

AAN 77th ANNUAL MEETING ABSTRACT

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Abstract Title: Effectiveness of Zonisamide Prophylaxis in Reducing Headache Days per Month for Pediatric Migraine Patients, A Retrospective Analysis

Press Release Title: Drug may prevent some migraine attacks in children and teens

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Objective: To examine zonisamide prophylaxis and reduction in headache days per month (HDPM) in pediatric migraine patients.

Background: Zonisamide is an anti-seizure medication that has been used off-label for headache prevention in pediatric patients. Despite growing usage, zonisamide as a prophylactic for headaches in children has not been well studied.

Design/Methods: This is a retrospective cohort study at a single institution. Epic SlicerDicer was used to identify patients with both an ICD diagnosis of "headache" and a zonisamide prescription. Wilcoxon tests were used to analyze change in HDPM on presentation and first follow-up. Analyses were made between groups stratified by time to first follow-up and intractable (having failed two or more prophylactic medications) vs non-intractable.

Results: A total of 256 patients met the inclusion criteria for this study. The participants were 70% female with a median age of 15, with 28% intractable migraine patients. For the entire cohort, the results suggest a median decrease from 16 to 6 HDPM at first follow-up after zonisamide initiation ($p < 0.001$). When compared across subgroups, the group that followed up within 2-6 months showed the largest reduction with a median decrease of 6 HDPM ($p < 0.05$). Both intractable and non-intractable groups showed a significant median decrease of 6 HDPM at first follow-up ($p < 0.001$).

Conclusions: Prophylactic zonisamide use was shown to significantly reduce median number of HDPM for both intractable and nonintractable migraine patients. The data suggests that the strongest effect of zonisamide prophylaxis occurs after at least 2 months of use. Zonisamide use was effective in reducing HDPM in both patients that were intractable and non-intractable. Our data show the potential novel clinical impact of zonisamide prophylaxis on the pediatric migraine population. Future research could investigate zonisamide prophylaxis in a prospective trial and compare zonisamide use to current gold standard, topiramate.

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