Delayed Diagnosis of Multibacillary Leprosy: A Report of Eight Cases

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Leprosy is an important public health problem in Brazil. However, this disease is still poorly diagnosed in its early stages, leading to permanent disability and disfigurement. We examined eight patients with clinical and histological diagnosis of multibacillary leprosy who were being treated for other diseases for about three years without clinical hypothesis of leprosy. These cases illustrate the importance of medical education and public information about leprosy’s signs and symptoms for prompt recognition and treatment, which are necessary to prevent permanent disabilities and eradicate the disease.

Key-Words: Misdiagnosis, late diagnosis, multibacillary leprosy.

Leprosy is an important public health problem in endemic areas. In spite of governmental strategies for reducing the leprosy burden and leprosy control, with declining incidence since 1991 due to new strategies for dealing with this disease, including multidrug therapy with reduced duration of treatment and the adoption of new cure criteria, more than 250,000 new cases were registered in 2007, including about 40,000 in Brazil and 140,000 in India [1,2].

Leprosy is a chronic disease caused by an intracellular bacillus, Mycobacterium leprae, which multiplies very slowly. The incubation period of this disease is about five years. It is transmitted via secretion droplets, from the nose and mouth, during close and frequent contacts with untreated patients, which are the most important transmission foci. Clinically, leprosy mainly affects the nerves and skin. The commonest skin lesions are erythematous, hypopigmented and infiltrated plaques, which have reduced sensibility. Damage to the nerves explains the sensory loss; if untreated, there can be progressive and permanent disabilities. Other clinical aspects of leprosy are reactions, which may be defined as acute phases within the usual chronic evolution of the disease; sometimes these define the moment of diagnosis [3-5]. Diagnosis is clinical and treatment is made at public health facilities [2].

Eight patients were evaluated at the Clinical Dermatology Division of the Hospital das Clínicas da Universidade de São Paulo, where diagnosis of multibacillary leprosy was made clinically and histologically. All eight patients had been initially misdiagnosed. We present these cases, followed by a discussion regarding various aspects of Hansen disease and the importance of early diagnosis for preventing complications and transmission (Table 1).

Discussion

Because of the long incubation period, infection with Mycobacterium leprae may not be evident in its early stages. This peculiarity can lead to misdiagnosis and consequently to long-term morbidity and disfigurement. The ability to recognize this disease and provide prompt therapy is essential to prevent disfiguring and other undesirable consequences [6,7].

Leprosy’s diagnosis is clinical, it is based on the finding of cutaneous lesions with altered sensation and thickened peripheral nerves. This disease has several clinical presentations, which vary from well delimited and clearly recognizable plaques to poorly defined macules, anesthetized areas, alopecia, dryness and diffuse infiltration of the skin. These clinically ill-defined lesions can be easily misdiagnosed, even when patients are examined by experts, leading to late diagnosis, which increases the transmission period and the probability of disabilities. Consequently, patient history and physical examination are fundamental steps in leprosy investigation. If investigated, the finding of incipient clinical signs can lead to earlier diagnosis. Since early detection and treatment is the best way to eliminate leprosy, it is clear that in Brazil, which is an endemic country, these ill-defined precocious symptoms need to be fully and extensively investigated [8-10].

Our patients presented to health services with skin lesions, anesthetized areas, amyotrophy and various other polymorphic signs and symptoms of chronic leprosy; but they were misdiagnosed by doctors of different specialties (gynecologist, infectologist, general clinicians, dermatologist, otorrinolaryngologist, plastic surgeon, rheumatologist, and vascular surgeon). Even when they had leprosy-provoked disabilities the patients were treated for other conditions. It usually took at least three years for a correct diagnosis; during this time, most of them developed complications due to late diagnosis of this disease.

We concluded that it is very important to teach both the public and health workers about leprosy. Familiarity with this disease is essential to initiate appropriate therapy and avert lasting sequels. Early case detection and treatment with multidrug therapy remains the cornerstone of leprosy control. An integrated approach that uses informed health-care workers and easily accessible leprosy services near patients’
Table 1. Eight cases of multibacillary leprosy that went undiagnosed after more than three years of public health service attendance.

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age</th>
<th>Gender</th>
<th>Precedence</th>
<th>Complaints and Physical examination performed in our hospital</th>
<th>Diagnosis of leprosy performed in our hospital</th>
<th>Previous follow-up with misdiagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>46 M</td>
<td>São Paulo</td>
<td>&gt;10 years</td>
<td>Nodules on the body several months</td>
<td>Diffuse infiltration of the skin erythematous skin nodules MMMM and trunk alopecia, madarosis, xerosis hypoesthesia insular in MMMM and trunk bilateral claw hand deformity plantar ulceration</td>
<td>LL in ENL</td>
</tr>
<tr>
<td>2</td>
<td>72 M</td>
<td>São Paulo</td>
<td>&gt;10 years</td>
<td>Leg ulcers 13 years</td>
<td>Diffuse infiltration of the knees and elbows erythematous ulcerated plaques MMMM 'glove and stocking' anesthesia left claw hand deformity, short fingers extensive ulcers on the dorsa of the legs</td>
<td>BL</td>
</tr>
<tr>
<td>3</td>
<td>31 F</td>
<td>São Paulo</td>
<td>11 years</td>
<td>Leg ulcers puerperium</td>
<td>Diffuse infiltration of the skin anesthetic hypochromic macules on the trunk violaceous macules MMII leg ulcers</td>
<td>LL in Lucio’s phenomenon</td>
</tr>
<tr>
<td>4</td>
<td>38 F</td>
<td>Praia Grande</td>
<td>30 years</td>
<td>Skin lesions 6 years</td>
<td>Diffuse infiltration elbows and knees erythematous anesthetic plaques MMMM ‘glove and stocking’ anesthesia atrophy of the interbone muscles left hand clawed left hand</td>
<td>BB</td>
</tr>
<tr>
<td>5</td>
<td>73 F</td>
<td>São Paulo</td>
<td>Since birth</td>
<td>Skin nodules several months</td>
<td>Diffuse infiltration of the face, elbows and knees erythematous nodules, papules MMMM, trunk ‘glove and stocking’ anesthesia at the left side of body</td>
<td>LL</td>
</tr>
<tr>
<td>6</td>
<td>32 F</td>
<td>São Paulo</td>
<td>Since birth</td>
<td>Leg nodules 9 months</td>
<td>Diffuse infiltration of the skin edema and anesthesia of the hands and feet erythematous nodules mainly on legs</td>
<td>LL in ENL</td>
</tr>
<tr>
<td>7</td>
<td>24 M</td>
<td>São Paulo</td>
<td>Two mouth</td>
<td>Hoarseness 2 years</td>
<td>Right claw hand amiotrophy and deformity foveolar plaques edematous at the trunk</td>
<td>BB in RR</td>
</tr>
<tr>
<td>8</td>
<td>51 F</td>
<td>São Paulo</td>
<td>Since birth</td>
<td>Painful erythematous leg nodules Few days</td>
<td>Diffuse infiltration of the skin hypochromic anaesthetic plaques on the trunk and legs painful inguinal and cervical lymphadenitis</td>
<td>LL in ENL</td>
</tr>
</tbody>
</table>

M=male; F=female; RR=reversal reaction; ENL=erythema nodosus lepromatous; BB=borderline borderline leprosy; BL=borderline lepromatous leprosy; LL=lepromatous lepromatous leprosy.
homes and access to tertiary health-care services will continue to be the key strategies to achieve worldwide decline of this disease and of its consequences [9].

Acknowledgments

We thank the leprosy patients for teaching us about patience.

References