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

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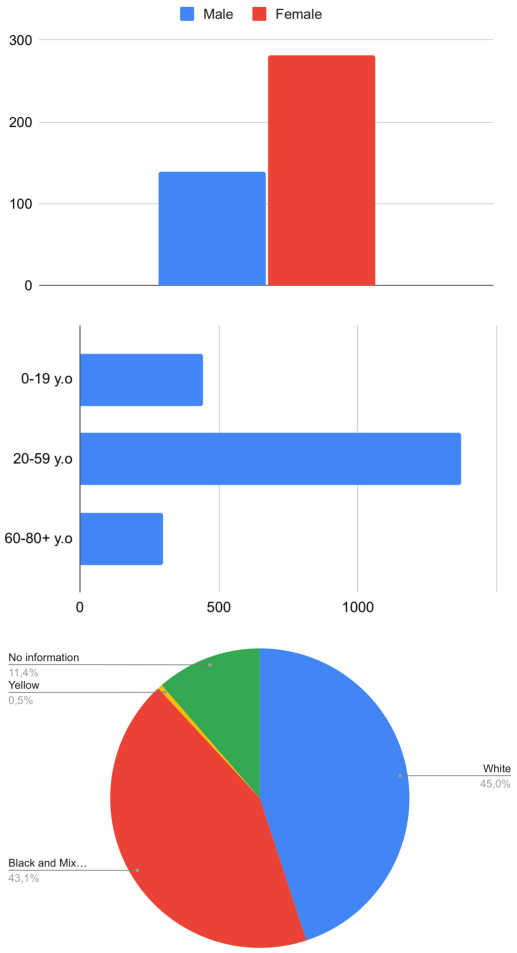
Research aims and key results: to analyze the epidemiological profile of patients hospitalized due to this conditions during the studied period. Most cases occurred in adult white women and the covid-19 pandemic caused variations in the hospitalizations occurrence.

Objective: Analyze the epidemiological profile of hospital admissions due to migraine and other headache syndromes in the city 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, in the city of São Paulo, were included. Variables such as sex, age group, skin color, and type of care were analyzed. The data was processed using descriptive statistics, simple linear regression 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: During the studied period, 2.112 hospital admissions occurred due to migraine and other headaches (422,4 cases per year), with 94,69% being emergency cases. The majority of patients were female and adults (20-59 years). Most patients were white, followed by mixed-race and black individuals, though 235 cases lacked race/skin color data, impacting analysis accuracy. The simple linear regression showed no significant reduction in hospitalizations (p=0.106; R^2=47.8%). However, the segmented regression with a breakpoint in 2020 revealed a significant change in hospitalization trends (p=0.018), with an increase of 15.6 hospitalizations per year in the post-pandemic period (p=0.022; R^2=89.2%). These results suggest that the pandemic significantly altered the trajectory of hospitalizations, with a progressive increase in the following years.



Conclusion: In conclusion, hospitalizations due to migraine and other headaches are predominantly emergency cases, with a higher incidence in women and adults (20-59 years). The racial/ethnic distribution shows a majority of white patients, though missing race data affects the accuracy of the analysis. While there was no significant overall reduction in hospitalizations, a significant increase in admissions post-2020 suggests that the pandemic has had a lasting impact on hospitalization trends, with a progressive rise in cases in the years following.