

# Hyperpigmentation, a marker of rifampicin overuse in leprosy patient: An incidental finding

**Pugazhenthan Thangaraju,  
Hosanna Singh, M. Punitha,  
V. C. Giri, M. K. Showkath Ali**

*Division of Clinical and Epidemiology,  
Central Leprosy Teaching and  
Research Institute, MOHFW, GOI,  
Chengalpattu, Tamil Nadu, India*

## Abstract

We report an unusual case of hyperpigmentation in a 40-year-old female who was on treatment for leprosy with rifampicin 450 mg daily for 2 months. After scrutinizing the treating physician's previous prescriptions and history, it was found that the patient has never taken clofazimine and minocycline, which were considered to cause hyperpigmentation in antileprosy regimen.

**Key words:** Adverse effects, hyperpigmentation, overuse, rifampicin

## INTRODUCTION

Pigmentation is the important clinical findings in many skin related disorders. It can be either hypo or hyperpigmentation. Hypopigmentation is one of the cardinal findings in the diagnosis of leprosy. Likewise, hyperpigmentation is considered to be the adverse effects of antileprosy drugs, namely minocycline<sup>[1]</sup> and clofazimine.<sup>[2]</sup> Hypopigmented patches of people affected with leprosy, in the hidden areas are often not recognized unless a thorough physical examination is performed, the same which becomes evident due to pigmentation of the skin by the drugs used for treating leprosy. This induces the patient some kind of distress in their normal living and causes even some depression,<sup>[3]</sup> and two suicidal deaths were cited in literature. Here, we describe a case with unusual hyperpigmentation with rifampicin.

## CASE REPORT

A 40-year-old female self-presented at the Central Leprosy Teaching and Research Institute (CLTRI), a

premier institute for leprosy under ministry of health and family welfare, Government of India in Chengalpattu in the southern part of India, with complaints of her hyperpigmentation which caused much distress in her normal living. From the history, it was known that she consulted many general practitioners in Tamil Nadu for complaints of diminished sensation over the medial aspects of both hands and dorsum of both feet for the duration of 5 years. Suspicion of pure neuritis Hansen, mononeuritis multiplex or fungal infection with anemia was made which were elicited from the reports of the patient. The patient also added that she noticed some hypopigmented patches over upper limbs, lower limbs, face and she consulted a private dermatologist 2 months before reporting to CLTRI where she was asked to take capsule rifampicin 450 mg for only 2 days and to consult a government dermatologist or leprologist for final diagnosis and to take up with medications thereafter. However, the patient added that she has taken the drug daily by herself for more than the days the doctor advised, thinking it will be cured if the dose is taken for long period. On our clinical examination, multiple irregular hyperpigmented patches with interspersed areas of hypopigmentation all over the body was seen. Ichthyotic skin with hyperpigmented patches in the extremities and the face was seen [Figure 1]. Neurological examination showed thick and tender bilateral ulnar nerve and thickened lateral popliteal nerve. Ziehl–Neelsen slit skin smear examination revealed, bacteriological index of 2.5 in routine sites and morphological index of 0.8%. Patient was then put on multibacillary multidrug therapy (MDT) (A) regimen for

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### Address for correspondence:

Dr. Pugazhenthan Thangaraju, Central Leprosy Teaching and Research Institute, Chengalpattu - 603 001, Tamil Nadu, India.  
E-mail: drpugal23@gmail.com



**Figure 1:** Hyperpigmentation in the cheek, ear lobes

12 months with steroids after making a diagnosis of the borderline lepromatous type of Hansen with sensory impairment without motor deformity. There is no history of drug therapy for any kind of illness in the past, and adrenal insufficiency was also ruled out. The patient was not interested in doing a biopsy for histopathological examination of pigmented lesion. Now except for the already hyperpigmented area, there is no new area of hyperpigmentation after the completion of 12 pulses of MDT. No new spots of hyperpigmentation with clofazimine are found.

## DISCUSSION

This case actually explains the hyperpigmentation due to rifampicin overdose. Therapeutically rifampicin is given to leprosy patients in a dose of either 6 or 12 pulses of monthly 600 mg contributing either to 3600 mg or 7200 mg cumulatively. Here, in our case, the patient had taken by herself 450 mg of rifampicin daily for 2 months. Fortunately, the patient had only mild marginal elevation of hepatic enzymes. Since the patient has taken only a single capsule of rifampicin daily for 2 months, we correlated

that hyperpigmentation is due to the effect of rifampicin alone. When we searched the literature and medical library, namely PubMed, Embase, and Scopus for possible hyperpigmentation due to rifampicin in leprosy patient we could not find any information. But a single case of generalized hyperpigmentation was seen by antituberculosis patient who consumed both rifampicin and isoniazid for 4 months.<sup>[4]</sup> To the best of our knowledge, this represents the first case of leprosy and as a second case in whole in hyperpigmentation due to rifampicin. Thus, this case might act as a signal or marker for rifampicin overuse when a patient is getting the drug without the knowledge of their doctors for a long time. This also warrants, a proper counseling should be presented to the patient before the start of any kind of medications and to restrict the over the counter use of antibiotics.

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