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Prevalence of alloknesis among patients with episodic and chronic migraine

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Introduction
Migraine is a highly prevalent and disabling chronic neurological disorder associated with sensory hypersensitivity and central sensitization. Among these manifestations, allodynia has been well described in the literature, whereas alloknesis remains poorly investigated in patients with migraine. Alloknesis is an abnormal sensory phenomenon characterized by the sensation of itch or scratching behavior triggered by a stimulus that would not normally induce itch. Considering the pathophysiological overlap between pain and itch, particularly involving central and peripheral sensitization mechanisms, the investigation of this phenomenon in migraine is clinically relevant.

Objective
To assess the prevalence of alloknesis among patients with episodic and chronic migraine, to characterize the migraine phases associated with its occurrence, and to explore its associations with clinical characteristics, triggering factors, associated symptoms, allodynia, autonomic dysfunction, depression, and anxiety.

Methods
A cross-sectional observational study conducted between March and April 2026 at the Headache Outpatient Clinic of the Complexo Hospital de Clínicas of the Federal University of Paraná (UFPR). Patients with a diagnosis of migraine according to the ICHD-3, evaluated through convenience sampling. Data collection included a structured interview, clinical characterization, an ASC-12 questionnaire adapted for alloknesis, the ASC-12 for allodynia, PHQ-9, GAD-7, and COMPASS-31. Statistical analysis was performed using GraphPad Prism version 11.0.1, adopting a significance level of $p < 0.05$.

Results
A total of 26 patients were evaluated, with a predominance of females (92.3%) and a mean age of 48.5±12.5 years. Alloknesis was identified in 5 patients (19.2%), occurring in both chronic and episodic migraine, with no significant association with migraine periodicity. The manifestation was more frequent during the aura and headache phases. A significant association was observed between alloknesis and physical stress as a triggering factor ($p=0.019$), in addition to higher COMPASS-31 scores in the group with alloknesis ($p=0.003$). No significant association was found with allodynia, anxiety, or depression.

Conclusion
Alloknesis was present in a subset of patients with migraine, suggesting that this phenomenon may be part of the sensory hypersensitivity spectrum of the disease. Its association with greater autonomic dysfunction and physical stress reinforces the hypothesis of the involvement of central sensitization mechanisms. Further studies with larger samples and validated instruments are required to clarify its clinical implications.

Keywords:
Migraine
Central sensitization
Alloknesis
Itch
Autonomic dysfunction

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