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Epidemiological analysis of death cases due to migraine and other cephalic pain syndromes in northeastern Brazil (2021-2025)

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Introduction

Neurological disorders are an important public health issue due to their impact on quality of life, hospitalizations, and mortality. Among them, migraine and other cephalic pain syndromes are highly prevalent and may be associated with severe complications. In Northeastern Brazil, epidemiological studies on mortality related to these conditions remain limited. Therefore, this study analyzes SIH/SUS data from the last five years to describe the epidemiological profile of deaths caused by migraine and other cephalic pain syndromes in Northeastern Brazil.

Objective

To analyze the epidemiological profile of deaths caused by migraine and other cephalic pain syndromes in Northeastern Brazil between 2021 and 2025.

Methods

This is a retrospective, cross-sectional epidemiological study with a quantitative approach, conducted through data collection from the Brazilian Unified Health System Hospital Information System (SIH/SUS), linked to DATASUS. In the ICD-10 Morbidity List category, "Migraine and other cephalic pain syndromes" was selected, and the variables analyzed included gender, age group, and region. The data analyzed were restricted to death cases involving patients from the Northeastern region of Brazil, covering the period from 2021 to 2025.

Results

Between 2021 and 2025, 311 deaths caused by migraine and other cephalic pain syndromes were recorded in Northeastern Brazil. Ceará presented the highest incidence, with 230 cases (73.9% of the total), while Rio Grande do Norte registered the lowest incidence, with only 1 case. Regarding gender, there was a predominance among females, accounting for 172 deaths (55.3%), whereas males corresponded to 139 cases (44.7%). In addition, concerning age groups, older adults were the most affected, especially individuals aged 80 years and older, who accounted for 60 deaths (19.3%), followed by the 60–69 years age group, with 55 cases (17.7%). These findings demonstrate the greater vulnerability of the elderly population to complications related to cephalic pain syndromes.

Conclusion

In conclusion, the findings indicate important regional and demographic differences in deaths related to migraine and other cephalic pain syndromes in Northeastern Brazil. The higher number of cases observed in Ceará may be associated with the concentration of specialized healthcare services and referral centers in the state, whereas the lower incidence in Rio Grande do Norte may reflect differences in reporting and healthcare distribution. The predominance among females is consistent with the known influence of hormonal factors on migraine occurrence, while the greater mortality among older adults may be related to increased clinical vulnerability and the presence of comorbidities. Overall, the results reinforce the importance of strengthening epidemiological surveillance, improving access to healthcare services, and promoting early diagnosis and appropriate management of cephalic pain syndromes.

Keywords:
Migraine
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