

EPIDEMIOLOGICAL PROFILE OF LEPROSY CASES IN A FAMILY HEALTH CENTER

*Perfil epidemiológico dos casos de hanseníase de um centro de
saúde da família*

*Perfil epidemiológico de los casos de lepra en un centro de
salud de la familia*

Original Article

ABSTRACT

Objective: To reveal the clinical and epidemiological characteristics of patients diagnosed with leprosy between the years 2007 and 2008, in a Family Primary Healthcare Unit in the city of Fortaleza-CE, Brazil. **Methods:** Documentary, quantitative and descriptive study. The research sample consisted of all medical records of patients examined and diagnosed with leprosy in the period from 2007 to 2008, totaling an amount of 55. Data was transcribed, tabulated, numbered and presented in tables and charts. **Results:** It was observed a concentration of cases in economically active age group; females (37 - 67%); race brown (36 - 65.5%); low schooling level, mostly incomplete primary education (25 - 45.5%). The cure rate in 2007 was 95.5% (21 cases) and, in 2008, 57.2% (19 cases). The number of cases with multibacillary clinical forms was high, revealing the late diagnosis, leading to maintained transmission of the disease. **Conclusion:** Understanding the epidemiological profile and clinical characteristics of patients diagnosed with leprosy is of fundamental importance for the development of strategies directed towards this group, seeking public policies that meet the needs of health professionals and strengthen the activities of grievance prevention and health promotion among the population.

Descriptors: Leprosy; Epidemiology, Descriptive; Disease Prevention.

RESUMO

Objetivo: Revelar as características clínicas e epidemiológicas de pacientes diagnosticados com hanseníase, entre o ano de 2007 e 2008, em uma Unidade Básica de Saúde da Família do município de Fortaleza-CE, Brasil. **Método:** Estudo documental, quantitativo e descritivo. A amostra do estudo foi composta por todos os prontuários dos pacientes atendidos e diagnosticados com hanseníase no período compreendido entre 2007 a 2008, totalizando um quantitativo de 55. Os dados, transcritos, tabulados e numerados foram expostos em tabelas e gráficos. **Resultados:** Observou-se a concentração de casos na faixa etária economicamente ativa; gênero feminino (37 - 67%); cor/raça parda (36 - 65,5%); baixo nível de escolaridade, com concentração no fundamental incompleto (25 - 45,5%). O percentual de cura em 2007 foi de 95,5% (21 casos) e, em 2008, de 57,2% (19 casos). O número de casos com formas clínicas multibacilares era alto, revelando o diagnóstico realizado tardiamente e mantendo a transmissão da doença. **Conclusão:** A compreensão do perfil epidemiológico e das características clínicas dos pacientes com diagnóstico de hanseníase é de fundamental importância para a construção de estratégias direcionadas para esse grupo, buscando políticas públicas que atendam as necessidades dos profissionais da saúde e fortaleçam as atividades de prevenção de agravos e promoção da saúde da população.

Descritores: Hanseníase; Epidemiologia Descritiva; Prevenção de Doenças.

Viviane Bezerra de Souza⁽¹⁾
Maria Rocineide Ferreira
Silva⁽¹⁾
Lucilane Maria Sales da Silva⁽¹⁾
Raimundo Augusto Martins
Torres⁽¹⁾
Kilma Wandelely Lopes Gomes⁽²⁾
Marcelo Costa Fernandes⁽¹⁾
José Musse Costa Lima
Jereissati⁽¹⁾

1) Universidade Estadual do Ceará - UECE
- Fortaleza (CE) - Brasil (Ceará State
University - Brazil)

2) Secretaria
Municipal de Saúde de Fortaleza - SMS -
Fortaleza (CE) - Brasil (Municipal Health
Secretariat of Fortaleza - Brazil)

