

AIDS AFTER THE AGE OF 50: INCIDENCE FROM 2003 TO 2013 IN THE CITY OF SÃO JOSÉ DO RIO PRETO, SÃO PAULO, AND THE PERCEPTION ON THE DISEASE OF THE ELDERLY OF A BASIC HEALTH CARE UNIT

AIDS DEPOIS DOS 50 ANOS: INCIDÊNCIA DE 2003 A 2013 EM SÃO JOSÉ DO RIO PRETO, SP, E A PERCEPÇÃO DOS IDOSOS DE UMA UNIDADE BÁSICA DE SAÚDE SOBRE A DOENÇA

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ABSTRACT

Introduction: The advances in medicine and technology favor aging, thus prolonging sexuality. Concomitantly, AIDS cases present growth on such an unassisted population. **Objective:** To estimate the incidence of AIDS in people aged 50 years of more in the city of São José do Rio Preto, São Paulo, and to verify their knowledge about the disease in a Basic Health Care Unit (Unidade Básica de Saúde). **Methods:** A retrospective study of AIDS incidence based on cases reported in the electronic system of the São Paulo State Health Department between 2003 and 2013. The elderly perception on the disease was evaluated through questionnaires, before and after the educational intervention (leaflets). Data were compared using the McNemar Chi-square test. **Results:** From 2003 to 2013, 224 new cases of AIDS were reported in the studied population, with a predominance of males. Although there was some oscillation in the incidence, a comparison between the beginning and the end of the studied period revealed a 68% decrease in new notified cases. Questionnaires were answered by 34 men and 66 women ranging 50 to 88 years of age. Most of them (59%) reported having a steady partner and denied the use of condom (87%). After the educational activity, only 5% remained in doubt and 68% showed interest in obtaining information about STDs at the Basic Health Care Unit. **Conclusion:** An instability in the incidence of AIDS was observed within the city; however, during the studied period there was a significant reduction in cases. Most of the interviewees did not know about AIDS, and the leaflets proved to be a simple and effective tool.

Keywords: incidence; AIDS; disease prevention; elderly.

RESUMO

Introdução: Os avanços da medicina e da tecnologia favorecem o envelhecimento, prolongando a sexualidade. Concomitantemente, crescem os casos de AIDS nesta população desassistida sobre o assunto. **Objetivo:** Calcular a incidência de AIDS em pessoas com 50 anos ou mais em São José do Rio Preto - SP e verificar o conhecimento dessas pessoas sobre a doença em uma Unidade Básica de Saúde. **Métodos:** Estudo retrospectivo da incidência de AIDS a partir dos casos notificados no sistema eletrônico da Secretaria de Saúde do Estado de São Paulo entre 2003 e 2013. A percepção dos idosos sobre a doença foi avaliada mediante a aplicação de questionários, antes e após intervenção educativa (panfleto). Os dados foram comparados utilizando-se o teste Qui-quadrado de McNemar. **Resultados:** De 2003 a 2013, foram notificados 224 casos novos de AIDS na população estudada, com predomínio do sexo masculino. Embora tenha ocorrido certa oscilação na incidência, ao se comparar o início e o final do período estudado observou-se decréscimo de 68% na notificação destes novos casos. Responderam aos questionários 34 homens e 66 mulheres entre 50 e 88 anos. A maioria (59%) referiu ter parceiro fixo e negou a utilização de preservativos (87%). Após a atividade educativa, apenas 5% continuaram com dúvidas e 68% demonstraram interesse em obter informações sobre DTS na UBS. **Conclusão:** Nota-se instabilidade na incidência de AIDS no município; contudo, no período estudado ocorreu diminuição significativa dos casos. A maioria dos entrevistados não possuía conhecimentos sobre a AIDS, mas os panfletos se mostraram uma ferramenta simples e eficaz.

Palavras-chave: incidência; AIDS; prevenção; idosos.

