Epidemiological profile of elderly Brazilians who died of acquired immunodeficiency syndrome between 1996 and 2007*

Perfil epidemiológico de idosos brasileiros que morreram por síndrome da imunodeficiência adquirida entre 1996 e 2007

Perfil epidemiológico de ancianos brasileños que murieron por Síndrome de la Inmunodeficiencia Adquirida entre 1996 y 2007

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ABSTRACT

Objective: To identify the epidemiological profile of elderly in the information system for AIDS mortality in Brazil, between 1996 and 2007. **Methods:** A descriptive, ecological study, with data obtained by consulting the database of the Mortality Information System of the Department of Informatics in the Unified Health System. **Results:** Deaths occurred predominantly in: men between 60 and 69 years, low educational status, married, white, and mostly among residents in the Southeast and South. **Conclusion:** AIDS among the elderly increases with the years, but the strategies to prevent sexually transmitted diseases and AIDS have not reached this population, generating prejudice and stigma. It is important to invest in actions of prevention and training of health professionals to improve the health and quality of life of the elderly, and to reduce these rates.

Keywords: Elderly; Acquired immunodeficiency syndrome /mortality; Primary prevention; Mortality

RESUMO

Objetivo: Identificar o perfil epidemiológico de idosos no Sistema de Informação de Mortalidade acometidos por aids no Brasil entre 1996 e 2007. **Métodos:** Estudo descritivo, ecológico, cujos dados foram obtidos por consulta à base de dados Sistema de Informação de Mortalidade do Departamento de Informática do Sistema Único de Saúde. **Resultados:** Os óbitos foram predominantes em homens entre 60 e 69 anos, baixa escolaridade, casados e de cor branca, em sua maioria residentes nas Regiões Sudeste e Sul. **Conclusão:** A aids entre idosos aumenta com o decorrer dos anos, porém as estratégias de prevenção à doenças sexualmente transmissíveis e aids não os atingem, gerando preconceito e estigma. É importante que se façam investimentos em ações de prevenção e capacitação de profissionais da saúde para melhorar a qualidade de vida do idoso e reduzir esses índices.

Descritores: Idoso; Síndrome de imunodeficiência adquirida/mortalidade; Prevenção primária; Mortalidade

RESUMEN

Objetivo: Identificar el perfil epidemiológico de ancianos en el Sistema de Información de Mortalidad atacados por Aids en Brasil entre 1996 y 2007. **Métodos:** Se trata de un estudio descriptivo, ecológico, cuyos datos fueron obtenidos por consulta a la base de datos del Sistema de Información de Mortalidad del Departamento de Informática del Sistema Único de Salud. **Resultados:** Los óbitos fueron predominantes en hombres entre 60 y 69 años, baja escolaridad, casados y de color blanco, en su mayoría residentes en las Regiones Sur este y Sur. **Conclusión:** El SIDA entre ancianos aumenta con el transcurso de los años, sin embargo las estrategias de prevención de las enfermedades sexualmente transmisibles y el SIDA no los alcanzan, generando prejuicios y estigma. Es importante que se hagan inversiones en acciones de prevención y capacitación de profesionales de la salud para mejorar la calidad de vida del anciano y reducir esos índices.

Descriptores: Anciano; Síndrome de inmunodeficiencia adquirida/mortalidad; Prevención primaria; Mortalidad

** Study conducted through a secondary database: National System of Mortality (Sistema Nacional de Mortalidade - SIM), National System of Notifiable Diseases (Sistema Nacional de Agravos de Notificação - SINAN).*

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INTRODUCTION

Over the course of a decade, the contingent of people aged 60 years or older in Brazil has increased from 10.7 million to 14.5 million, representing an increase of 35.5% over this period. It is estimated that, over the next 20 years, the number of elderly will exceed 30 million, representing 13% of the population. In developing countries, the World Health Organization considers individuals aged 60 years or more to be elderly [1].

In the 1980s, the AIDS epidemic struck the country, particularly the metropolitan regions of São Paulo and Rio de Janeiro, and the cases were characterized, mostly, as males, with high socioeconomic status, and belonging to the categories of homosexual / bisexual transmission, and people with hemophilia or who were blood recipients. From 1990 onwards, a transition of the epidemiological profile was observed, resulting in impact on heterosexuals women, and the impoverished, and an internalization of the epidemic. Although initially associated with young adults, there was an increase in the number of people diagnosed with AIDS in Brazil, aged above 60 years (1).

