


ANALYSIS OF DEATHS DUE TO LUPUS ERYTHEMATOSUS IN BRAZIL

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ABSTRACT

Systemic Lupus Erythematosus (SLE) is a chronic inflammatory disease of autoimmune origin that can affect various organs and systems of the body, resulting in symptoms such as fever, weight loss, weakness, joint pain, among others. There are two main types of lupus: cutaneous, which affects the skin, and systemic, which affects internal organs. Diagnosis is based on factors intrinsic to the patient and requires the presence of specific autoantibodies and characteristic clinical manifestations.

The treatment of SLE involves the use of corticosteroids, antimalarials, and immunosuppressants, but these medications can cause adverse side effects that affect the quality of life of patients. Despite advances in diagnosis and treatment, morbidity and mortality in SLE patients is still significantly higher than in the general population. The objective of the present study was to identify the epidemiological profile of deaths from lupus erythematosus in Brazil between 2012 and 2022. A quantitative, retrospective, and epidemiological methodological approach was used, showing the number of deaths due to lupus erythematosus. Data were collected through the SUS Department of Informatics (DATASUS), and the variables investigated were year of death, region, gender, color/race, age group, and place of occurrence of deaths related to lupus erythematosus. The information pointed to the need for investment in research on lupus erythematosus, with a focus on early diagnosis, treatment, and access to quality health care.

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INTRODUCTION

Systemic Lupus Erythematosus (SLE), also known as lupus, is a chronic inflammatory disease of autoimmune origin. It can affect many different organs and systems of the body, resulting in a wide variety of symptoms. This clinical complexity makes lupus a challenging condition with significant potential for morbidity and mortality. Symptoms can include fever, weight loss, loss of appetite, weakness, joint pain, skin spots, inflammation of the pleura, hypertension and kidney problems. Although it is not known exactly what causes lupus, genetic, hormonal, and environmental factors are involved in its development ⁽¹⁾.

According to the Brazilian Society of Rheumatology (SBR), there are two main types of lupus: cutaneous, which manifests itself with spots on the skin, especially in areas exposed to sunlight, such as the face, ears, décolleté, and arms; and systemic, which affects one or more internal organs ⁽²⁾.

Lupus erythematosus results from an exaggerated immune response, causing tissue damage. This condition can affect several organs, such as the skin (in 90% of cases), musculoskeletal tissue (also in 90%), the kidneys (in 50%) and the nervous system. Symptoms can vary and include periods of remission and exacerbation ⁽³⁾.

Due to clinical variability, it becomes more challenging to identify and distinguish the patient's status, resulting in late diagnoses and lack of appropriate treatment. This, in turn, can lead to more advanced disease progression in the patient ⁽⁴⁾.

The diagnosis of Systemic Lupus Erythematosus is based on the combination of factors intrinsic to the patient, such as characteristic clinical manifestations and the presence of autoantibodies, which are observed with caution. In addition, disease-specific laboratory findings are used to confirm the diagnosis. In 1971, the American College of Rheumatology (ACR) created diagnostic classification criteria for SLE, which were later revised in 1997 to include anticardiolipin antibodies and eliminate the LE cell criterion. These criteria have been validated by the Systemic Lupus International Collaborating Clinics (SLICC) group and involve eleven clinical parameters and six immunological parameters. To confirm the diagnosis, the patient must present at least four items (including one clinical item and one immunological item) or biopsy-proven lupus nephritis compatible with SLE (presence of lupus autoantibodies) ⁽⁴⁾.

Currently, the treatment and control of Systemic Lupus Erythematosus (SLE) is based on the use of corticosteroids, antimalarials and immunosuppressants. However, these medications are associated with adverse side effects, such as reduced physical

capacity, changes in the pace of life, and the emergence of conflicts and distress. These effects can cause both physical and psychological suffering, significantly affecting the quality of life of patients ⁽⁵⁾.

Despite advances in the diagnosis and treatment of Systemic Lupus Erythematosus (SLE), which positively impact the prognosis, morbidity and mortality in patients with the disease is significantly higher compared to the general population ⁽⁶⁾.

Based on the above, the objective of this study was to identify the prevalence and characterize the socioepidemiological profile of deaths from systemic lupus erythematosus in Brazil between 2012 and 2022.

METHODOLOGY

This is an observational epidemiological study of a descriptive nature. Descriptive epidemiological studies play a significant role in health sciences 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 Department of Informatics of the Unified Health System of Brazil (DATASUS), referring to the period from 2012 to 2022. Aspects such as year of death, region, sex, color/race, age group, and place of occurrence of deaths related to lupus erythematosus were evaluated. Information was also collected from the SCIELO and GOOGLE SCHOLAR databases, using the keywords "lupus erythematosus", "epidemiological profile" and "observational study".

The study population consisted of the number of deaths from lupus erythematosus in Brazil and recorded in the period from 2012 to 2022. To avoid incomplete information in the system, such as those for the year 2023 and 2024, it was decided to use only the years prior to 2023 available in the system. From the data obtained from the DATASUS SINAN, new tables were built in Microsoft Excel and later analyzed by means of descriptive and analytical statistics.