INTRODUCTION

The Acquired Immunodeficiency Syndrome (AIDS) was first observed in 1981, in the USA, from the identification of cases of immunological dysfunction-related disorders⁽¹⁾. It is a chronic infectious disease caused by the Human Immunodeficiency Virus (HIV) and is characterized by immunity suppression mediated by CD4+ T lymphocytes, making the individual vulnerable to opportunistic diseases⁽²⁾.

Since the first AIDS evidence, in 1980, until June 2016, Brazil amounted to 842,710 cases of the disease, 548,850 (65.1%) in men

and 293,685 (34.9%) in women⁽³⁾. It can be stated that the beginning of the epidemic was marked by the involvement of male homosexuals, but nowadays the syndrome reaches the general population without social, economic, racial, political or cultural distinctions^(3,4).

One of the current aspects of the disease epidemiology is the emergence of a new vulnerable population, the elderly, who were minimally affected at the beginning of the epidemic, with only four cases registered in people aged 50 years or more in the first five years⁽⁵⁾.

The growing progress of the cases of the disease in this population can be associated with the increasing notification of HIV infection involving people aged more than 50 years and the aging of people living with the virus⁽⁶⁾. With the use of antiretroviral drugs in 1987, life expectancy of HIV-infected individuals was expanded

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and they are growing old with the disease, becoming senior citizens with AIDS^(7,8).

OBJECTIVE

To evaluate the incidence of AIDS in people aged more than 50 years notified in the city of São José do Rio Preto, SP, in the period of 2003 to 2013, in order to reveal the current epidemiological situation of the disease in the city. It was also possible to verify the knowledge of the Basic Health Care Unit users on the various aspects of this disease, especially regarding prevention.

METHODS

This is a retrospective study based on the calculation of AIDS incidence in individuals aged 50 years or more, of both sexes, in the city of São José do Rio Preto, SP, from 2003 to 2013.

The population of São José do Rio Preto in 2003 was estimated in 382,273 inhabitants, and 434,039 in 2013. The percentage of men and women remained constant in the two years analyzed: 48% men and 52% women. As for the age group over 50 years, about 75,355 people were estimated in 2003, and 108,370 in 2013. Men and women percentages changed in these two years: 56% of men in 2003, and 44% in 2013.

The World Health Organization (WHO) defines the elderly in Brazil as individuals aged more than 50 years; however, people aged more than 50 participated in this study as it involves the age group considered old for contamination by HIV, besides the significance of the national epidemiological data in this population⁽⁹⁾.

Information from the database of notified AIDS stored in the System of the Ministry of Health of the State of São Paulo, and used by the City Hall, were analyzed to calculate the AIDS incidence. The period in question was chosen based on the availability of data recorded in this Secretariat of Health. For the construction of indicators, people aged 50 years or more were registered in the Informatics Department of the Unified Health System (DATASUS), according to the Brazilian Institute of Geography and Statistics (IBGE) for each year studied. The variables sex and age were considered. All results were properly grouped in graphs and charts, followed by the descriptive analysis of each indicator.

After authorization of the Municipal Secretariat of Health, the project was approved by the Research Ethics Committee - protocol number 975,823.

In order to evaluate the knowledge and perception of people aged 50 years or more on AIDS, questionnaires were distributed in the waiting room of the Basic Health Care Unit in the *Parque Industrial de São José do Rio Preto*, SP, in October, 2015.

Individuals with enough intellectual capacity to understand the issues and answer them properly participated in this stage of the study, totaling a sample of 100 people. The exclusion criteria adopted were persons aged less than 50 years and/or with severe hearing problems and cognitive deficit that might prevent the comprehension of the questionnaire, as well as those who refused to answer.

The questionnaire had a simple language adapted to the reality of the users, composed of objective questions addressing the means of transmission, signs and symptoms, treatment/possibility

of cure and prevention of AIDS. Literate individuals responded without help, whereas for the illiterate or for the ones with difficulties, the interviewer did the reading, marking the answer indicated by the interviewee.