The cases of AIDS infection in this age group happen, predominantly, through sexual transmission. By virtue of the stigma of old age, both the family and health professionals seem to ignore that in this phase the person is sexually active. This failure has serious consequences, particularly as regards prevention [2].

AIDS in old age becomes an issue of culture and exclusion, and concentrates primarily on social prejudices related to sex at this age. Behavioral studies reveal that sexual desire remains in older people and that the belief rooted in society that sex is the prerogative of youth contributes to keeping the elderly out of the priorities set for preventing sexually transmitted diseases (STDs) and AIDS in the population groups over 50 years of age [3].

There was a change in the sexual pattern of older men as a result of medications for treatment of erectile dysfunction, available on the market since the 1990s, providing them with more intense sexual activity. In relation to women, one study suggested that, although the frequency of intercourse decreased at the time of menopause, they continued with sexual activity and had difficulty negotiating condom use with their partners [4].

Moreover, the lack of campaigns targeted at the elderly about STD / AIDS, coupled with the prejudice against the use of condoms in this population and the increase in sexual activity, exposes an important segment of the population to the risk of acquiring HIV infection. In addition, health professionals are not adequately trained for prompt diagnosis and assistance for the aged with STD / AIDS. In general, the chronic-degenerative diseases have the major emphasis with regard to health promotion in this population group [5].

AIDS in the elderly suggests that these citizens are still invisible with respect to public policies of prevention. Although a minority are AIDS patients, mature adults and the elderly are the most affected in the whole country, even more than children and adolescents: from 1980 to June 2006, there were 26,014 AIDS cases reported in those older than 50 years, compared to 10,031 and 5,034 reports among children and adolescents, respectively [6].

The significant increase in the number of people older than 50 years of age who are living with AIDS emerges as a major challenge for Brazil, demanding the establishment of public policies and strategies that can guarantee quality of life for these people. Issues such as AIDS in the aging need further clarification in discussions in order to provide subsidies, both to care for people living with HIV and AIDS, and for the development of interventions and programs of prevention [3].

Faced with the confirmation of the sexual life of the elderly, it is essential that policies for prevention of STDs and AIDS are contemplated for this age group, considering its particularities, so that the objectives proposed by the Program of STD and AIDS are achieved effectively. In addition, knowledge of the epidemiological profile is important for the design of efficient actions for the population group exposed.

Therefore, this study had as its objective to identify the epidemiological profile of elderly people who died from AIDS in Brazil, between 1996 and 2007.

METHODS

This was a quantitative study of the ecological descriptive type, with data obtained from the database of the System of Information on Mortality (SIM), provided by the Informatics Department of the Unified Health System (DATASUS). For the definition of elderly, we used the age range recommended by the Ministry of Health, of 60 years and older. The ages of the elderly who died from AIDS were stratified into the following age groups: 60-69 years, 70-79 years, and, 80 years and more. The choice of the period 1996 to 2007 was based on the availability of such data in the DATASUS at the time of collection, in March 2010, estimating the mortality rates per 100,000 inhabitants.

This study was preceded by the approval of the Committee of Ethics in Research under No. 001/2012.

RESULTS

The age group ranging from 60 to 69 years had the largest number of deaths during the study period, showing the lowest mortality rate in 1997 (3.4 deaths/100.000) and

the highest in 2006, with a mortality rate of 5.2 deaths per 100,000 inhabitants. It is also the age group most affected by AIDS, representing 77.4% of AIDS deaths in the elderly. The results show an increasing linear trend of AIDS deaths over the years (Figure 1).

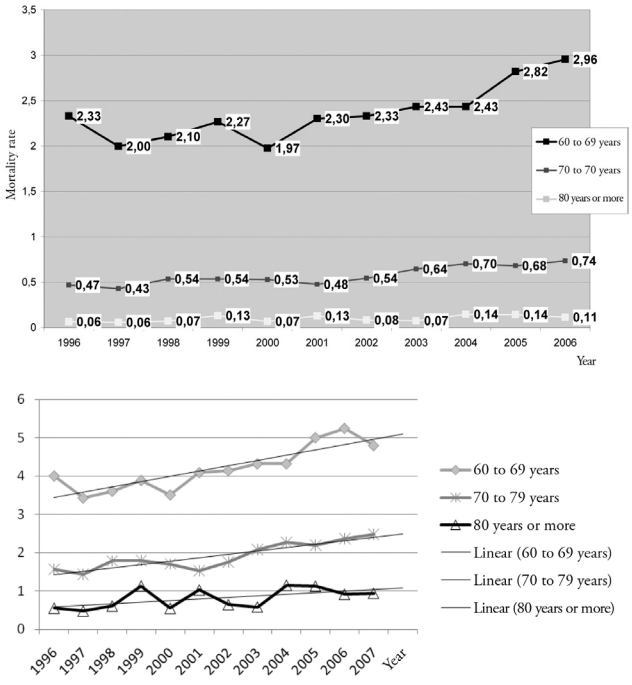

Figure 1. Mortality rate for AIDS among the elderly. Brazil, 1996 to 2007. (SIM, March 2010)