Due to the information obtained from a database in the public domain, according to item III of Resolution No. 510/2016, it was not necessary to submit the study to the Research Ethics Committee (CEP).

RESULT

There were 964 deaths from lupus erythematosus in Brazil between 2012 and 2022. The highest number of cases was recorded in 2022, 135 (14%) of deaths. The year 2019 represented the lowest number of deaths, with 67 (6.95%).

Deaths according to year of death

YEAR OF DEATH	DEATHS
TOTAL	964
2012	83
2013	76
2014	76
2015	79
2016	78
2017	86
2018	86
2019	67
2020	73
2021	125
2022	135

Source: MS/SVS/CGIAE - Mortality Information System – SIM

The Southeast Region recorded the highest number of deaths, 387. The total number of deaths from lupus erythematosus in the Southeast Region of Brazil, which is formed by the states of São Paulo, Minas Gerais, Rio de Janeiro and Espírito Santo, corresponds to 40.14% of the total number of deaths reported. However, the region that had the lowest number of cases for the same period was the Central-West Region with 69 cases, representing 7.15% of total deaths.

Deaths according to region

REGION	DEATHS
TOTAL	964
North Region	93
Northeast Region	323
Southeast Region	387
South Region	92
Midwest Region	69

Source: MS/SVS/CGIAE - Mortality Information System – SIM

The individuals most affected by the disease were female, with 861 deaths, representing 89.31%. Males had 103 deaths, expressing 10.69%.

Deaths according to sex

SEX	DEATHS
TOTAL	964
Male	103
Female	861

Source: MS/SVS/CGIAE - Mortality Information System – SIM

The brown color/race registered 416 deaths, representing 43.15% of the cases. This data shows the prevalence of deaths from lupus erythematosus in brown individuals, mainly, followed by white individuals with 390 cases, making up 40.45% of the deaths. However, there were 48 deaths that did not obtain information regarding the color/race of the affected patients.

Deaths according to color/race

COLOR/RACE	DEATHS
TOTAL	964
White	390
Black	108
Yellow	2
Brown	416
Ignored	48

Source: MS/SVS/CGIAE - Mortality Information System – SIM

The age group with the highest number of deaths was 30 to 39 years old and 40 to 49 years old with 176 deaths each.

Deaths by age group

AGE GROUP	DEATHS
TOTAL	964
CHILD 1 YEAR OLD	1
5 TO 9 YEARS	2
10 TO 14 YEARS OLD	12
15 TO 19 YEARS OLD	58
20 TO 29 YEARS OLD	140
30 TO 39 YEARS OLD	176
40 TO 49 YEARS OLD	176
50 TO 59 YEARS OLD	174
60 TO 69 YEARS OLD	124
70 TO 79 YEARS OLD	62
80 YEARS AND OVER	39

Source: MS/SVS/CGIAE - Mortality Information System – SIM

The highest number of deaths occurred in the hospital environment, totaling 756 deaths (78.42%), followed by the home environment with 139 cases (14.41%). The other places of occurrence accounted for 6.38% of deaths.

Deaths according to place of occurrence

PLACE OCCURRENCE	DEATHS
TOTAL	964
Hospital	756
Other health facility	60
Domicile	139
Public Roads	1
Other	7
Ignored	1

Source: MS/SVS/CGIAE - Mortality Information System – SIM

DISCUSSION

The total number of deaths recorded in the analyzed period was 964, however, it was possible to notice a significant increase in deaths from erythematous leukemia in the years 2021 and 2022.

The Southeast region concentrated the highest number of deaths (387), representing 40.14% of the total. On the other hand, the Central-West region had the lowest number (69), equivalent to 7.15%. This regional disparity may be associated with factors such as access to health services, case notification, and population distribution. Investigations into the reasons for this difference are necessary to understand the real situation of the disease in the different regions of the country.

Women were disproportionately affected, accounting for 861 deaths (89.31%). Only 103 deaths (10.69%) occurred in men. This information corroborates other literature on the subject that points to the prevalence of lupus erythematosus in women.

The age group with the highest number of deaths was between 30 and 39 years old, followed by the 40 to 49 age group, with 176 deaths each. These data may indicate the need for specific prevention and treatment strategies for these age groups.

Finally, most deaths occurred in the hospital environment (756 cases, 78.42%), followed by the home environment (139 cases, 14.41%). The other places of occurrence accounted for 6.38% of deaths. This information may be relevant to care planning and medical interventions.

CONCLUSION

Between 2012 and 2022, 964 deaths from SLE were recorded in the country. The year 2022 had the highest number of cases (135), while 2019 had the lowest (67).

The Southeast Region concentrated the highest number of deaths (387), representing 40.14% of the total.

Women were most affected, representing 89.31% of deaths. Brown color/race had the highest prevalence (43.15%), followed by whites (40.45%). The lack of information on color/race occurred in 48 deaths.

The most affected age groups were 30 - 39 years old and 40 - 49 years old, with 176 deaths each. Most deaths occurred in a hospital environment (78.42%)

The data present in this study point to the need for investment in research on lupus erythematosus, with a focus on early diagnosis, treatment, and access to quality health care.

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