Received on: 08/30/2011

Revised on: 01/30/2012

Accepted on: 02/17/2012

RESUMEN

Objetivos: Revelar las características clínicas y epidemiológicas de los pacientes diagnosticados con lepra entre el año 2007 y el 2008, en una Unidad Básica de Salud de la Familia del municipio de Fortaleza-CE, Brasil. **Métodos:** Estudio documental, cuantitativo y descriptivo. La muestra del estudio fue formada por las historias clínicas de los pacientes de las consultas diagnosticados con lepra en el período de 2007 y 2008, en total de 55. Los datos, transcritos, tabulados y numerados fueron presentados en tablas y gráficos. **Resultados:** Se observó la concentración de casos en la franja etaria económicamente activa; del género femenino (37 - 67%); color/raza parda (36 - 65,5%); bajo nivel de escolaridad con mayor parte en la primaria incompleta (25 - 45,5%). El porcentaje de cura en el 2007 fue del 95,5% (21 casos) y en el 2008 del 57,2% (19 casos). El número de casos con formas clínicas multibacilares fue elevado, revelando el diagnóstico tardío y manteniendo la transmisión de la enfermedad. **Conclusión:** La comprensión del perfil epidemiológico y de las características clínicas de los pacientes con el diagnóstico de lepra es de fundamental importancia para la elaboración de estrategias dirigidas a ese grupo, buscando las políticas públicas que atiendan las necesidades de los profesionales sanitarios e incrementen las actividades de prevención de daños y de promoción de salud de la población.

Descriptores: Lepra; Epidemiología Descriptiva; Prevención de Enfermedades.

INTRODUCTION

Leprosy is a chronic infectious disease, transmitted from person to person through contact with untreated patients or patients with communicable forms. Nowadays, it still represents a serious public health problem in Brazil and developing countries.

Identified as skin disease, it also affects the nerves, a fact that causes the most problems and limitations to their patients⁽¹⁾. Besides inherent aggravating factors in any disease of socioeconomic background, the psychosocial impact generated by physical disability resulting from disease is highlighted. They are, in fact, the biggest cause of stigma and isolation of the carrier⁽²⁾.

To date, the impact caused by the disease affects the daily lives of people who regard leprosy as the constant threat of prejudice, suffering, abandonment, deformity and psychosocial problems.

One of the important issues, but rarely addressed in Brazil and in other countries as well, is the unequal epidemiological pattern of occurrence of leprosy, determinant and conditional of its occurrence, which leads us to reflect on how health policies still need to be contextualized, with a focus on culture, customs, and

socioeconomic aspects along with the actual behavior of the disease in each territory.

Some studies conducted in the northeastern region of Brazil, more specifically in Ceará, have contributed to a better understanding of this aspect of the disease epidemiology. Municipalities with major social inequality have the highest rates of detection and prevalence of leprosy, stressing that socioeconomic and environmental indicators are also important predictors of leprosy⁽³⁾.

Therefore, studies related to epidemiological and operational aspects of leprosy, a disease expressed in neglected populations and territories, mainly in the outskirts of large urban centers, are of great importance to guide the work. In fact, there is a pressing need of detecting the socially vulnerable areas of greatest risk to leprosy in order to better structure the control actions⁽⁴⁾.

Epidemiological surveillance of leprosy is based on analysis of data collected in health services through epidemiological and operational indicators aimed at reorienting the actions to be taken at the local level⁽⁵⁾. However, in most municipalities, the data is forwarded to higher hierarchical levels (state and federal) with no effective feedback. Thus, the municipalities do not develop in a satisfactory way the means to analyze them and take appropriate action (if necessary)⁽⁶⁾.

Leprosy is a major public health problem and its control depends on the participation of all instances of the municipal health system. In this context, the Basic Health Unit is a primary care service that, as one entrance gateway for patients into the health services, plays a key role in the diagnosis, treatment and monitoring of patients with leprosy. A service is a gateway when identified by the population and by the team as the first health resort. To do so, it must be easily accessible and available⁽⁶⁾.

In Ceará, the reality of the disease does not differ from the national situation. In 2008, 2,586 new cases of leprosy were reported, accounting for a detection rate of 30.6/100,000 population, which is considered very high, according to the parameters of the WHO/MS. In Fortaleza, there is a growing detection of cases over the past 15 years. With an average of 900 cases per year, the overall average detection rate in the period 1995 to 2007 was 3.74. This fact is amplified when considering the underreporting of cases, which further increases the burden of disease in the city (7).

The present study aimed to reveal the clinical and epidemiological characteristics of patients diagnosed with leprosy, between 2007 and 2008 in a Family Health Center in Fortaleza.

