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Somatosensory analysis of pain in individuals with migraine with and without aura in the interictal phase

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Introduction:
Migraine is a primary headache disorder characterized by unilateral pain, classified as migraine without aura (MO) or migraine with aura (MA). In the literature, studies comparing neurophysiological mechanisms between MA and MO are scarce, indicating the need for further investigation of somatosensor clinical manifestations.

Objective
To analyze whether the presence of aura modifies somatosensory aspects during the interictal phase in individuals with migraine.

Methods
This is a comparative cross-sectional observational study that assessed the clinical characteristics of pain in individuals with MA and MO. The study was approved by the Institutional Research Ethics Committee (CAAE: 81931324.0.0000.5546) and opinion number 7.230.625. This study met the requirements of the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) statement. Sociodemographic, anthropometric, and clinical characteristics of the participants were recorded. Immediately after screening, pressure pain threshold (PPT; digital pressure algometer), temporal summation of pain (TS; temporal summation test), and conditioned pain modulation (CPM; conditioned pain modulation test - algometry) were tested. SPSS software, version 27.0 was used for statistical analyses, with a significance level of $p \leq 0.05$.

Results
The final sample consisted of 27 individuals (MA: n=15; MO: n=12). No statistical differences were observed in the analysis of both primary ($p > 0.05$) and secondary ($p > 0.05$) PPT, TS ($p > 0.05$), and CPM mechanism ($p > 0.05$).

Conclusion
Our findings suggest that somatosensory profiles in MA and MO patients are similar This suggests a shared pathophysiological substrate in the processing of chronic pain, manifested in an analogous manner in both groups, regardless of the presence of aura.

Keywords:
Pain
Signs and symptoms
Central nervous system sensitization
Migraine with aura

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