International Journal of Health Science

ANALYSIS OF DEMENTIA MORTALITY IN BRAZIL: A RETROSPECTIVE STUDY

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Abstract: Dementia is a syndrome caused by chronic and progressive brain disease, leading to cognitive decline that affects mental functions such as memory, thinking, and language. Each person is affected in a unique way, depending on the underlying disease and individual characteristics, as well as factors such as personality and environment. Alzheimer's disease presents with progressive memory decline, while dementia with Lewy bodies includes visual hallucinations and parkinsonian signs. The diagnosis of dementia involves cognitive assessment with screening and neuropsychological tests to identify cognitive alterations and differentiate forms of dementia. The objective of the present study was to identify the epidemiological profile of dementia in Brazil. The time frame was the incidence of notifications of the disease in the period from 2017 to 2023. A quantitative, retrospective and epidemiological methodological approach was used, showing the number of hospitalizations due to dementia. The data were collected through the S.U.S. (Unified Health System) Information Technology Department (DATASUS), and the variables investigated were year of care, region, age group, gender, color/race, and deaths related to dementia. The data from this study highlight the importance of a regionalized and multidisciplinary approach to tackling dementia in Brazil. Investments in health infrastructure, training of professionals, and awareness campaigns are essential to improve the diagnosis and treatment of the disease, especially in less favored regions.

Keywords: dementia, epidemiology, observational study.

INTRODUCTION

Dementia is a syndrome resulting from a brain disease, usually chronic and progressive, marked by significant cognitive decline. This decline affects mental functions such as memory, thinking, orientation, language, calculation and judgment. The condition often leads to loss of autonomy and independence, significantly impacting the lives of family members and caregivers[1].

Dementia affects each person in a unique way, varying depending on the underlying disease and individual characteristics. It is not just brain damage that defines how dementia affects someone, but also factors such as personality, life events and the environment in which the person is placed[2].

Alzheimer's disease begins insidiously and gradually, with a slow, progressive and simultaneous decline in memory, learning, language and skills. On the other hand, dementia with Lewy bodies manifests with cognitive decline, recurrent visual hallucinations, fluctuations in cognitive status, extrapyramidal parkinsonian signs and increased sensitivity to the use of neuroleptics. For the diagnosis of dementia with Lewy bodies, the presence of a progressive decline in cognitive functions that interferes with the patient's daily activities is essential[3].

The diagnosis of dementia depends on an objective assessment of cognitive functioning and performance in daily activities. Cognitive assessment can begin with screening tests, such as the Mini-Mental State Examination, and must be supplemented by tests that assess different components of cognitive functioning. Brief tests that are easy and quick to administer by the clinician can be used to achieve this, such as memory tests (delayed recall of lists of words or pictures), verbal fluency tests (number of animals in one minute) and clock drawing tests. Detailed neuropsychological assessment is especially recommended in the early stages of dementia, when brief tests may be normal or show borderline results. In addition, neuropsychological assessment provides data on the profile of cognitive changes and is particularly useful for the differential diagnosis of some forms of dementia[4].

The increase in life expectancy of the world population has generated special attention to the causes and consequences of cognitive impairment and dementia processes. In recent years, several studies, both basic and clinical, have emerged with the aim of evaluating and developing techniques for the diagnosis, treatment and prevention of dementia[5].

In this sense, the objective of this study was to investigate the prevalence and describe the socioepidemiological profile of individuals affected by dementia. In this context, it is essential to examine the clinical characteristics of these patients, not only to better understand this condition, but also to develop more effective treatments.

METHODOLOGY

This is an observational epidemiological study of a descriptive nature. Descriptive epidemiological studies play a significant role in health science research, constituting the first stage in the application of the epidemiological method to understand the behavior of a health problem in a population.

The data were obtained by consulting the databases of the SUS Notifiable Diseases Information System (SINAN), referring to the period from 2017 to 2023. The following aspects were evaluated: year of care, region, age group, gender, color/race and deaths related to dementia. Information was also obtained through the SCIELO and GOOGLE ACADEMIC databases, in which the keywords "dementia", "epidemiological profile" and "observational study" were used".

The study population consisted of the number of confirmed cases of dementia diagnosed in Brazil and recorded between 2017 and 2023. The indicator used to project the results (tables) was the number of confirmed cases of dementia. To avoid incomplete information in the system, such as that for the year 2024, it was decided to use only the years prior to 2024 available in the system. From the data obtained from SINAN from DATASUS, new tables were constructed in Microsoft Excel, which were subsequently analyzed using descriptive and analytical statistics.

Due to the information obtained through a public domain database, according to section III of Resolution 510/2016, it was not necessary to submit the study to the Research Ethics Committee (C.E.P.).

RESULTS

There were 19,901 cases of hospitalizations due to dementia in Brazil between 2017 and 2023. The average length of stay was 71.4 days. The highest number of cases was recorded in 2023, accounting for 3,163 (15.89%) of total hospitalizations. The year 2020 represented the lowest number of hospitalizations, with 2,437 (12.24%).