METHODS

Documentary, quantitative and descriptive study. Quantitative research is focused in terms of size or quantity

of the factor occurring in a situation. The characters have numerical values, that is, are expressed in numbers and, from these aspects, possible inferences are made⁽⁸⁾.

The study was conducted at the *Centro de Saúde da Família - CSF Studart Eliezer* (Family Health Center Studart Eliezer), included in the *Secretaria Executiva Regional III* (Regional Executive Secretariat III) in Fortaleza-CE. At this unit, four teams of the Family Health Strategy assist the enrolled population of approximately 21,323 inhabitants, according to the *Instituto Brasileiro de Geografia e Estatística - IBGE* census 2000 (Brazilian Institute of Geography and Statistics). The choice of this unit to obtain epidemiological data used in this research was due to the fact that its team brings together professionals of reference in the subject, besides being a facility that is municipal reference with regard to leprosy.

The study sample consisted of all medical records of patients seen and diagnosed with leprosy in the period between 2007 and 2008, totaling 55 records. As inclusion criteria were used the time period and the form being filled in its entirety, available in both the health center and in the *Sistema de Informação de Agravos de Notificação - SINAN* (Information System for Notifiable Diseases). SINAN is a system created by the Ministry of Health for monitoring acute and chronic injuries occurred in the municipalities⁽⁹⁾.

Once collected, the data was transcribed, numbered and tabulated. Then, the results were presented in text, tables and graphics, with insightful and thoughtful comments, based on literature.

The study was approved by the *Comitê de Ética da Universidade Estadual do Ceará* (Ethics Committee of the State University of Ceará) (Protocol 09230292 FR-287517)

in accordance with ethical and legal parameters established by Resolution 196/96 of the *Conselho Nacional de Saúde* (National Health Council).

The health unit investigated was also asked the authorization to carry out the research, being presented the trustee term for the data collected during the period from July to August 2009. In this term, were informed the research objectives, the commitment that the study would not bring harm to the institution and its users and the confidentiality of information was ensured.

RESULTS

Regarding the age of the patients affected by leprosy the range between 30 and 39 years prevailed, with 06 (27.5%) of the cases in 2007. In 2008, the age group between 20 and 29 years stands out, with 08 (24.2%) occurrences (Table I).

Female gender is predominant, with 16 (72.7%) in 2007 and 21 (63.6%) in 2008. The most prevalent color/race is brown, both in 2007, with 16 (72.7%), as in 2008, with 20 (60.6%).

On the patients' schooling, in 2007 most of the individuals had the incomplete elementary level, constituting 10 (45.5%) cases; similar to 2008, when they were 15 (45.5%), followed by the group with complete elementary level, which raised 50% in 2008 in comparison to the prior year. It is worth noting the expressive number of illiterate in this population, reaching 02 (9,1%) cases in 2007 and 04 (12,1%) in 2008 (Table II).

The most prevalent clinical form was the borderline, with 09 (40.9%) in 2007 and 18 (54.5%) in 2008. Regarding

Table I - Distribution of leprosy patients according to age range in CSF Studart Eliezer. Fortaleza-CE, 2007 - 2008.

Age in years	2007		2008		Total	
	n	%	n	%	n	%
0 to 9	01	4.5	03	9.1	4	7.3
10 to 19	02	9.1	03	9.1	5	9.1
20 to 29	03	13.6	08	24.2	11	20.0
30 to 39	06	27.5	04	12.1	10	18.2
40 to 49	05	22.7	03	9.1	8	14.5
50 to 59	03	13.6	07	21.2	10	18.2
60 to 69	01	4.5	01	3.0	2	3.6
70 to 79	01	4.5	02	6.1	3	5.5
80 to 89	-	-	02	6.1	2	3.6
Total	22	100.00	33	100.00	55	100.00

Source: CSF, 2009.

Table II - Characterization of leprosy patients according to gender, color/race and schooling in CSF Studart Eliezer. Fortaleza-CE, 2007 - 2008.

