

EPIDEMIOLOGICAL PROFILE OF HOSPITALIZATIONS DUE TO MALIGNANT NEOPLASMS OF OTHER PARTS OF THE CENTRAL NERVOUS SYSTEM IN THE STATE OF PARÁ FROM 2019 TO 2024

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Introduction: The central nervous system (CNS) is anatomically divided into two components - the brain and the spinal cord - each possessing distinct histophysiological characteristics, yet functioning in close integration to maintain bodily homeostasis. Within this framework, the spinal cord may be subject to neoplastic processes capable of eliciting systemic effects, constituting a pathology potentially influenced by epidemiological factors in Brazil. **Objectives:** This study aims to describe the epidemiological profile of hospitalizations due to malignant neoplasms of other parts of the CNS (which includes the Spinal Cord) in the state of Pará between 2019 and 2024, and to identify potential risk factors associated with the disease. **Methods:** This was a cross-sectional, observational epidemiological study based on secondary data retrieved from the Department of Informatics of the Brazilian Unified Health System (DATASUS). Data were collected and analyzed according to the following variables: Place of Hospitalization Occurrence, Age Group, Race/Color, Sex, and Year of Processing. The study population included patients diagnosed with Malignant Neoplasm of Other Parts of the CNS (ICD-10 code C72). Data analysis was performed using Microsoft Office Excel 2019 and BioEstat 5.3. A descriptive and comparative analysis was conducted, and a chi-square test was applied to assess the association between Age Group, Race/Color, Sex and the clinical outcome (death or hospital discharge). A p-value of less than 0.05 was considered statistically significant. **Results:** A total of 377 hospitalizations were recorded in Pará between 2019 and 2024. Of these, 315 (83.55%) occurred in Belém, followed by 22 (5.83%) in Santarém. The highest number of hospitalizations was observed among children aged 5 to 9 years, with 69 cases (18.30%), followed by the 1 to 4 years age group with 50 cases (13.26%). Mixed race ("parda") individuals represented the majority of

hospitalizations (292 cases, 77.45%), followed by white individuals (37 cases, 9.81%). Males were more affected, accounting for 210 hospitalizations and 25 deaths (62.5%), compared to females with 167 hospitalizations and 15 deaths (37.5%). No statistically significant association was found between age group ($p = 0.1754$), race/color ($p = 0.3024$) and sex ($p = 0.5115$) in relation to the clinical outcome for each variable. The overall mortality rate during the study period was 10.61%, with 2022 presenting the highest mortality rate (19.61%) and the greatest number of deaths (10). The year 2023 recorded the highest number of hospitalizations, totaling 86 cases (22.81%). Conclusion: This study characterized the epidemiological profile of malignant neoplasms of other parts of the CNS in Pará between 2019 and 2024, identifying a predominant demographic of mixed-race male children. These findings highlight the urgent need for targeted public health policies and early detection strategies, emphasizing the role of social determinants in oncology care.

Keywords: Epidemiological profile; neoplasms; spinal cord