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CASE REPORT

# Lepromatous leprosy: case report

## Lepra lepromatosa: reporte de un caso

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**ABSTRACT**

Hansen's disease or leprosy is a chronic infectious disease caused by Mycobacterium leprae. As old as man himself, those who suffer from it continue to be marginalized and stigmatized as they were thousands of years ago. The World Health Organization (WHO), has developed a program aimed at preventing, diagnosing in a timely manner and treating it appropriately. In many cases, patients with leprosy are diagnosed late, accompanied by irreversible disabilities. For this reason, it is appropriate to present a clinical case of lepromatous leprosy, with late diagnosis and grade 2 disability, who was treated in de Dermatology Service of the Dr. Leon Cuervo Rubio teaching clinical surgical hospital in Pinar del Rio, due to skin lesions, with loss of sensitivity and bone resorption, of 5 years of evolution. A bacilloscopy was indicated which confirmed the diagnosis of lepromatous leprosy, so combined polychemotherapy was started, although he is still under treatment. It is vitally important to continue training the Basic Health Team to be able to make early diagnoses of leprosy at the primary care level, thus avoiding the appearance of disabilities.

Keywords: Leprosy; Lepromatous Leprosy; Clinical Evolution; Disability.

**RESUMEN**

La enfermedad de Hansen o lepra, es una enfermedad infecciosa crónica causada por Mycobacterium leprae Tan antigua como el mismo hombre, los enfermos que la padecen continúan marginados y estigmatizados como ocurría miles de años atrás. La Organización Mundial de la Salud (OMS) ha desarrollado un programa orientado a prevenir, diagnosticar oportunamente y tratarla de forma adecuada. En muchas ocasiones, los pacientes con lepra son diagnosticados tardíamente, acompañados de discapacidades irreversibles. Por esta razón es oportuno presentar un caso clínico de lepra lepromatosa, con diagnostico tardío y discapacidad grado 2, quien fue asistido en el Servicio de Dermatología del Hospital Clínico Quirúrgico Docente Dr. León Cuervo Rubio en Pinar del Río, por presentar lesiones en piel, con pérdida de la sensibilidad y reabsorciones óseas, de 5 años de evolución. Se le indicó baciloscopia que confirmó el diagnóstico de lepra lepromatosa, por lo que se comenzó a administrar poliquimioterapia combinada, encontrándose aún en tratamiento. Es de vital importancia seguir preparando al Equipo Básico de Salud, para poder realizar diagnósticos tempranos de lepra en el nivel de atención primaria, evitando así la aparición de discapacidades.

Palabras clave: Lepra; Lepra Lepromatosa; Evolución Clínica; Discapacidad.

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## INTRODUCTION

Leprosy is considered an ancient epidemic disease in many cultures. It was first described in India and China between 600 and 400 BC. The Egyptians and the Persians also have records of this disease, since they were attracted by disfiguring skin lesions.(1)

It is a granulomatous, chronic, infectious, but not very contagious disease caused by Mycobacterium leprae.(2)

It mainly affects the skin and peripheral nerves. Today, it is known that leprosy is not so easy to transmit, but the exact mechanism of the disease and its transmission still need to be better understood.(3)

It is a disease that, although curable, remains a public health problem in several parts of the world.(3)

If not treated early and effectively, it is among the chronic skin conditions the leading cause of deformity and disability in the world's population, and therefore has a major social impact.(4)

The exact phenomena that occur after the entry of M. leprae into the organism are not known, while the development of the disease and its clinical presentation will depend on the immunological status of the host.(5)

The broad spectrum of clinical manifestations allows HD to be classified from the tuberculoid (LT) or paucibacillary (PB) form to the lepromatous (LL) or multibacillary (MB) form.(6)

Highly endemic foci exist in India, Brazil, Democratic Republic of Congo, Nepal, United Republic of Tanzania, Madagascar and Mozambique; however, in Europe it has almost completely disappeared, although small foci have been reported in Spain, Portugal and Russia.(7)

In 2023, the global number of new cases amounted to 182 815, with 13,6 % of them reported in the Americas, where Brazil accounts for more than 90 %.(8)

In Cuba, 123 cases were reported for an incidence rate of 0,12 per 10,000 inhabitants. In Pinar del Rio, 3 cases were diagnosed for a rate of 0,6 per 10 thousand inhabitants.(9)

Although it is not a health problem in our country or in the province, we present a typical case of an adult with lepromatous leprosy diagnosed late in our province.

## CASE REPORT

Male patient, Caucasian, 55 years old, from Pinar del Río. He works as a self-employed farmer and charcoal maker. In April 2019, he was admitted to the Provincial Hospital of Pinar del Río, referred from his health center to the municipal hospital and from there to the provincial hospital due to intense foul odor in his nostrils with the expulsion of larvae or worms, from which large quantities were extracted. On that occasion, he was treated with antimicrobials and discharged to his health center.

