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Epidemiological profile of hospitalizations for migraine and other headache syndromes in the northeast region of Brazil: a 10-year retrospective study in the Unified Health System (SUS)

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Introduction

Migraine is a highly prevalent neurological condition that generates a high number of hospital admissions due to refractory attacks, profoundly impacting the quality of life of patients, especially those of working age (20-49 years). In the Northeast Region, marked by socioeconomic inequalities and demographic diversity, the profile of these hospitalizations reflects the heterogeneous distribution of healthcare access. Understanding this scenario is essential to measure the burden of these morbidities on the SUS and to support improvements in care.

Objective

To analyze the epidemiological, demographic, and social trends of hospitalizations for migraine and other headache syndromes in the Northeast between 2016 and 2025.

Methods

An ecological study based on the analysis of secondary data on SUS hospitalizations for migraine (ICD-10 G43) and other headache syndromes (ICD-10 G44). Data were obtained via the TABNET/DATASUS platform and cross-referenced with population estimates from the Brazilian Institute of Geography and Statistics (IBGE) for the 2016–2025 period. The investigated variables included sex, age group, color/race, and state. Following extraction, data were processed using descriptive statistics, calculating absolute and relative frequencies.

Results

A total of 31,154 hospitalizations were recorded during the period, of which 19,982 (64.1%) were female. In the most prevalent age group (20 to 49 years), female predominance was even more significant, accounting for 68.4% (10,948) of the 15,996 hospitalizations. Geographically, the states of Ceará (9,128) and Maranhão (7,641) concentrated the highest number of occurrences, while Rio Grande do Norte recorded the lowest absolute (176) and relative (0.5/100,000) rates. Maranhão had the highest hospitalization rate (11.3/100,000), followed by Ceará (10.3/100,000). Regarding color/race, 23,484 (75.3%) of the hospitalized patients self-identified as pardo (mixed-race), contrasting with only 622 (2%) Black and 27 (0.1%) Indigenous patients. The combination of these data with the significant number of 3,993 (12.8%) records lacking race information highlights potential barriers to hospital care access for minorities, pointing to a probable underreporting of attacks managed exclusively in a home setting.

Conclusion

Migraine hospitalizations in the Northeast present a strong gender profile, predominantly affecting women of reproductive age, which suggests the influence of neuroendocrine factors. Additionally, geographic disparities and the high rate of ethnic-racial underreporting reveal weaknesses in health records and inefficiencies in Primary Care, reflected in the high hospital demand for an essentially outpatient condition. These findings reinforce the urgency of developing prophylactic strategies aimed at the female population and strengthening primary care to mitigate the worsening of migraine attacks and alleviate the burden on the public health system.

Keywords:
Migraine disorders
Hospitalization
Epidemiology
Brazilian Unified Health System

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