

AAN 73rd ANNUAL MEETING ABSTRACT

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Abstract Title: Medication Overuse Headache in Chronic Migraine Patients Using Cannabis: A Case-Referent Study

Press Release Title: Can Cannabis Use Lead to Rebound Headaches for People with Migraine?

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Objective: To examine whether cannabis use predicts medication overuse headache (MOH) in chronic migraine (CM) patients.

Background: MOH is a consequence of regular overuse of acute headache medications in patients with pre-existing primary headache disorders. Cannabis affects the endocannabinoid system in the brain, which plays a role in pain processing. There is moderate evidence to support the use of cannabis for the treatment of chronic pain. However, there is emerging anecdotal clinical evidence that use of cannabis may lead to medication overuse headache.

Design/Methods: We conducted a retrospective study using the Stanford Research Repository Cohort Discovery Tool between 2015 to 2019 involving 368 (150 using cannabis; 218 not using cannabis) adult CM patients with a minimum CM duration of 1 year. The following variables were extracted from each patient's chart: diagnosis of MOH as dependent variable, and predictor variables as age, sex, migraine frequency, current CM duration, current cannabis use duration, overused acute migraine medications and duration of current MOH. Logistic regression was employed to identify variables predicting MOH while controlling for remaining predictors. Agglomerative hierarchical clustering (AHC) was conducted to explore natural clusters using all predictor variables.

Results: There were 212 CM patients with MOH and 156 CM patients without MOH. Current cannabis use statistically significantly predicted cases with MOH – odds ratio 5.99 (3.45, 10.43), $p < 0.0001$. Significant associations were found between current cannabis use, opioid use and MOH. AHC revealed two major natural clusters. Cluster I patients were younger with less migraine frequency, higher MOH burden, more current cannabis and opioid users than cluster II.

Conclusions: Cannabis use significantly contributes to the prevalence of MOH in CM. Bidirectional cannabis-opioid association was observed – use of one increased use of the other. It may be helpful to advise CM patients with MOH to reduce cannabis use in order to treat MOH effectively.

Study support: None

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