Perfil epidemiológico da hanseníase em um município do nordeste brasileiro: uma análise retrospectiva

Epidemiological profile of leprosy in a municipality in the Brazilian Northeast: a retrospective analysis

Perfil epidemiológico de la lepra en una ciudad del noreste de Brasil: un análisis retrospectivo

Eliracema Silva Alves[1]; Layze Braz de Oliveira[2]; Telma Maria Evangelista de Araújo[3]; Ivone Venâncio de Melo[4]; Rosineidia do Perpétuo Socorro Araújo[5]; Lindalva Maria Ferreira Marques[6]

ABSTRACT

Objective: To analyze leprosy epidemiological profile in the state of Piauí, Brazil. **Methods:** Cross-sectional epidemiological study with retrospective collection. It was used data from the SUS Notifiable Diseases Information System of leprosy patients, for the period from 2005 to 2014. We evaluated the detection rate, degree of disability in the diagnosis and cure, and the proportion of healing. **Results:** It was totaled 13,787 leprosy cases, the detection rate has decreased over the years, the degree of disability to be evaluated in the diagnosis and cure showed a downward trend assessment, the cure rate was regular (%?). **Conclusion:** The proportion of cases detected with degree of disability and the prevalence of passive forms of detection suggest late diagnosis and confirm the importance of integrating leprosy control actions in primary care.

Descriptors: Leprosy, Epidemiology, Nursing, Public health.

[1]   Nurse. Supervisor of the Leprosy Program of the State of Piauí (SESAPI). E-mail: eliracema@gmail.com.

[2]   Master's student in Nursing. Primary Nursing Program of the Ribeirão Preto College of Nursing. University of Sao Paulo (USP). E-mail: layzebraz@usp.br.

[3]   Nurse. PhD. Undergraduate/Posgraduation Program in Nursing. Federal University of Piaui (PPGENF/UFPI). E-mail: telmaevangelista@gmail.com.

[4]   Nurse. Supervisor of the Tuberculosis Program of the State of Piauí (SESAPI). E-mail: ivonevmelo@gmail.com.

[5]   Technical of the State Leprosy Program of the State of Piauí (SESAPI).

[6]   Technical of the State Leprosy Program of the State of Piauí (SESAPI).

RESUMO

Objetivo: Analisar o perfil epidemiológico da hanseníase no estado do Piauí. **Métodos:** Estudo epidemiológico transversal, com coleta retrospectiva. Utilizaram-se dados do Departamento de Informática do SUS, de pacientes com hanseníase, referentes ao período de 2005 a 2014. Foram avaliadas a taxa de detecção, grau de incapacidade física no diagnóstico e na cura e a proporção da cura. **Resultados:** Totalizaram 13.787 casos de hanseníase. O coeficiente de detecção diminuiu ao longo dos anos, o grau de incapacidade física a ser avaliado no diagnóstico e na cura apresentou uma tendência de redução de avaliação, o percentual de cura foi regular (%?). **Conclusão:** A proporção de casos detectados com grau de incapacidade e o predomínio de formas passivas de detecção sugerem diagnóstico tardio e corroboram a importância da integração das ações de controle da hanseníase na atenção básica.

Descritores: Hanseníase, Epidemiologia, Enfermagem, Saúde Pública.

RESUMEN

Objetivo: Analizar el perfil epidemiológico de la lepra en el estado de Piauí. **Métodos:** Estudio epidemiológico transversal con recolección retrospectiva. Se utilizaron datos de las enfermedades de declaración obligatoria del Sistema de Información de los enfermos de lepra, para el período comprendido entre 2005 y 2014. Se evaluó la tasa de detección, grado de discapacidad en el diagnóstico y la cura y la proporción de curación. **Resultados:** Asciende a 13,787 casos de lepra, la tasa de detección ha disminuido con el paso de los años, el grado de incapacidad para ser evaluados en el diagnóstico y la cura mostró una tendencia a la baja de evaluación, la tasa de curación fue regular (%?). **Conclusión:** La proporción de casos detectados con el grado de discapacidad y la prevalencia de las formas pasivas de detección sugieren un diagnóstico tardío y confirmar la importancia de integrar las acciones de control de la lepra en atención primaria.