Gender	2007		2008		Total	
	n	%	n	%	n	%
Male	06	27.3	12	36.4	18	32.7
Female	16	72.7	21	63.6	37	67.3
Color/Race	2007		2008		Total	
	n	%	n	%	n	%
Brown-skinned	16	72.7	20	60.6	36	65.5
White	05	22.7	07	21.2	12	21.8
Black	01	4.6	06	18.2	07	12.7
Schooling	2007		2008		Total	
	n	%	n	%	n	%
Illiterate	02	9.1	04	12.1	06	11
Incomplete elementary	10	45.5	15	45.5	25	45.5
Complete elementary	03	13.6	09	27.3	12	21.8
Incomplete secondary	02	9.1	01	3.0	03	5.5
Complete secondary	02	9.1	03	9.1	05	9
Unknown	03	13.6	01	3.0	04	7.2
Total	22	100.00	33	100.00	55	100.00

Source: CSF, 2009.

Table III - Distribution of the clinical forms and operational classification of leprosy patients in CSF Studart Eliezer. Fortaleza-CE, 2007 - 2008. PADRONIZAR .0 após 100

Clinical form	2007		2008		Total	
	n	%	n	%	n	%
Borderline	09	40.9	18	54.5	27	49.1
Tuberculoid	07	31.8	07	21.2	14	49.1
Indeterminate	06	27.3	07	21.2	13	49.1
Lepromatous	-	-	01	3.1	01	49.1
Total	22	100.0	33	100.00	55	100.0
Operational Classification	2007		2008		Total	
	n	%	n	%	n	%
Paucibacillary	13	59.1	14	42.4	27	49.1
Multibacillary	09	40.9	19	57.6	28	50.9
Total	22	100.0	33	100.00	55	100.0

Source: CSF, 2009.

the operational classification, in 2007 it was found that 13 (59.1%) were paucibacillary type and 09 (40.9%), multibacillary. In 2008, 14 (42.4%) were paucibacillary and 19 (57.6%) multibacillary (Table III). In 2008, there was 01

case of the lepromatous form, which is highly contagious.

Regarding the type of discharge, it was observed prevalence of healing, a category with 21 (95.5%) cases in 2007 and 19 (57.6%) in 2008 (Table IV).

Table IV - Distribution of leprosy patients' type of discharge from the CSF Eliezer Studart. Fortaleza-CE, 2007 - 2008.

Type of discharge	2007		2008		Total	
	n	%	n	%	n	%
Cure	21	95.5	19	57.6	40	72.8
Transference to other service in the city	-	-	2	6.1	2	3.6
Intermunicipal transference	1	4.5	1	3.0	2	3.6
Death	-	-	2	6.1	2	3.6
Abandonment	-	-	1	3.0	1	1.8
In treatment	-	-	8	24.2	8	14.6
Total	22	100.0	33	100.0	55	100.0

Source: CSF, 2009.

DISCUSSION

This research reveals that the studied patients are concentrated in the younger age group, within the working life, therefore, in a period when many are still working, that is, there is an increase in the number of cases with age progression, with the disease affecting especially the working population and, in smaller numbers, the elderly⁽¹⁰⁾. Another issue is related to the diagnosis of disease in childhood in endemic countries. This population comes early in contact with patients releasing the *bacillus*, contributing to an increased risk of illness during this period of life⁽¹¹⁾.

It was noted that the study population was composed mainly of women, with female predominance in 2007 and 2008. In 2008, there was an increase of 9% in the assistance to male gender in comparison to 2007.

This phenomenon, yet without a consolidated explanation, can have as a justification the higher frequency of women in primary health units, probably due to the existence of specific programs for women's health and/or child's (which they would have access to by virtue of their sons); or even the inadequacy of diagnosis, which should be the focus of further studies for elucidation⁽¹²⁾.

The national data and that about the state of Ceará show a predominance of cases among men, usually considering the risk of exposure to the disease and less concern with the body and health as factors responsible for such a situation⁽¹³⁾, diverging from what was revealed in this study. It is important to further investigate this issue and reflect on strategies that allow a greater range of attention to men in health services. Which strategies and methods ensure qualified care for men and women?

The search for the consolidation of primary care, specifically the *Estratégia de Saúde da Família - ESF* (Family Health Strategy), would be an attempt to re-orientate the health care, with practices aiming at the real health needs of the population, regardless of race/color, gender, social class and religion.