The age group between 70 and 79 years had the second highest number of deaths, also progressively increasing this number over the years studied, with the lowest mortality rate in 1997, with 1.4 deaths per 100,000 inhabitants and the highest mortality rate, in 2007, with 2.4 deaths per 100,000 inhabitants, practically double the beginning of the period. It represented 19.2% of all deaths by AIDS in the elderly during the study period.

The age group 80 years and older also showed an increased mortality rate during the period: in 1997, there were 0.4 deaths per 100,000 inhabitants and in 2004, the rate reached 1.15 deaths per 100,000 inhabitants. It represented 3.3% of all AIDS deaths in the elderly.

It was observed that the mortality between genders tended to increase gradually over the years. Both genders showed a linear increase in this period. The number of AIDS deaths for males was three times higher than in females, however, the mortality rate for females showed a greater increase, ranging from 1.3 deaths per 100,000 inhabitants in 1996 to 2.1 deaths per 100,000 inhabitants in 2007, an increase equivalent to double. In the males, the mortality rate increased from 4.1 per 100,000 inhabitants in 1997, to 5.2 per 100,000 inhabitants in 2007 (Figure 2).

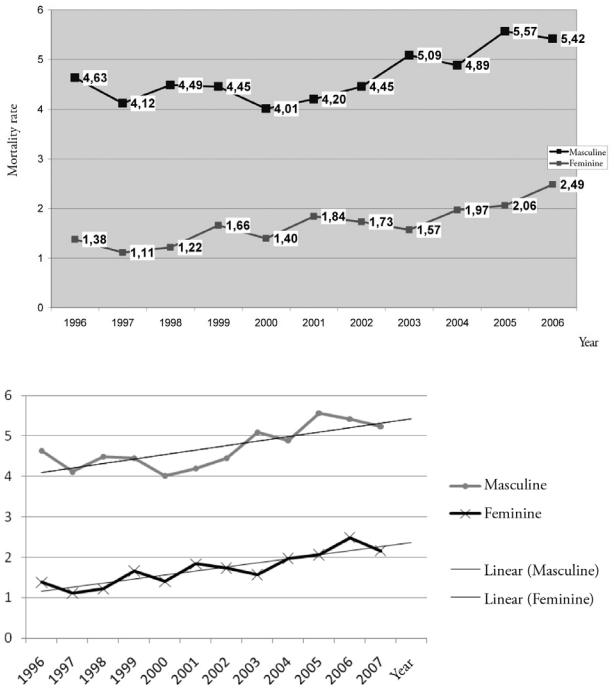

Figure 2. Mortality rate for AIDS among elderly, by gender. Brazil, 1996 a 2007. (SIM, March 2007)

It was verified that the ratio of mortality between genders decreased gradually during the period; that is, the number of deaths of women increased proportionally more than males.

On mortality, related to color / ethnicity, the white predominated with 54.0% of elderly deaths from AIDS, followed by yellow with 18.9% and black with 8.3%. Yellow and indigenous peoples accounted for the lowest mortality rates. The category of unknown (color / ethnicity was not identified) was noteworthy with 17.3%.

The percentage of deaths in people of white color is practically stable, as well as in the yellow and indigenous color / ethnic groups. The number of deaths has increased in the elderly of black and brown colors.

In 1996 and 1997, a great underreporting of deaths occurred, because the percentage of the category of unknown obtained, respectively, 96.9% and 49.0% of all deaths in those years, decreasing progressively during the study period, to 5.5% in 2007. This shows that the registration of deaths has been enhanced by epidemiological surveillance in the country.

In the analysis of the deaths, according to education, the results showed 45.6% coded as unknown; this number characterized almost half of the elderly. The largest number of deaths occurred in those with schooling between 4 and 7 years (15.8%), followed by those with schooling between 1 to 3 years, with 15.2% of total deaths. The category no formal schooling obtained 8.9% of the total. The schooling 8 to 11 years

and 12 and over had the lowest values, which were, respectively, 6.8% and 7.3%.