In June 2021, he was evaluated by his family doctor in consultation with the internal medicine specialist at the GBT in his health area, who recommended his admission to the municipal hospital with suspected Hansen's disease, as the patient reported that he felt no pain when he burned himself with a pot or a burning coal while making charcoal, and that he had loss of surface sensitivity accompanied by deformity of the nose. On this occasion, the patient did not go to the hospital, stating that he did not have the necessary financial means to do so.

Later, in the first months of 2023, he was admitted to the municipal hospital for ulcerative skin lesions, which were in very poor condition and foul-smelling. He received antibiotic therapy and treatment and was discharged.

In March 2024, he began to present ulcerative lesions in the distal third and anterior aspect of the leg and inflammation of the affected region, and was admitted again to the municipal hospital, from where he was referred to the Dr. León Cuervo Rubio Teaching Surgical Hospital on suspicion of Hansen's disease, with the aim of conducting a better study, diagnosis, and treatment, as the patient lives in a rural area that is difficult to access.

His personal medical history includes mild mental retardation, which allows him to work, and he is also a smoker. He reports no family history of disease. He underwent surgery for nasal tabaque.

Epidemiological history: He reports no contact with other patients.

Psychosocial history: He lives with two brothers and his father in a brick house with a zinc roof, with poor hygiene and sanitary conditions. He also reports that he makes charcoal for use in his home.

### Physical-dermatoneurological examination

Skin: nodular lesions on the auricles with infiltration, large nodules in the ciliary regions with alopecia of the eyebrows, saddle nose deformity. Old burn lesions on both hands, accompanied by anesthesia, 2 mm ulcerated lesion on the lower third of the left leg.

Dermatoneurological examination: infiltration of all peripheral nerves, the patient reports generalized anesthesia.

Eyes: no ocular alterations caused by leprosy or signs of visual loss.

Examination of thermal, pain, and tactile sensitivity: altered (insensitivity), tests performed on hands and feet.

**Figure 1. Diffuse infiltration of the pinna, superciliary arch, glabella and nose with presence of lepromas, giving the appearance of leonine fascia, rupture of the nasal septum with presence of saddle nose**

Blood count, coagulogram, erythrocyte sedimentation rate, blood glucose, TGP, TGO, alkaline phosphatase, cholesterol, triglycerides, uric acid, urea, creatinine, VDRL, HIV, all within normal limits.

Bacilloscopy: coding 4 in both atria and elbows, with morphological indices between 40 % and 70 %.

### Treatment

After completion of the case study, it is concluded as lepromatous leprosy, multibacillary, with late diagnosis and grade II disability. Multitherapy treatment was started with MDT-Combi, for one year, which contains rifampicin, clofazimine and dapsone. Subsequently, he will be kept under observation for 5 years, with annual bacteriological study. Currently the patient is under treatment, the lesions have not progressed and he has not presented any reactional state during the course of the disease.

The search for intra- and extra-domiciliary contacts was carried out, and dermatoneurological examination was performed on them; the intra-domiciliary contacts were examined by the dermatologist and the extra-domiciliary contacts by the family physician. The presence of the disease was not identified in them. All received prophylaxis with rifampicin and will remain under observation for 5 years with annual follow-up.

## DISCUSSION

When leprosy is diagnosed early (within 12 months of the first symptoms), treatment can cure 95 % of patients and leave no sequelae. However, if diagnosed late, it often causes extensive internal lesions and disfigurement, leaving the patient permanently disabled, as in this case.(10)

**Figure 2. Resorption of the distal bony phalanges (acroosteolysis), presence of ulcerations and scars with hypopigmentation due to old lesions, Loss of sensibility in hands**

**Figure 3. Presence of acrokeratosis in the feet, ulcerated lesion on the left sole of the foot, painless, persistent and fetid, suggestive of plantar perforating disease, painless ulcer on the inner third of the right leg, knee skin thinned, dry and flaccid**

Therefore, the importance of early diagnosis of leprosy is emphasized and it is necessary for primary health care staff to be trained in health promotion and prevention in this context.(10)

The WHO in 1998 made an operational classification, so that it can be used quickly in areas with limited resources or without the need to use analytical equipment and thus deliver treatment in less time. He classified leprosy into two different forms, differentiated simply by the number of clinical lesions: the paucibacillary form, with up to five clinical lesions, and the multibacillary form, with more than five lesions.(11)The case presented corresponds to the multibacillary form.

It has been proven that detection and treatment of cases with polytherapy alone are not sufficient to interrupt transmission. WHO recommends the tracing of household, neighborhood and social contacts, accompanied by the administration of a single dose of rifampicin as post-exposure prophylaxis.(12)

Currently in Cuba leprosy is not a significant health problem, but this is thanks to the efforts of the Ministry of Public Health and its National Program for the control and treatment of this entity.(13)

## CONCLUSIONS

It can be concluded that early diagnosis and timely treatment can prevent disabilities and rehabilitate those affected by leprosy, so it is essential to train health personnel about this disease, thus allowing better control and management.

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