



Case of lepromatous leprosy associated with leg ulcer

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Abstract

Leprosy is a widespread infectious and contagious disease. It is viewed as a systemic infection, since, in its manifestations, it mimics many conditions. There are few studies that characterize the factors associated with ulcers in leprosy. These injuries should be prevented and treated promptly to avoid serious problems like secondary infections, sepsis, carcinomatous degeneration and amputations. We describe a patient with leg ulcer, involving late diagnosis of lepromatous leprosy.

Keywords: Lepromatous, leprosy, associated, widespread

Introduction

Leprosy is a contagious and chronic systemic granulomatous disease caused by *Mycobacterium leprae* (Hansen's bacillus). It is transmitted from person to person and has a long incubation period (between two and six years) [1, 2].

It can present as two major polar forms (tuberculoid and lepromatous) and other intermediate variants. Mid-borderline leprosy represents the midpoint in the leprosy spectrum [3].

The ulcers in leprosy occur by direct action of *Mycobacterium leprae* on the peripheral nerves, with changes in the sensory, autonomic and motor fibers (neuropathic ulcers). Less frequently, it is due to direct invasion of bacilli in the vascular endothelium, causing vasculitis, cutaneous necrosis and ulcers [4, 5].

We report a case of lepromatous leprosy with multiples signs including leg ulcer.

Case report

A 60-year-old men presented with erythematous skin lesions that had progressed slowly during the preceding 2 years. The lesions started initially as macular discoloration but evolved into indurated, erythematous plaques involving the entire face, trunk, and bilateral upper and lower extremities. The patient also experienced flattening of the nasal bridge and loss of bilateral eyebrows (Figure 1). The lesions on the extremities were associated with numbness and swelling of the hands and feet. Biopsy has shown that the patient suffers from leprosy. A treatment regimen of clofazimine, dapsons, and rifampin was initiated, with a planned duration of 2 years. The patient was doing well at 1 year follow-up but 2 months ago, he presented to our traumatology department for a leg ulcer. The clinical examination revealed the presence of a well-defined ulceration, purulent on the plantar surface of the right foot (Figure 2), associated with the presence of multiple hyperpigmented macules diffused in the body, a depilation of the eyelashes and eyebrows, a deformation of the nose.

We realized a radio that showed osteolysis. (Figure 3) And made an abscess trimming with local ulcer care with and we did make sure that the patient continues his treatment.

Discussion

Despite attempts at eradication, leprosy (Hansen disease) remains endemic in certain parts of the world. The causative organism is *Mycobacterium leprae*, an obligate intracellular parasite [6]. Clinical presentations range from paucibacillary (tuberculoid) disease with less than 5 lesions to multibacillary (lepromatous) leprosy with diffuse skin involvement of the face, trunk, and extremities. Severe involvement of facial skin results in the classic "leonine" face seen in our patient. Both sensory and motor nerve damage occur in the vicinity of tuberculoid lesions but can be more diffuse in lepromatous leprosy.

With treatment, the skin lesions gradually clear, mostly within the first year as we can see in our patient.

As for Neural damage, it leads to changes in sensitivity, changes in tropism and motor function, which predisposes to ulceration.

These chronic, neuropathic ulcers have very peculiar characteristics, such as circular edges, erythematous surfaces. They occur in high pressure areas such as the feet, and less commonly, on the legs, thighs and upper limbs [5].

Patients with borderline tuberculoid leprosy have a higher risk of chronic ulcers, followed by individuals with lepromatous and borderline lepromatous forms [7].

This ulcers are slow to heal, and produce atrophic scarring or even tissue/bone destruction [8].

Since the patient experienced a resolution of ulcers following specific polychemotherapy, unlike the 2-year treatment, neurotrophic changes are accepted as the main mechanism, typical of lepromatous leprosy, combined with a high bacterial load and endo-vascular phenomena [9].

Management of chronic ulcers in patients with leprosy includes

different types of dressings, orthopedic and plastic surgeries, plaster casts, special footwear, splints, crutches, wheelchair use and absolute rest. Despite this, clinical experience shows that patient compliance to the therapeutic procedures is a key consideration in treatment choice and that without patient collaboration the result of the treatment can be frustrating ^[10].

Conclusion

Leprosy continues to haunt human civilization. Numerous programs and control measures have been implemented, but somehow, the disease is everlasting. Lepromatous leprosy, one of the polar presentations of the disease, is thought to contribute to high communicability of the disease. The severity of systemic involvement, disabilities, and deformities adds to the suffering of the patient.

What is known about this topic

- Leprosy is a widespread infectious, contagious disease and endemic.
 - Leg ulcer is rare complication of lepromatous leprosy
- What this study adds

What this study adds

Despite attempts at eradication, leprosy (Hansen disease) remains endemic in certain parts of the world.

The importance of prevention even if the patient undergone the treatment.

Competing interests

The author declare no competing interests

Authors contributions

All the authors have read and agreed to the final manuscript



Fig 1: saddle nose deformity associated with front nodules



Fig 2: Leg ulcer



Fig 3: Radio showing a complete bone destruction

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