In the years 1996 to 1998, the data obtained showed zero in the schooling ranging from 1 to 3, 4 to 7 and 8 to 11 years; in addition, the percentage of unknown data in these years was very high. Such data may have been under-reported, thereby underestimating rates and hindering the actual knowledge of the number of deaths.

We observed that the number of deaths tended to remain stable over the course of years and in all schooling levels. But the category of unknown has been declining gradually in the period, showing that there is less under-reporting of records.

Regarding the marital status of the elderly, married individuals accounted for the largest number of deaths, with 35.0% during the years studied, followed with 27.1% of the unmarried, and the widowed with 22.4%. As for the legally separated, they accounted for 9.0%.

The percentage of deaths remained practically the same in all civil states and in all years studied; it varied little over the years, only the separated marital status had a higher elevation in the number of deaths during the years, increasing to nearly double in the period.

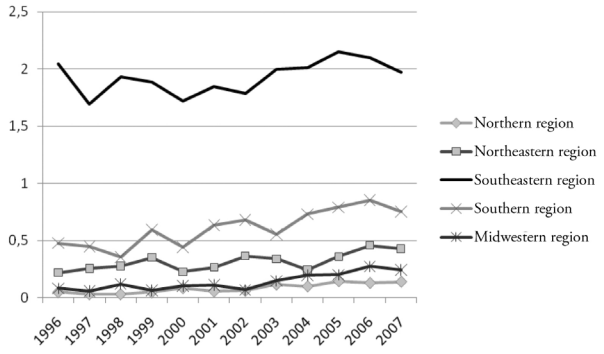

Figure 3. Mortality rate for AIDS by macroregions. Brazil, 1996 to 2007 (SIM, March 2010)

We analyzed 5,413 AIDS deaths in the age group of 60 years and older, reported in DATASUS, from June 1996 until 2007. The majority of cases occurred in the Southeastern and Southern regions, that achieved together, in each year of the series studied, a percentile above 80% of the cases from the whole country, with the accumulation of the period at 82.4% of cases. It is also important to stress the low participation of the Northeastern, Midwestern and Northern regions of the cases of AIDS reported, accounting for only 17.6% of cases accumulated in the whole period (Figure 3).

If the rate for 100,000 inhabitants is analyzed, it is possible to perceive that in the southeastern region the number of deaths ranged from 1.6 in 1996 to 2.1 per 100,000 inhabitants in 2005, with a growing trend over the years.

In the southern region, it varied from 0.3 in 1998 to 0.84 in 2006, also with a growing trend over the years, but the number of deaths per 100,000 inhabitants in the southern region does not reach half the one found in the southeastern region.

The northeastern region showed variation in the rates of 0.21 in 1996 to 0.45 in 2006, with a growing trend over the years. The profile found in the southern region more closely resembles that of the northeastern region than that of the southeastern.

The midwestern and northern regions also increased their rates over the years, but have smaller rates than the other regions.

DISCUSSION

The spread of AIDS in Brazil shows an epidemic of multiple dimensions that, over time, has shown profound changes in its evolution and distribution. Viewed initially as an epidemic specifically of young people and those considered to be in "at risk groups", it evolved to affect any individual in society, regardless of gender or age [2].

A retrospective study conducted in Ceará found that among older people reported as having AIDS, the most affected age group was between 60 and 69 (77.5%). In addition, 6.7% of cases compromised individuals aged 80 years or more. The data from this study were similar, as 77.4% of deaths occurred in individuals aged 60 to 69 years. But, in the age group of 80 years and more, the data diverged, with 3.3% of deaths identified within this age group in this study [2].

Between 1994 and 1995, in Brazil, the number of AIDS cases in individuals between 50 and 70 years showed a slight increase, the opposite of what occurred in other age groups, in which there was stabilization [2]. Another study shows that shift of deaths to the higher age groups, contradicting the hypothesis of juvenalization and leading to the belief that there is an aging of those affected by AIDS [7].

It is possible that these changes may have been provoked by several factors related to sexuality, such as: cultural issues, the notion of being low-risk, practicing unprotected sex, heterosexualization and feminization, more effective therapies, increases in life expectancy and sexual activity. Moreover, greater life expectancy and active lifestyles promote sexuality among the elderly, resulting in expansion of sexual relations, probably without the use of condoms [2].

The male and female mortality tended to increase over the years studied. The number of male deaths was three times greater than that of women, however, the mortality rate for women increased by more; the observations was that the number of female deaths increased proportionately more than male.

In a study with results similar to those found in our study, the proportional participation of female cases increased gradually over the period. In 1989, notifications referring to women represented 13% of all cases, reaching 30% in 1997. The gender ratio registered had six men for every woman with AIDS (6:1) in 1989; by 1997 that ratio was only two men to every woman (2:1) [8].