As for the color of patients suffering from leprosy in 2007, most were brown-skinned, the same occurring in 2008. This data converges with studies conducted in the Northeast, which also have the color brown as predominant⁽¹⁴⁾.

Similar information on the schooling level of leprosy patients were found in the study conducted in the city of Jaguaré-ES, where the majority of patients had elementary schooling or were illiterate⁽¹⁵⁾.

Endemic diseases, such as leprosy and tuberculosis, can be influenced by the living conditions of the population and the schooling level⁽¹⁶⁾. It is observed that the educational level of a nation represents its population strata, and it should also be considered the difficulty in accessing the health services and in health promotion and disease prevention⁽¹⁵⁾.

Regarding the clinical form, the data on this study approaches the research conducted earlier in a reference center in the city of Fortaleza-CE, according to which 54.6% were of borderline clinical form, a manifestation that has high transmission power⁽¹⁰⁾.

Leprosy in its indeterminate form constitutes the initial phase of the disease, with potential to progress to healing or polarized forms⁽¹¹⁾. In the present study, the percentage of the indeterminate form was lower than that found for the borderline type, allowing the assumption that the diagnosis of leprosy is not being performed, in the unit, in its early stages, inferring that actions have not been so efficient from the view preventing the chain of transmission into the community.

Multibacillary patients are considered the main source of infection and are also the most susceptible to the disease⁽¹⁶⁾. Thus, the study shows that cases with greater potential for transmission are being detected by the Basic Health Unit, but also shows that the diagnosis of these patients is being done late.

A survey conducted in a Brazilian city in the period from 2000 to 2006 also showed a significant prevalence of the multibacillary operational class, with 87% of all identified cases of leprosy⁽¹⁸⁾, what characterizes the endemicity

of the disease in the country. These data demonstrate the need for more effective actions to achieve better results. It is necessary to arrive before, this is fact, but how? This is an issue to be discussed with regionalized teams, seeking decentralization of leprosy services and the development of qualification programs for professionals in primary care, enabling early diagnosis and treatment.

The distribution of cases according to discharge demonstrates an effective involvement of patients with adherence to treatment regimen, data that corroborates previous research where the percentage of patients who achieved remission rates were 83.9%, showing the effectiveness of multidrug therapy (MDT)⁽¹⁷⁾.

It is not possible to evaluate the two (6.1%) cases that resulted in death, due to lack of variables and indicators of the *cause morris*. Death from leprosy complications is rare, since leprosy has treatment and cure. The dropout rate was only one (3%) case in 2008, without any record in 2007. These events must be weighted by the healthcare facility, since treatment with incomplete multidrug therapy makes the carrier a potential transmitter of *M. leprae*.

It is suggested to promote and implement educational actions, therefore counting on health and education professionals, along with community representatives, aiming to inform the population about clinical signs, sensitize to the prejudice and lead to reflection on the local issues that involve the theme of leprosy, maintain collective activities such as the *Dia da Mancha* (Day of the Skin Macule), that occurred in the unit in 2007, and incorporated in daily practice a permanent keen eye not only for the macules, but for all psychological, social and moral aspects that regard the issue of leprosy as a public health problem.

CONCLUSION

Epidemiological and clinical features of leprosy patients identified in this study depict the following profile: female gender, younger age (economically active), brown-skinned, with low schooling level, prevalence of borderline clinical form, multibacillary operational classification and high healing rate.

Understanding the epidemiologic profile and clinical characteristics of patients diagnosed with leprosy is of fundamental importance for the development of strategies directed at this group, by management professionals together with the population through social control, thus aiming at public policies that meet the needs of health professionals and strengthen the activities of disease prevention and health promotion for the population.

Therefore, it is intended to sensitize the management to the resizing of assistance held at health facilities in the municipality for the leprosy patients, with special

attention to making the diagnosis as early as possible and understanding the panorama of leprosy today, as well as foster the discussion of strategies to support the practices of health services, in order to control the disease and promote health in its broadest sense, to the whole society.