Descriptores: Lepra; Epidemiología, Enfermería, Salud Pública.

INTRODUCTION

Leprosy is a chronic, granulomatous, slow-onset disease caused by *Mycobacterium Leprae* or Hansen's bacillus, an intracellular parasite that shows high infectivity and low pathogenicity. It is an infection characterized as a public health problem due to peripheral impairment and its incapacitating potential.[1]

In 2000, the World Health Organization (WHO) established the goal of reducing the global prevalence of leprosy to less than one case per 10,000 inhabitants.[2] However, this goal has been set as a great challenge. According to the WHO, 16 countries worldwide reported a thousand or more cases in 2009. Asia had the highest detection rate, 9.39 cases per 100,000 inhabitants, the Americas had 4.58 cases per 100,000 inhabitants. In these regions, data were strongly influenced by the number of cases reported by India with 133,717, and by Brazil with 37,610 cases, the second country being characterized by number of cases. Of the 40,474 new cases in the Americas, 93% are reported cases in Brazil.[3]

Leprosy is still reported in several countries around the world. In Brazil, 33,303 new cases were detected in 3,267 municipalities. In 2013, according to WHO, the recorded incidence was 215,656 cases, with a detection coefficient of 17.17/100 thousand inhabitants.[4-5]

Although the disease is considered easy to diagnose and treat, the worldwide infection situation is still alarming, mainly due to the lack of active patient search, late diagnosis, poor public services, treatment abandonment, lack of knowledge on the illness injury.[6]

Based on this problem, the present study aimed to describe the epidemiological aspects of patients diagnosed with leprosy in a municipality with a high prevalence of the disease in Brazil's northeast, and could provide support for a better understanding of the disease.

METHODS

This is a descriptive, epidemiological study, with data collected in November 2015, covering the period from 2005 to 2014. The study was conducted in the state of Piauí, with a population of 3,195,000 inhabitants, located in the northeast of Brazil.

The data were collected from the online database of the Department of Informatics of the National Health System (DATASUS) of Brazilian's Ministry of Health.
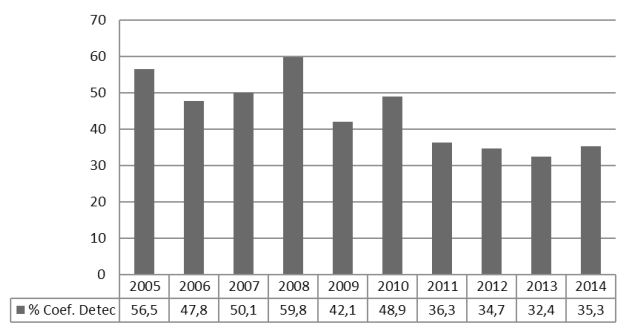
The variables studied were: year of notification, coefficient of detection, degree of physical disability assessed in diagnosis and cure, and the distribution of cases of cure of the condition. The statistical analysis of the data was performed through the distribution of relative frequencies using the Excel program.

The discussion of the data was made based on the scientific production on the subject. Since the research was done from a public domain database, it was not necessary to submit to a Research Ethics Committee. However, it was submitted for approval by the Institution (State Health Department of Piauí/Directorate of Health Surveillance and Care), which granted access to a database.

RESULTS

There were 13,787 cases of leprosy in the period between 2005 and 2014. The coefficient of detection of the prevalence of leprosy showed a tendency of reduction, 2008 was the year with the highest detection rate (59.8%). While the year of 2013 presented the lowest notification percentage (32.4%).
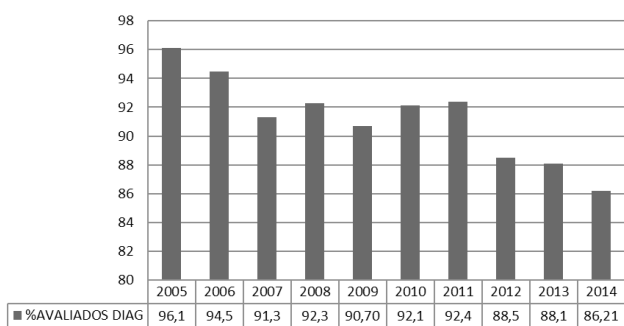
Graph 1 - Distribution of the general detection coefficient of leprosy per 100,000 inhabitants. Teresina/PI, 2005 to 2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
■ % Coef. Detec	56,5	47,8	50,1	59,8	42,1	48,9	36,3	34,7	32,4	35,3

Source: SINAN.