Based on this initial questionnaire, the data obtained were as follows: demographic (age, sex, marital status, educational level and occupation). To ensure the confidentiality and privacy, participants were identified by numbers.

Then, an educational activity was conducted with the distribution of an information leaflet including illustrative figures with simple language regarding the means of AIDS transmission, signs and symptoms, treatment and prevention. Some time was destined to clarify doubts related to the subject.

Finally, another questionnaire was applied to evaluate if the information provided was effective to improve the knowledge about the disease and to determine the effectiveness of the educational intervention.

The results obtained from the collected information were listed in a descriptive form with the percentages and simple frequencies. The McNemar's chi-square test with a 5% significance level was used to compare before and after intervention results. The analysis was done by IBM SPSS Statistics, version 18, (IBM-SPSS, NY, USA).

RESULTS

During the studied period, from 2003 to 2013, 1,414 new cases of AIDS were notified in the city of São José do Rio Preto, SP. From these cases, 224 occurred in the age group of this study, 50 years of age or more.

In 2003, the incidence corresponded to 35.83/100,000 inhabitants. Interestingly, there was a progressive reduction from this year until 2006, when the rate reached 17.1%. A decline of about 50% was verified in this period.

After four years of incidence reduction (from 2003 to 2006), a discreet rise in 2007 was noted, reaching 21.95% in 2008, with an increase of 4.86/100,000 inhabitants in two years.

A new decline happened in 2009, from 21.95 to 16.25%, i.e., a reduction of 5.7/100,000 inhabitants in just one year, corresponding to a decrease of one quarter from 2008 to 2009. Given this, there is an instability in the incidence, whose values varied considerably from one year to the next.

The number of 25.54/100,000 inhabitants in 2011 was revealed, the highest number registered during the period from 2005 to 2013. After this surge, a decline was observed until 2013, reaching the lowest incidence rate in the studied period, 12/100,000 inhabitants.

However, there was a significant reduction of the cases from 2003 to 2013, similar to a fall of 68% in the 10 years of the study (**Figure 1**).

As far as gender distribution is concerned, an oscillation in both sexes was observed, with a predominance in males, with the peak of incidence in 2009 (70%) (**Table 1**).

To evaluate the knowledge about AIDS through the questionnaires, this study counted on the participation of 100 individuals attending the *Parque Industrial BHCU de São José do Rio Preto*, SP: 34 men and 66 women in the age group from 50 to 88 years, with an average age of 63 years.

Regarding education, most of them declared to not have completed high school (73%). Among them, 29% attended high school and 33% attended elementary school. Only 8% have complete higher education, whereas 4% have no type of study. As for the earnings, 68% were unemployed, and 32% were retired.

As for marital status, 57% are married, 19% are divorced, 13% are widowed and 11% are single. Regarding sexual intercourse, most of them (59%) claimed to have a steady partner, and the remaining 41% reported casual or total absence of intercourse.