REFERENCES

1. Ministério da Saúde (BR), Secretaria de Políticas Públicas, Departamento de Atenção Básica. Guia para o Controle da Hanseníase. Brasília; 2002.
2. Freitas CASL, Silva NAV, Ximenes NFRG, Albuquerque IMAN, Cunha ICKO. Consulta de enfermagem ao portador de hanseníase no território da Estratégia da Saúde da Família: percepções de enfermeiro e pacientes. *Rev Bras Enferm.* 2008;61(esp):757-63.
3. Martelli CMT, Stefani MMA, Penna GO, Andrade ALSS. Endemias e epidemias brasileiras, desafios e perspectivas de investigação científica: hanseníase. *Rev Bras Epidemiol.* 2002;5(3):273-85.
4. Ramos JR AN, Heukelbach J, Gomide M, Hinders DC, Schreuder PA. Health systems research training as a tool for more effective Hansen's disease control programmes in Brazil. *Lepr Ver.* 2006;77(3):175-88.
5. Cunha MD, Cavaliere FAM, Hércules FM, Duraes SMB, Oliveira MLWDR. Os indicadores da hanseníase e as estratégias de eliminação da doença em município endêmico do estado do Rio de Janeiro, Brasil. *Cad Saúde Pública.* 2007;23(5):1187-97.
6. Peiter PC. A geografia da saúde na faixa de fronteira continental do Brasil na passagem do milênio [tese]. Rio de Janeiro: Instituto de Geografia, Universidade Federal do Rio de Janeiro; 2005.
7. Célula de Vigilância Epidemiológica – CEVEPI, Secretaria Municipal de Saúde (CE). Informe epidemiológico: hanseníase [acessado em 2009 Set 28]. Disponível em: http://www.sms.fortaleza.ce.gov.br/sms_v2/VigilanciaEpidemiologica_web/downloads/cevepi_2008_boletimHans_01.pdf
8. Lakatos EM, Marconi MA. Fundamentos de metodologia científica. 3ª ed. São Paulo: Atlas; 1991.
9. Ministério da Saúde (BR), Secretaria Nacional de Programas Especiais de Saúde. Controle da hanseníase: uma proposta de integração ensino-serviço. Rio de Janeiro: DNDS/NUTES; 2004.
10. Gomes CCD, Gonçalves HS, Pontes MAA, Penna GO. Perfil clínico-epidemiológico dos pacientes diagnosticados com hanseníase em um centro de

- referência na Região Nordeste do Brasil. An Bras Dermatol. 2005;80(Supl 3):283-288.
11. Talhari S, Neves RG. Dermatologia tropical: hanseníase. Manaus: Editora Tropical; 1997.
 12. Campos SSL, Ramos Jr AN, Kerr-Pontes LRS, Heukelbach J. Epidemiologia da hanseníase no Município de Sobral, Estado do Ceará-Brasil, no Período de 1997 a 2003. Hansen Int. 2005;30:167-73.
 13. Cunha AZS. Hanseníase: aspectos da evolução do diagnóstico, tratamento e controle. Ciênc Saúde Coletiva. 2002;7(2):235-42.
 14. Oliveira MLW. O papel estratégico do enfermeiro no controle da Hanseníase. Rev Bras Enferm. 2008; 61(esp):668-69.
 15. Santos AS, Castro DS, Falqueto A. Fatores de risco para transmissão da Hanseníase. Rev Bras Enferm. 2008; 61(esp):738-43.
 16. Evangelista CMN. Fatores sócio-econômicos e ambientais relacionados hanseníase no Ceará [dissertação]. Fortaleza: Faculdade de Medicina da Universidade Federal do Ceará; 2004.
 17. Araújo MG. Hanseníase no Brasil: Rev. Soc. Bras. Med. Trop. 2003; 36(3):373-382.
 18. Miranzi SSC, Pereira LHM, Nunes AA. Perfil epidemiológico da hanseníase em um município brasileiro, no período de 2000 a 2006. Rev Soc Bras Med Trop. 2010;43(1):62-7.

First author's address:

Viviane Bezerra de Souza
Rua Henrique Autran 673 apto. 403
Bairro: Monte Castelo
CEP: - Fortaleza - CE - Brasil
E-mail: vivi.bezerra@hotmail.com

Mailing address:

Marcelo Costa Fernandes
Rua: Coronel Alves Teixeira, 755, Apt. 103
Bairro: Joaqui Távora
CEP: 60130-000 - Fortaleza - CE - Brasil
E-mail: celo_cf@hotmail.com