The degree of physical incapacity evaluated in the diagnosis showed a tendency to decrease of evaluated and the year of 2005 presented the highest percentage (96.1%). Over the years, there was a reduction in the percentage of those evaluated and the year 2014 had the worst evaluation indicator (86.21%).
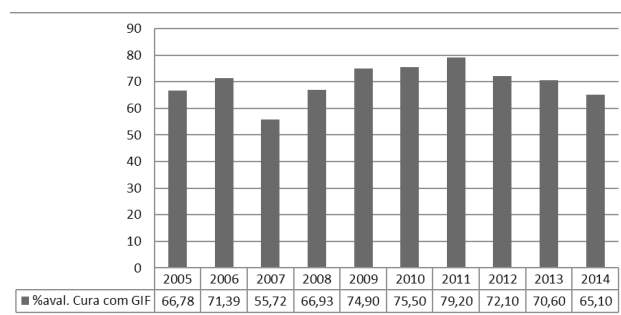
Graph 2 - Evaluation of leprosy cases with physical disability degree II evaluated in the diagnosis. Teresina/PI, 2005 to 2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
■ %AVALIADOS DIAG	96,1	94,5	91,3	92,3	90,70	92,1	92,4	88,5	88,1	86,21

Source: SINAN.

With regard to the evaluation of disability at the time of healing, the results showed divergent values when compared to those evaluated in the diagnosis. The year of 2011 presented the highest percentage of evaluation (79.20%). On the other hand, the year 2007 presented the lowest (55.72%).
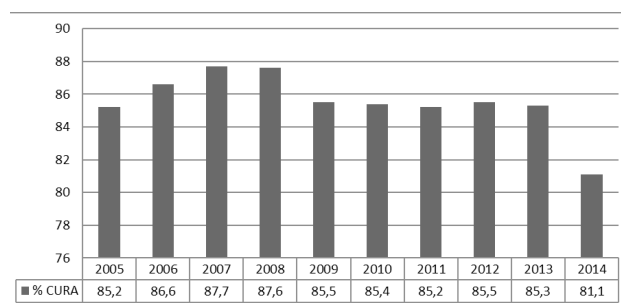
Graph 3 - Evaluation of leprosy cases with physical incapacity degree II in the cure. Teresina/PI, 2005 to 2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
■ %aval. Cura com GIF	66,78	71,39	55,72	66,93	74,90	75,50	79,20	72,10	70,60	65,10

Source: SINAN.

In the study period, there was a heterogenic distribution of the percentage of leprosy cure. The years 2007 and 2008 had the highest percentage of cure with 87.7% and 87.8%, respectively. However, the year 2014 had the worst result, 81.1%.

Graph 4 - Distribution of leprosy cure cases. Teresina/PI, 2005 to 2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
■ % CURA	85,2	86,6	87,7	87,6	85,5	85,4	85,2	85,5	85,3	81,1

Source: SINAN.

DISCUSSION

Leprosy is a chronic infection that especially affects areas of the body with lower temperature, including the skin and nerves. However, if it is treated in the early stages of the disease, the individual can obtain the cure.[7]

The detection rate is the monitoring of leprosy and determines the level of transmission of the infection. In addition to this, other indicators can be considered of impact

for the monitoring of this infection, such as the proportion of multibacillary and proportion of cases with degree of incapacity[2] among the new cases. Case detection rates and delay in diagnosis are dependent on several factors, such as age, occupation, nationality, endemicity, type of leprosy and method of detection.[8]

When analyzing the general detection coefficient of leprosy in the study period, there was a decline in the detection rate of new cases infection, from 56.5 to 35.6 cases per 100,000 inhabitants, with increasing oscillations. It is conjectured that these oscillations in the detection rate occurred due to the campaigns operated by the health services of the municipality, in order to develop actions to control the disease.