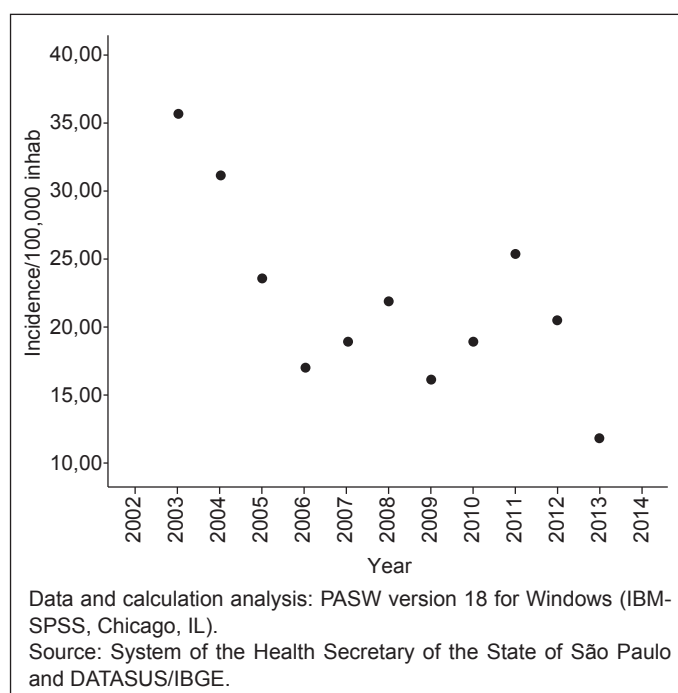


Figure 1 – Cases of AIDS in the population aged 50 years or more in São José do Rio Preto-SP according to the yearly diagnosis incidence (2003 to 2013).

Table 1 – Cases of AIDS in the population aged 50 years or more in São José do Rio Preto-SP, according to gender and year of diagnosis, 2003 to 2013.

Year	Male (%)	Female (%)
2003	16/59	11/41
2004	12/50	12/50
2005	11/58	08/42
2006	07/50	07/50
2007	11/58	06/42
2008	12/68	06/32
2009	12/70	05/30
2010	08/50	07/50
2011	17/63	08/37
2012	11/54	09/46
2013	07/61	07/39

Data and calculation analysis: PASW version 18 for Windows (IBM-SPSS, Chicago, IL).

Source: System of the Health Secretary of the State of São Paulo and DATASUS/IBGE.

In the approach on the use of contraceptive methods, only 6% refused to answer. Of the 94 answers, 87% of individuals informed the non-use of condoms, 35% of them justified having a steady partner, 26% declared faith in their partner, and 25% were abstinent.

Of the 55.2% participants who had initially answered to ignore symptoms of AIDS, 84% happened to know them after the distribution of the leaflet. Most of them (98%) learned about the transmission, and 75% about how the disease is transmitted. Only 5% claimed to have doubts even after reading the brochure (**Table 2**).

Assuming that 87% of the interviewees did not feel uncomfortable talking about sex and STDs, they were asked about their interest in receiving information at the BHCU, and 68% have shown such an interest.

Although 45% of participants had already carried out the rapid testing for HIV, 80% claimed to know where to look for help in case AIDS symptoms emerge, and the BHCU was the most indicated place for the diagnosis and treatment of the disease.

DISCUSSION

As this study demonstrates, the incidence of AIDS in the population aged 50 years or more in the city of São José do Rio Preto, SP, was reduced in approximately 50% from 2003 to 2006 (from 35.83 to 17.1%) and remained stable until the last year of the study (2013), when a lower rate was registered (12/100,000 inhabitants). Therefore, it can be concluded that the city showed a linear tendency to a significant reduction.

According to data from the Brazilian Ministry of Health, the detection rate of AIDS, considering the general population, showed stabilization with an average of 20.7 cases per 100,000 inhabitants from 2006 to 2015. This stabilization is owed to the reduction in some States, such as: São Paulo (46.0%), Rio de Janeiro (22.6%), Santa Catarina (16.9%), Distrito Federal (13.1%), Minas Gerais (11.9%), Rio Grande do Sul (11.2%), and Espírito Santo (0.5%), contrary to data observed in the States of Pará and Maranhão, which showed an increase of 91.5% and 82.9%, respectively⁽³⁾.

Table 2 – Participants' answers to questionnaires in two moments of the interview.

	Interview 1	Interview 2	p-value
SYMPTOMS*	Yes	No	
Yes	38 (93%)	03 (7%)	<0.0001
No	42 (84%)	08 (16%)	
INFECTION†	Yes	No	
Yes	78 (100%)	00 (00%)	<0.0040
No	09 (75%)	03 (25%)	
DOUBTS‡	Yes	No	
Yes	03 (17%)	15 (83%)	<0.0190
No	04 (05%)	71 (95%)	
TRANSMISSION§	Yes	No	
Yes	11 (100%)	00 (00%)	<0.0001
No	82 (98%)	02 (02%)	

*Do you know the symptoms of AIDS?; †Do you know how AIDS is acquired?; ‡Do you still have doubts about sexually transmitted diseases (STD/AIDS)?; §Do unprotected sex and sharing needles transmit AIDS?; Data and calculation analysis: McNemar Chi-square test (5% significance level. IBM SPSS Statistics version 18 software (IBM-SPSS, NY, USA).

