Headache Medicine 2026, Supplement ▪ p-ISSN 2178-7468, e-ISSN 2763-6178

Headache Medicine

ID: 33

Exclusive breastfeeding as a protective factor against migraine in children and adolescents: a systematic review

Júlia Batista Andrade Barreto, Halley Ferraro Oliveira

Tiradentes University, Aracaju, Sergipe, Brazil

Júlia Batista Andrade Barreto
juliababarreto28@gmail.com

Introduction

Migraine is one of the main causes of recurrent headache in childhood and adolescence and is associated with functional, academic, and psychosocial impairment. Early-life factors related to neurodevelopment and immune modulation have been investigated as contributors to headache disorders in this population. In this context, exclusive breastfeeding (EBF) has gained attention due to its neuroprotective, anti-inflammatory, and gut microbiota–modulating effects, which may influence mechanisms involved in migraine pathophysiology. Studies suggest that children exclusively breastfed for an adequate period may present a lower prevalence of neurological and inflammatory conditions, including primary headaches.

Objective

To investigate, through a systematic review, the association between exclusive breastfeeding and migraine occurrence in children and adolescents, evaluating its possible protective effect.

Methods

A systematic review was conducted according to PRISMA guidelines using the PubMed and SciELO databases. The descriptors used were: "breastfeeding", "exclusive breastfeeding", "migraine", "headache", "children" and "adolescents". The research question was structured according to the PICO strategy: P (population) consisted of children and adolescents; I (intervention/exposure) was exclusive breastfeeding; C (comparison) included absence or shorter duration of EBF; and O (outcome) was migraine and recurrent headache occurrence. The initial search identified 48 studies. After duplicate removal and title and abstract screening, 17 articles remained for full-text evaluation. Following eligibility criteria application, 9 studies were included in the final analysis. Reviews, case reports, and studies lacking complete data were excluded.

Results

Most studies demonstrated an association between longer duration of exclusive breastfeeding and lower migraine prevalence in children and adolescents. Reduced frequency of recurrent headaches was observed among individuals exclusively breastfed for at least six months. EBF was also associated with improved neurological development, inflammatory modulation, and greater gut microbiota stability, factors potentially involved in migraine prevention. Nevertheless, some studies reported inconclusive findings due to methodological heterogeneity and differences in diagnostic criteria.

Conclusion

This systematic review suggests that exclusive breastfeeding may act as a protective factor against migraine and recurrent headache in children and adolescents. The findings indicate a beneficial role of EBF in neurodevelopmental and neuroinflammatory pathways associated with migraine pathophysiology. Despite favorable results, heterogeneity among studies highlights the need for further longitudinal research to clarify this association and strengthen current evidence. These findings reinforce the importance of breastfeeding promotion strategies in pediatric care and public health policies focused on preventing childhood migraine and disability.

Keywords:
Migraine
Children and adolescents
Headache
Exclusive breastfeeding

© Copyright 2025