

UNRAVELING THE COMPLEXITY OF MEDICATION-OVERUSE HEADACHE: CLINICAL AND BEHAVIORAL PREDICTORS OF 12-MONTH OUTCOMES

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Background. Medication-overuse headache (MOH) is a complex neurological condition that, once treated, is associated with relapse risk. This study aims to identify factors associated with relapse into MO at 12 months.

Methods. We analyzed a single-center cohort of 217 MOH patients treated in our Headache Unit with a detoxification protocol. Twelve-month follow-up data were available for 175 patients. Categorical variables were compared using Fisher's exact test, with odds ratios (ORs) reported where appropriate, while continuous variables were compared using the Mann–Whitney U test and summarized as median and interquartile range or mean ± standard deviation. The Holm correction was applied separately to the multiple univariate comparisons performed for each outcome. Two multivariable logistic regression models identified factors independently associated with relapse into medication overuse and chronic headache recurrence. The models included age, sex, duration of chronicity, a medium/high Leeds Dependence Questionnaire (LDQ) score, depressive spectrum, and previous exposure to advanced preventive therapies. Multivariable analyses used a complete-case approach, and adjusted odds ratios (aORs), 95% confidence intervals (CIs), and p-values were reported.

Results. A total of 175 patients (94.09%) completed the one-year follow-up (150 females and 25 males with a mean age of 48.14±12.62 years). At this point, 49 patients (28.0%) relapsed into medication overuse (MO), while 71 (40.6%) experienced a chronic headache pattern recurrence. Multivariable analysis showed MO relapse was independently associated with a longer duration of chronicity (aOR 1.069 per year; 95% CI 1.02–1.12; p=0.0085), a medium/high LDQ score (aOR 3.229; 95% CI 1.43–7.27; p=0.0047), and previous exposure to advanced preventive therapies – botulinum toxin A, anti-CGRP mAbs, gepants (aOR 2.870; 95% CI 1.22–6.77; p=0.016). For chronic headache recurrence, a longer duration of chronicity was the only independently associated factor (aOR 1.044 per year; 95% CI 1.00–1.09; p=0.0484).

Conclusions. Relapse into MO at 12 months is driven by chronicity duration (cross-cutting risk of persistence), a medium/high LDQ score (indicating pharmacological dependence), and exposure to advanced therapies (a marker of clinical severity and refractoriness). The identified complex profiles require a multidimensional approach that includes detoxification, patient education, preventive treatment, structured monitoring, and psychological support.