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Identification of food triggers associated with migraine characteristics

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Introduction
Food triggers are frequently reported by individuals with migraine; however, their clinical implications are still poorly understood.
Objective
To investigate the association between migraine characteristics and specific food triggers.
Methods
This cross-sectional study included individuals with migraine who reported at least one food as a migraine trigger, seen in an academic outpatient clinic in Londrina-PR, Brazil. Demographic, anthropometric, and clinical information were collected. Data on migraine classification, medication overuse, prophylactic treatment, and presence of osmophobia were recorded. Participants also completed validated self-administered questionnaires on disability, migraine impact, allodynia, anxiety, and depression. An exploratory analysis was conducted using Chi-square or Fisher's Exact tests as appropriate.
Results
A total of 524 individuals with migraine were evaluated, of whom 293 reported at least one food trigger. The majority of these participants were female (87.0%) with a median age of 33 years. The most frequently reported triggers were alcohol (44.0%), followed by chocolate (42.0%) and cheese (27.7%). Chocolate was associated with episodic migraine compared to chronic migraine (49.0% vs. 34.1%; p=0.010). Cheese was associated with females (30.2% vs. 10.5%; p=0.011), osmophobia (31.6% vs. 13.8%; p=0.005), and prodrome perception (30.9% vs. 17.8%; p=0.030). Excessive carbohydrates were associated with females (30.2% vs. 10.5%; p=0.011) and depression (41.5% vs. 25.7%; p=0.041). Monosodium glutamate was associated with the presence of osmophobia (9.2% vs. 1.5%; p=0.035) and abdominal obesity (13.4% vs. 5.1%; p=0.024). Citrus fruits were associated with migraine without aura (16.0% vs. 7.3%; p=0.022) and age ≥50 years (25.0% vs. 9.4%; p=0.002). Lastly, artificial sweeteners were associated with migraine without aura (p=0.029), and processed meats with osmophobia (p=0.038). There was no association of specific food triggers with migraine disability, impact, allodynia, anxiety, prophylactic medication, or medication overuse.
Results
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Conclusion
There is an association between migraine characteristics and the type of food perceived by patients as a trigger for migraine attacks.