fifteen patients (43%), had converted to episodic migraine.

Conclusion: Even though the tolerance issue, 40% of the patients reduced MMD $> 50\%$. Perampanel might be an option in refractory chronic migraine. More studies are needed.

Bibliography:

1. GBD 2015 Neurological Disorders Collaborator Group. Global, regional, and national burden of neurological disorders during 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet Neurol.* 2017;16(11):877-97.
2. Hepp Z, Dodick DW, Varon SF, Chia J, Matthew N, Gillard P, et al. Persistence and switching patterns of oral migraine prophylactic medications among patients with chronic migraine: A retrospective claims analysis. *Cephalalgia Int J Headache.* 2017 Apr;37(5):470-85.
3. Curto M, Lionetto L, Negro A, Capi M, Fazio F, Giamberardino MA, et al. Altered kynurenine pathway metabolites in serum of chronic migraine patients. *J Headache Pain.* 2015;17:47.
4. Truini A, Piroso S, Pasquale E, Notartomaso S, Di Stefano G, Lattanzi R, et al. N-acetyl-cysteine, a drug that enhances the endogenous activation of group-II metabotropic glutamate receptors, inhibits nociceptive transmission in humans. *Mol Pain.* 2015 Mar 20;11:14.
5. Schulze-Bonhage A. Perampanel for epilepsy with partial-onset seizures: a pharmacokinetic and pharmacodynamic evaluation. *Expert Opin Drug Metab Toxicol.* 2015;11(8):1329-37.