Nevertheless, the detection rate of AIDS in people aged 50 years or more, mostly men over the age of 60, has increased in recent years, from 10.9, in 2006, to 13.8, in 2015, in the Brazilian scenario⁽³⁾. It is worth mentioning that the present study showed a contrary tendency in this age group, with a decrease of 35.83, in 2003, to 12 in 2013.

Perhaps this phenomenon had occurred due to the reduction of the incidence of AIDS in the elderly population in the city of São José do Rio Preto, SP. On the other hand, as also reported by Ribeiro and Jesus (2006), this can be related to local underreporting. Despite improvements of the disease detection means, access to laboratory tests and health information systems, the reported number of elderly people with AIDS or HIV-positive could be lower than reality⁽¹⁰⁾.

Unfortunately, the lack of interest and training of health professionals regarding senior sexuality is a fact that undermines this approach, contributing to the late diagnosis or even death due to disinformation of the disease and failure in notification^(10,11). This was a well evidenced issue in this study, in which 87% of the interviewees had never received information on STIs at the BHCU, neither felt uncomfortable talking about the subject, and 68% of them showed interest in talking about and receiving information about AIDS in basic health care.

Some studies of the same sort had adverse results in other cities, revealing the high rate and the growing tendency of AIDS among individuals aged 50 years or more, such as in Fortaleza, Ceará⁽¹²⁾, and Pelotas, Rio Grande do Sul⁽¹³⁾. Another study conducted in the State of Rio Grande do Sul observed that the most affected group is the one ranging in age from 50 to 59⁽¹⁴⁾. On the other hand, in the State of Pernambuco, the highest rate was found in the group ranging from 60 to 69 years of age⁽¹⁵⁾, as well as in Distrito Federal⁽¹⁶⁾ and in Ceará⁽¹⁷⁾.

The present study showed a prevalence of men in relation to the women in the number of AIDS cases reported from 2003 to 2013, which is in accordance with the national values of the Ministry of Health, which showed a ratio of 17 cases of the disease in men to 10 cases in women of this age group. Studies carried out in the States of Pernambuco⁽¹⁵⁾ and Ceará⁽¹⁷⁾ also revealed such a relationship; however, there was a feminization of the AIDS epidemic in Distrito Federal, with the ratio of 0.7:1.0 M:F⁽¹⁶⁾.

This expansion of AIDS in the male elderly population may be directly related to the new technologies that improve sexual performance, such as the drugs for erectile disorders, and also to the fact that men seek services of sex professionals more frequently^(12,18).

The demystification of sex in old age has been related to several factors that have been improving the quality of life of the population, with greater integration in social life, through the participation in coexistence groups, dancing balls and clubs^(11,12,18). Therefore, a favorable environment for meeting partners was created, which is associated with greater sexual practice, increasing the risk of contamination by HIV⁽¹⁹⁾.

It is worth mentioning that sexuality is not what makes the individual more vulnerable to contracting the virus, but unprotected sex⁽¹⁹⁾. The low adherence to the use of condoms among elderly men and the low requirement of its use on the part of women are reflections of the non-recognition of older persons as individuals who are vulnerable to STD/AIDS^(18,20).

These factors are associated with entrenched beliefs of an asexual elderly population, either by the individuals themselves or by health professionals. The possibility of people aged more than 50 years being infected with HIV seems non-existent to society⁽¹⁸⁾. Therefore, they tend to postpone the anti-HIV test as they consider themselves as a group with less risk of infection⁽³⁾.

