Epidemiologic analysis of hospital admissions due to migraine and other cephalalgia syndromes in the state of São Paulo (2019-2024)

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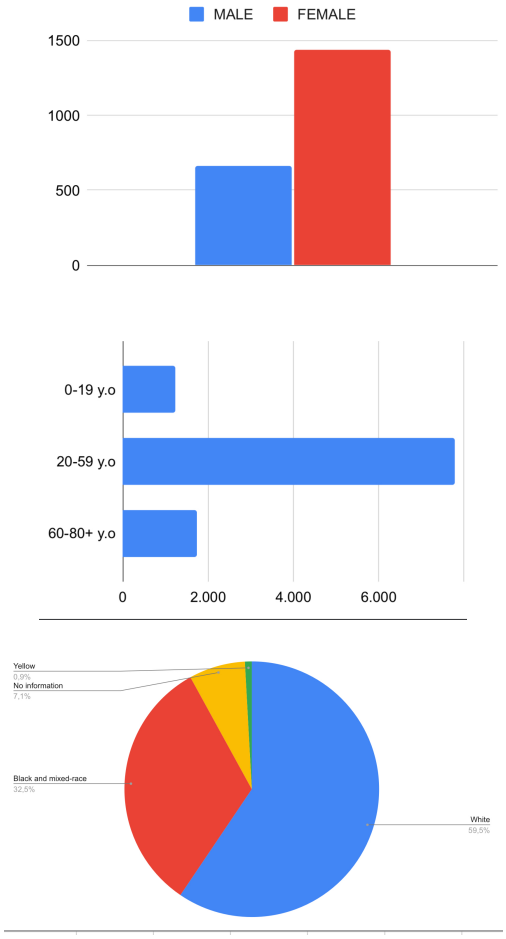
Research aims and key results: to analyze the epidemiological profile of patients hospitalized due to this conditions during the studied period. Most cases occurred in adult white women and the covid-19 pandemic caused variations in the hospitalizations occurrence.

Objective: Analyze the epidemiological profile of hospital admissions due to migraine and other headache syndromes in the state of São Paulo, considering the period from 2019 to 2024.

Methods: This is a descriptive, cross-sectional study based on secondary data from the Hospital Information System of SUS (SIH/SUS). SUS is the unified health system of Brazil. The data was collected in May 2025. Records of hospitalizations with a primary diagnosis of migraine (ICD-10 G43) and other headache syndromes (ICD-10 G44), during the years of 2019 to 2024, were included. Variables such as sex, age group, skin color, and type of care were analyzed. The data were processed using descriptive statistics, with absolute and relative frequencies. A simple linear regression was applied to assess the temporal trend in hospital admissions from 2019 to 2024 and a segmented (piecewise) regression to evaluate the impact of the pandemic on the admissions. The slope and intercept were estimated, and model adequacy was evaluated using the p-value and the coefficient of determination (R^2).

Results: A total of 11.455 hospitalizations were recorded during the study period, with an average of 1.909,16 cases per year. Approximately 96,48% of these were emergency cases. Most hospitalizations occurred in women (69,38%) and adults aged 20-59 years (67,87%). The racial distribution reflects the state's demographics but it is also important to investigate structural inequalities affecting Black people's access to health care in Brazil. Linear regression showed a non-significant average annual increase of 51 admissions (ß = 51.06; p = 0.45; R^2 = 0.15), while segmented regression indicated a 26% decline in admissions during the peak of the pandemic (2020-2021) and a significant post-pandemic recovery with an 11.2% annual growth (ß=0.112, p=0.006, R^2=0.858).



Conclusion: The results show a high number of emergency hospitalizations, predominantly among women and adults. The 26% decline in admissions during the peak of the pandemic (2020-2021) reflects the impact of the health crisis, followed by a significant post-pandemic recovery with an annual increase of 11.2%. The higher incidence among the white population and adults suggests the need for targeted public health policies for the most affected groups.