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Incidence of hospitalizations for migraine in children and adolescents across regions of Brazil in the last 10 years: a comparative analysis between 2016 to 2021 and 2021 to 2026

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Introduction

Migraine is a common primary headache disorder in childhood and adolescence and may significantly affect school, social, and family life. A 2021 global analysis of 204 countries showed that Brazil had the highest prevalence of headaches among children and adolescents, reaching 30.6%.

Objective

This study aimed to evaluate hospitalizations due to migraine among children and adolescents across Brazilian regions and compare the periods from 2016–2021 and 2021–2026.

Methods

This is a cross-sectional, retrospective, epidemiological study with a quantitative approach based on data from the Hospital Information System of the Brazilian Unified Health System (SIH/SUS), available through DATASUS. The category "Migraine and other cephalic pain syndromes" from ICD-10 morbidity lists was selected.Variables analyzed included mortality, region, sex, and age groups under 1 year to 19 years.

Results

Between 2016 and 2021, 8,453 hospitalizations were recorded, with 8,091 (95.72%) classified as emergency admissions and 11 deaths. The Southeast region had the highest number of cases, with 2,923 (34.58%), while the Midwest had the lowest, with 512 (6.06%). Females showed higher incidence rates. The age group from 15 to 19 years accounted for the highest number of hospitalizations, with 3,888 (45.99%), whereas children under 1 year had the lowest number, with 52 (0.62%). From 2021 to 2026, 9,831 hospitalizations were identified, including 9,477 (96.40%) emergency admissions and 27 deaths. The Northeast became the region with the highest number of cases, with 3,269 (33.25%), while the Midwest remained the lowest, with 665 (6.76%). Females also predominated, representing 6,044 (61.48%) cases. Individuals aged 15–19 years continued to present the highest number of hospitalizations, with 3,727 (37.91%), while children under 1 year remained the least affected group, with 92 (0.94%).

Conclusion

It was concluded that hospitalizations increased over the years, and the proportion of emergency admissions increased by 0.71%. Regarding the incidence of migraine-related hospitalizations across the regions of Brazil, the Southeast initially stood out with the highest number of occurrences, but in the most recent analyzed period, the Northeast became the leading region. A 145.45% increase in deaths was observed. Furthermore, concerning age distribution, in both periods the highest number of hospitalizations occurred among individuals aged 15 to 19 years; however, in the temporal analysis, there was a 17.57% reduction in cases within this age group. In both periods, the Midwest was the region with the lowest number of hospitalizations. Additionally, females predominated among migraine-related hospital admissions in Brazil, and the age group with the lowest occurrence was children under 1 year old.

Keywords:
Migraine
Children and adolescents
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