In this study, we observed that the largest number of deaths occurred among people with lower education; in addition, the data presented a high number of unknown educational levels. For some authors, the increased number of deaths among those with lower schooling is believed to lead to the condition of poor surveillance systems and health care coverage among the economically disadvantaged, based on the hypothesis that schooling is an important variable of social stratification[2,8-9]. It was noted in the current study that 44.0% had little or no schooling and that 36.4% had an unknown level of education. This may have influenced the results obtained. This limitation is also observed in other studies conducted in Brazil [2,8-9].

The mortality, based on race, affects more elderly of the white color - with over half of all deaths - followed by those of mixed and black color, and then by yellow and indigenous people, with an emphasis on the coding of unknown. This probably occurs due to the AIDS epidemic being mainly concentrated in the Southeast and South, where there is a greater number of white elderly, followed by those of mixed and black colors. Since people of color/indigenous ethnic groups and yellow color are not prevalent in the country, this would explain why there is a lower number of deaths in these groups.

Regarding marital status, married couples accounted for the largest number of deaths, followed by those who were single, widowed or legally separated. The large number of deaths among married people may suggest that the partner having an extramarital relationship may not be preventing contamination through the use of condoms in sexual relations outside marriage, and, probably, does not use condoms in their relations with their partner, thereby contaminating him/her with STDs and HIV.

The scarcity of campaigns targeted at the elderly for the prevention of STDs, along with the prejudice against the use of condoms in this population, and their greater sexual activity exposes an important segment of the population to the risk of contracting HIV infection.

In addition, health professionals are not adequately prepared to assist the elderly with HIV and AIDS. The chronic degenerative diseases play a predominant role in planning care for the elderly, leaving AIDS to be considered as a disease of young adults. The nursing staff, in particular the professional nurses, can facilitate a space in the planning of the health unit to deploy prevention activities in the area of STD and AIDS, for the elderly[5-7].

AIDS is prevalent in more developed regions of the country. In a historical cohort study analyzing the period from 1990 to 2003, researchers found a higher number of cases diagnosed in the southeastern and southern regions (80%), approximating the findings of this study, where we found those two regions had 84.2% of diagnosed cases. Another study stated that the low participation of other regions, especially the northern region, may reflect a delayed introduction of the AIDS epidemic into these macro-regions and problems with the surveillance system [8,10-11]. Although the use of secondary data presents numerous advantages, incomplete notifications hinder the knowledge of the true picture of the epidemic in Brazil. We emphasize the large number of fields in records with unknown data, the lack of standardization, the lack of professionals to report and investigate, and also the important barriers for completing the notification forms and research.

CONCLUSION

This research, based on secondary data, depicts the paths that AIDS has taken into a previously protected segment of society: the elderly. A subject that was silent in the past, sex in old age has become relevant due to the discovery of sexual stimulants used by elderly males.

The increasing number of elderly people contaminated by AIDS and, consequently, the increase in the number of deaths caused by it shows the need for public health programs specific for the prevention of this disease in elderly patients, since it is easily avoidable and prevention is easy with the use of condoms during sexual intercourse.

AIDS among the elderly is not different from the disease in other heterosexual groups: older men infect their female partners, with relationships outside the marriage, sensitized by sexual stimulants and without awareness of condom use.

In this context, the elderly do not imagine that they can be infected by their partners, as they are not accustomed to the use of condoms during sexual intercourse, due to cultural factors that highlight the faithfulness in marital relations.

The Elderly Statute, created in 2003, redeemed public policies regarding the elderly, highlighting the rights and obligations of family, community, society and government, but there is no emphasis in relation to sexual and reproductive life of the elderly.

For the elderly, intercourse without condoms and use of sexual stimulants may represent a movement similar to the sexual liberation of the 1960s with the discovery of the contraceptive pill.

Research has shown the need for investment in primary care interventions, such as health education ac-

tivities to educate the elderly and consequently, promote the reduction in the incidence of HIV infection. These are urgent actions to be developed in the southeastern and southern regions, where we identified the highest number of deaths. Moreover, it is important to take a targeted approach to the infected elderly to decrease stigma and prejudice caused by HIV in this segment, encouraging the search for treatment and social inclusion without prejudice, as well as use of condoms during sexual intercourse.

The elderly experience many stigmas and stereotypes attributed to old age and AIDS; the elderly should be seen as sexually active human beings, integral to the society, as important societal actors and, therefore, they should be included in health policies based on the principles of the Unified Health System.

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