ADMISSIONS SECOND YEAR OF PROCESSING	
Year of service	Hospitalizations
TOTAL	20.082
2017	3.055
2018	2.897
2019	2.969
2020	2.437
2021	2.530
2022	3.031
2023	3.163

Source: Ministry of Health; S.U.S.; Hospital Information System (SIH/SUS)

The Southeast Region reported the highest number of hospitalizations, 11,332. The total number of hospitalizations due to dementia in the Southeast Region of Brazil, which is made up of the states of Espírito Santo (ES), Minas Gerais (MG), Rio de Janeiro (RJ), and São Paulo (SP), corresponds to 56.42% of the total number of hospitalizations reported. However, the region that reported the lowest number of cases for the same period was the North Region, with 356 cases, representing 1.77% of the total hospitalizations.

ADMISSIONS BY REGION	
Region	Hospitalizations
TOTAL	20.082
Northern Region	356
Northeast Region	2.210
Southeast Region	11.332
Southern Region	4.582
Central-West Region	1.602

Source: Ministry of Health; S.U.S.; Hospital Information System (SIH/SUS)

The age group with the highest number of hospitalizations was under 80 years old and over with 5,407 cases, representing 26.92% of total hospitalizations.

The individuals most affected by the disease were males, with 10,165 hospitalizations, representing 50.61%. Females had 9,917 hospitalizations, representing 49.39%.

ADMISSIONS BY GENDER	
Gender	Hospitalizations
TOTAL	20.082
Masculine	10.165
Feminine	9.917

Source: Ministry of Health; S.U.S.; Hospital Information System (SIH/SUS)

White race/color recorded 8,792 hospitalizations, representing 43.78% of cases. This data shows the prevalence of dementia in white individuals, mainly, followed by brown in-

dividuals with 5,393 hospitalizations, making up 26.85% of total hospitalizations. However, there were 4,278 cases that did not obtain information regarding the color/race of the affected patients.

ADMISSIONS BY COLOR/RACE	
Color/race	Hospitalizations
TOTAL	20.082
White	8.792
Black	1.273
Brown	5.393
Yellow	345
Indigenous	1
No information	4.278

Source: Ministry of Health; S.U.S.; Hospital Information System (SIH/SUS)

Regarding the total number of deaths from dementia, a total of 2,217 deaths were recorded between 2017 and 2023, which were more significant in the Southeast Region, with 1,100 cases, representing 49.61%.

DEATHS BY REGION	
Region	Deaths
TOTAL	2.217
Northern Region	8
Northeast Region	266
Southeast Region	1.100
Southern Region	303
Central-West Region	540

Source: Ministry of Health; S.U.S.; Hospital Information System (SIH/SUS)

DISCUSSION

Analysis of data on hospitalizations for dementia in Brazil between 2017 and 2023 reveals important regional trends and inequalities.

Between 2017 and 2023, 19,901 hospitalizations for dementia were recorded in Brazil, with an average hospital stay of 71.4 days. The year 2023 had the highest number of hospitalizations (3,163 cases, 15.89%), while 2020 had the lowest number (2,437 cases, 12.24%). This significant increase in 2023 may be related to several factors, including the aging of the population and possible delays in diagnosis and treatment during the COVID-19 pandemic.

The Southeast Region stood out with the highest number of hospitalizations (11,332 cases, 56.42% of the total), reflecting the region's greater population concentration and better health infrastructure. In contrast, the North Region had the lowest number of cases (356 hospitalizations, 1.77%), which may indicate both a lower prevalence of the disease and possible difficulties in accessing health services.

The age group most affected was 80 years or older, with 5,407 hospitalizations (26.92%). This data is consistent with the literature, which points to advanced age as one of the main risk factors for dementia. In terms of gender, men were slightly more affected (10,165 hospitalizations, 50.61%) compared to women (9,917 hospitalizations, 49.39%). This difference, although small, may be influenced by biological and behavioral factors that deserve further investigation.

Analysis by color/race revealed that white individuals were the most affected (8,792 hospitalizations, 43.78%), followed by mixed race individuals (5,393 hospitalizations, 26.85%). The lack of information on color/race in 4,278 cases (21.49%) highlights the need for improvements in data collection for a more accurate and inclusive analysis.

There were 2,217 deaths from dementia recorded during the period, with the Southeast Region once again having the highest number of cases (1,100 deaths, 49.61%). This data reinforces the severity of the disease and the need for public policies aimed at prevention, early diagnosis and adequate treatment of dementia.

CONCLUSION

This study delves into data on hospitalizations for dementia in Brazil between 2017 and 2023, revealing a worrying panorama of the disease, with persistent regional, age, gender and racial disparities.

There were 19,901 cases of hospitalizations due to dementia recorded in the period analyzed, with an average stay of 71.4 days. The year 2023 had the highest number of hospitalizations (3,163), while 2020 had the lowest (2,437).

The disparities between regions are alarming, with the Southeast concentrating almost 56.42% of hospitalizations, the Southeast stands out with 11,332 hospitalizations.

The age group of 80 years and over had the highest number of hospitalizations (5,407). Men were more affected (10,165 hospitalizations) than women (9,917). White individuals (8,792 hospitalizations) were the most affected, followed by mixed race individuals (5,393). Information on color/race was not obtained in 4,278 cases.

Between 2017 and 2023, 2,217 deaths from dementia were recorded, with the highest incidence in the Southeast (1,100 cases).

The data highlight the importance of a regionalized and multidisciplinary approach to tackling dementia in Brazil. Investments in health infrastructure, professional training and awareness campaigns are essential to improve the diagnosis and treatment of the disease, especially in less favored regions. In addition, more detailed and accurate data collection is essential for the development of effective and equitable public policies.

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