The number of new cases detected in an area can be influenced by educational actions, population coverage of disease control actions, and the competence of health professionals to carry out an accurate and early diagnosis. These indicators vary by region. Thus, in 2012 the North, Northeast and Midwest regions had a very high detection coefficient and an average prevalence coefficient. On the other hand, in the South and Southeast regions, these indices were estimated in medium and low, respectively.[9-10]

An essential aspect in the initial approach of the patient in leprosy services is the assessment of the degree of physical disability, which must be performed at the time of diagnosis, every three months during treatment if there are no complaints, on discharge from the patient And whenever there are complaints of pain in the path of the nerves and in the treatment of the reactional states.[10-11]

The registry and classification of the degree of incapacity of the leprosy is operationalized by the neurological evaluation and verification of the presence of deformities or traumatisms in the eyes, hands and feet. Grade I is characterized as grade 0 in the absence of any event caused by leprosy, grade I has a reduced sensitivity in one or more sites and grade II presents in the eyes the presence of lagophthalmos and/or ectropion, trichiasis, central corneal opacity, hands manifest trophic lesions and/or traumatic lesions, claws, resorption, and in the feet present trophic lesions and/or traumatic injuries, reabsorption contraction of the ankle, drooping foot.[11-12]

The proportion of new cases of leprosy with a degree of physical disability assessed at the time of diagnosis regressed over the years of this study. In order to mitigate this impasse, it is pertinent for health professionals to intensify this evaluation, emphasizing the importance of this information in the leprosy case report form.

The assessment of the degree of physical disability helps to estimate the epidemiological situation and is used as an indicator of leprosy control. Its detection indicates the late diagnosis of the disease, revealing a need to qualify the recruitment of these patients.[13]

The percentage of evaluated in the cure was lower when compared to those evaluated in the diagnosis over the years. It is important to note that a detailed approach to assessing the degree of disability in diagnosis as well as cure is important. This data provides a plausible picture of the evolution or regression of these disabilities after discharge.[14]

The treatment is available and funded by the Unified Health System (SUS), it is important to point out that the earlier treatment is the lower the risk for the development of physical disabilities.[15]

The efficient and effective treatment of leprosy is evaluated by the proportion of cure cases, evaluated one year after diagnosis in the case of paucibacillary patients, or two years after diagnosis in multibacillary patients. New case cure rates range from 81 to 87%. The Ministry of Health considers good cure rates that are above 90%. The rates between 75% and 90% are considered regular and below 75%, precarious. The effectiveness of treatment in the municipality is classified as regular.[16]

There is a need for strategies to implement the timely detection and cure according to what is recommended by the Ministry of Health, as well as the carrying out of new research that addresses new aspects such as the reasons for abandoning treatment and the conduct of contact surveys, which may be useful in improving the monitoring of leprosy in the state. In this way, this study reinforces the importance of performing evaluation as a way to subsidize the planning of leprosy control actions.

CONCLUSION

The high coefficient of detection of leprosy found in the city allows the priority area to control the disease. The high indexes of cases that presented physical disabilities at the time of detection point to a late diagnosis. The evaluation after cure, also draws attention, since it presents lower percentages than those made in the diagnosis.

The notification of new cases and registration of discharge for cure has contributed to the identification of trends and aided in disease control. In spite of the significant amount that ended the treatment, culminating in a cure, treatment effectiveness has not yet reached values above 90%, evidencing the need to implement strategies that improve these indicators.

In order to mitigate this impasse, it is pertinent to reorganize the work process in order to integrate control actions to basic health services, especially in the Family Health Teams. In this perspective, it is evident the importance of intensifying the development of leprosy control actions in the state capital, promoting access to diagnosis and treatment.

The results evidenced the need for new studies to better understand the influence of the health services organization and the dynamics of work processes in order to subsidize the development of other strategies for the control of leprosy.

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Author responsible for correspondence:
Eliracema Silva Alves
Rua Oriente, 3489
ZIP-code: 64017-885
E-mail: eliracema@gmail.com