



Telltale signs of hansen's disease: discolored, hypoesthetic patch and deformities of the hand

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Abstract

Leprosy (Hansen's Disease) is a crippling, devastating disease affecting skin, eyes, and nerves; the etiological agent being *Mycobacterium leprae*. India, Brazil, and Indonesia account for the majority of cases globally. Early diagnosis and prompt treatment by multidrug regimen are the mainstays of management of this chronic infectious disease which is transmitted by respiratory route and skin to skin contact from cases of leprosy. We report a case of leprosy in a 14-year-old boy in Uttar Pradesh, manifesting as hypopigmented hypoesthetic patch with thickened ulnar nerve, emphasizing the fact that the disease is still endemic in states like Uttar Pradesh; hence it is important to do the hawk-eyed examination to avoid missing any hidden case.

Keywords: Hansen's Disease, Leprosy, *Mycobacterium Leprae*

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Introduction

Leprosy also called Hansen's disease is caused by a slow-growing organism, *Mycobacterium leprae*, which can affect the skin, and mucous membranes of the nose, eyes, and peripheral nerves in the hands and feet (1). Loss of sensation occurs if there is the destruction of nerve endings. The disease tends to affect people of all ages. It can be transmitted through the respiratory route and skin to skin contact with infected leprosy patients (2). Early diagnosis can prevent the deformities resulting from delay in treatment, which consists of a combination of drugs like rifampicin, clofazimine, and dapsone. In the present study, we are reporting a case of Hansen's Disease presenting with discolored,

hypoesthetic patch and deformities of the hand who was managed with antileprosy drugs.

The Case

A 14-year-old boy presented in the Outpatient Department of a Multispeciality Hospital, Uttar Pradesh with complaints of decreased sensation, numbness, and feeling of crawling of ants in left hand for one year. There was no history of fever or weight loss. On examination, there was a hypopigmented patch (Figure 1) on the dorsum of the left hand. On pinprick, there was diminished sensation in the skin lesion. The left ulnar nerve was thickened. There was no other nerve involvement. Routine examination of blood, urine and

stool were normal. The skin smear examination revealed acid-fast bacilli on modified Ziehl neelsen stain. Antileprosy drugs were given like daily dapsone, clofazimine, and supervised monthly rifampicin for 6

months. On follow-up at 6 months, the color of the skin lesion turned normal and there was a normal sensation to touch, pain, and temperature.



Fig.1 (Original). Hypopigmented patch (white arrow)

Discussion

Leprosy (a bacterial infection caused by *Mycobacterium leprae*) is a chronic progressive disease that can affect skin and nerves. Although leprosy is now considered to be a rare disease still, the disease is endemic in 3 countries –India, Brazil, and Indonesia which accounts for the majority of cases globally (3). According to the World Health Organization (WHO) report, the global prevalence of leprosy was found to be 0.25 per 10000 populations at the end of 2017 (4). In the year 2016, WHO started the Global Leprosy Strategy (2016 - 2020): Accelerating towards a leprosy-free world, which aims to control leprosy, especially among children in endemic countries (5). According to WHO,

individuals having one out of 3 features as mentioned below are considered to be leprosy patients (6):

- (i) definite loss of sensation in a pale (hypopigmented) or reddish skin patch;
- (ii) thickened or enlarged peripheral nerve with loss of sensation; and
- (iii) presence of acid-fast bacilli in a slit-skin smear.

In a study done by Mitsuda and Ogawa, autopsy of 150 patients with leprosy was done. They reported a rate of 1.3% deaths due to laryngeal involvement (7, 8). The disease is said to be endemic in some countries, with the highest incidences being reported from Bangladesh, Brazil, the Democratic Republic of Congo, Ethiopia, India, Indonesia and Madagascar. In an analysis done

between 2011 to 2021 by Kramer DG et al. from Northeast Region of Brazil, 168,848 cases of leprosy were reported, of which 55.57% were males, 62.87% were multiracial, most with low education level, until primary education, and 35.63% had multiple skin lesions (9-12). It is highly desirable to start early treatment in such patients for a better prognosis and to avoid deformities.

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Data availability

The raw data supporting the conclusions of this article are available from the authors upon reasonable request.

Conflict of interest

The authors have no conflict of interest in this study.

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Ethical statement

This research was conducted in accordance with ethical principles.

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