In a study conducted in the city of Rio de Janeiro, RJ, Fernandes (2011) emphasizes this subject when 31.67% of the participants answered that only young people should receive information on AIDS transmission, and 30% said that the elderly have no risk of acquiring the disease. In addition, 63.33% of the interviewees believe that people aged 60 years or more are even less vulnerable⁽²¹⁾.

On account of this restricted and preconceived view, the elderly population remains unassisted by health professionals, who tend to impute some suggestive symptoms of opportunistic infections that occur in AIDS to chronic degenerative diseases that prevail in this age group, which can delay the diagnosis of AIDS in about ten years^(18,20,22).

The low education level revealed in this study is an important indicator of the increasing rates of elderly people infected in Brazil. People with lower schooling tend to have more difficulty in assimilating information, making AIDS prevention and treatment adherence insufficient^(15,17,23).

It is believed that schooling is also related to the low socioeconomic level, making the individuals with lower schooling more vulnerable to an HIV infection⁽²³⁾. This fact is associated with the precarious access to information, directly related to the low adherence to the use of preventive methods⁽¹⁵⁾, as well as the one found in this study, in which 87% of the interviewees did not use any type of protection.

Justifications for disregarding protection methods included the following: they had “steady partners” and “trusted them”. Once again, it is possible to see the lack of information on different aspects of the disease, mainly regarding the chain of HIV transmission, neglecting prevention.

This study also showed that the population analyzed, besides low schooling, had little information and knowledge about HIV transmission, sexual practices, vulnerability behaviors and AIDS symptoms. Most individuals interviewed (88.4%) did not know about the viral transmission and symptoms of the disease (55.2%). Other studies including elderly people described that this traditionally marginalized population is increasingly being infected with HIV^(17,24).

The results observed in the questionnaires reflect the failure of prevention efforts addressed to this group. It should also be noted that the elderly are a population group that remains unassisted by the policies and strategies of health prevention and promotion^(18,25). Sexuality is part of life for any person at any age; however, when related to the elderly, it is surrounded by myths and beliefs⁽¹⁹⁾.

Fernandes (2011) revealed in this paper the same unawareness of the elderly population in Rio de Janeiro regarding AIDS. Most of the interviewees did not know about the possible routes of HIV transmission; 56.67% of seniors reported that AIDS can be transmitted through mosquitoes, 35% through glasses, cutlery, clothes and towels, and 33.33% through sweat⁽²¹⁾.

The leaflets proved to be a simple and inexpensive tool, also effective to the knowledge regarding the various aspects of AIDS. Of the 100 individuals interviewed, only 5% still had doubts after reading the brochure. Most of them (98%) learned about the ways HIV could be transmitted and the symptoms of the disease (84%).

Melo *et al.* (2012) conducted a comparative study about the level of knowledge about AIDS among the elderly and young people. The result was the expected: older people have a level of knowledge and information inferior to young people. This factor is associated with the increasing investment in prevention policies addressed to the young population to the detriment of the elderly, in addition to the historic taboo of sexuality denial in old age⁽²⁴⁾.

In this scenario, it is worth mentioning the education and prevention delay aiming at this group. Although there are public health policies addressed to the elderly, they are not effective and are not practiced in the Health Care Basic Units^(18,25). This is a neglected population group and deprived of prevention.

Few studies investigate the elders' level of knowledge in relation to AIDS, as well as the factors that influence the probable unawareness of this population segment about the disease⁽²⁴⁾. Thus, the present work has the potential to warn health professionals about the need for implementing actions and public policies aimed at HIV prevention and transmission control in the elderly population.

CONCLUSION

An instability in the incidence of AIDS in São José do Rio Preto, SP, was noted; however, it can be concluded that the city shows a linear trend of significant reduction of new cases of the disease in the studied period.

The unawareness of the population studied in relation to the main aspects of AIDS was also observed. However, the educational intervention based on the leaflets proved to be a simple, low cost and effective tool to obtain the knowledge about the disease.

Conflict of interests

There is no conflict of interests to declare.

Acknowledgments

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