



Case Report

The enigmatic rhinitis: A nasal clue to Hansen's disease

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ABSTRACT

Leprosy can present with subtle or atypical symptoms, particularly involving the upper respiratory tract, which may lead to misdiagnosis. Allergic rhinitis is a common condition, and overlapping nasal symptoms may distract clinicians from considering Hansen's disease. We report a 37-year-old male who was repeatedly treated for allergic rhinitis due to chronic nasal obstruction, episodic sneezing, and persistent watery rhinorrhea. Despite treatment with antihistamines, intranasal corticosteroids, and saline irrigation for five months, his symptoms did not improve. Further evaluation revealed a xerotic patch, ear lobe infiltration, and thickened peripheral nerves. Slit-skin smear from the ear lobe demonstrated abundant acid-fast bacilli, confirming the diagnosis of lepromatous leprosy. Multidrug therapy was initiated, resulting in marked symptomatic improvement. This case highlights that leprosy should be considered in patients with chronic or atypical rhinitis unresponsive to standard therapy, and that thorough cutaneous and neurological examination remains critical for early diagnosis.

Keywords: Allergic rhinitis, Leprosy, Multidrug therapy, Nasal symptoms

INTRODUCTION

Leprosy (Hansen's disease), caused by *Mycobacterium leprae*, exhibits a wide clinical spectrum affecting the skin, peripheral nerves, and upper respiratory mucosa. Nasal involvement is often one of the earliest manifestations due to the organism's predilection for cooler anatomical sites.¹ Yet, symptoms such as nasal obstruction, sneezing, crusting, and rhinorrhoea may closely mimic allergic rhinitis, leading clinicians astray. Allergic rhinitis is common and frequently diagnosed, and overlapping clinical features can result in leprosy being overlooked, especially when dermatological signs are subtle. Such misdiagnosis delays appropriate treatment, heightens the risk of nerve impairment, and contributes to ongoing community transmission. We present a case of lepromatous leprosy initially treated as allergic rhinitis, emphasizing the importance of maintaining diagnostic suspicion in such patients.

CASE REPORT

A 37-year-old male, a personal car driver, presented with a 1 year history of persistent nasal obstruction, recurrent sneezing, and watery rhinorrhea. He also reported an occasional history of epistaxis. The patient was previously diagnosed with allergic rhinitis by an otorhinolaryngologist (based on his symptoms of recurrent sneezing, rhinorrhea, and nasal obstruction) and underwent treatment as per the instructions without clinical improvement. There was no history of fever with evanescent lesions, slippage of footwear, or prior multidrug therapy (MDT) intake either by the patient or his family members. On examination, a single erythematous, xerotic patch over the left lower limb [Figure 1a], infiltration of the bilateral ear lobes, madarosis of both eyebrows

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Figure 1a: Ill-defined xerotic patch over left thigh.



Figure 1b: Ear lobe infiltration and madarosis.

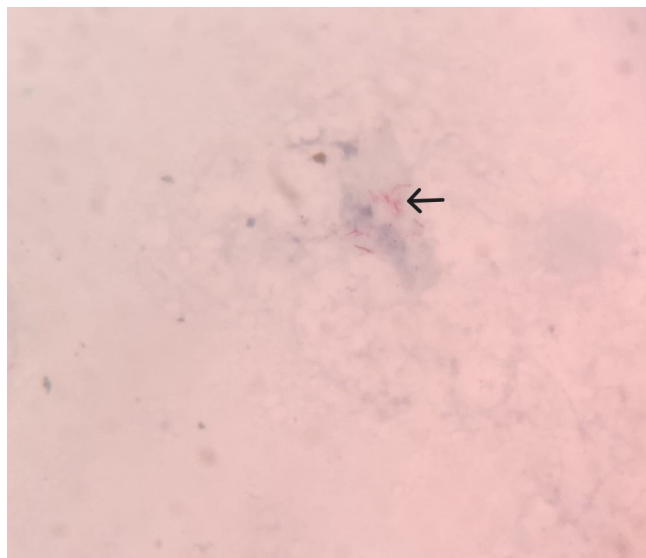


Figure 2a: Slit skin smear from the left ear lobe showing acid-fast bacilli.

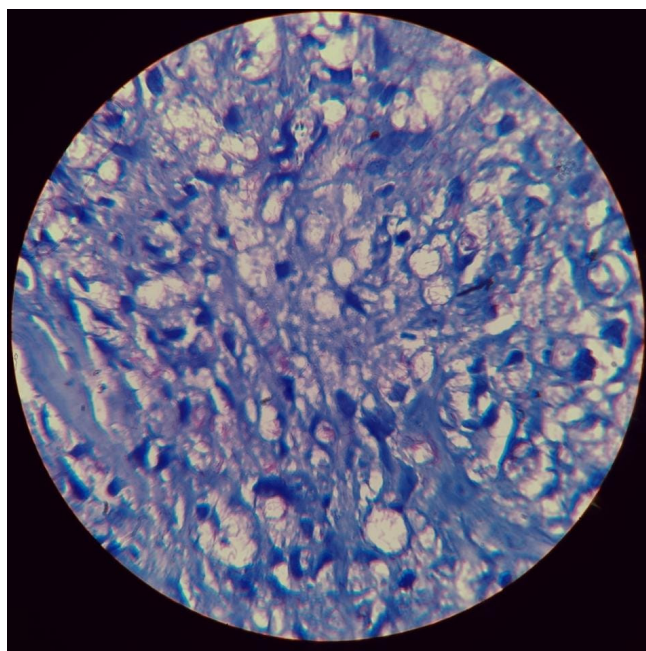


Figure 2b: Histopathological examination from the xerotic patch over the left thigh showing abundant acid-fast bacilli and foamy macrophages (Fite-Faraco stain, x100).

[Figure 1b], and thickened bilateral ulnar and greater auricular nerves. His sensation and motor function tests were intact. Slit skin smear [Figure 2a] from the lesion and ear lobe showed a high bacteriological index, a morphological index of more than 20%, and biopsy [Figure 2b] was suggestive of lepromatous leprosy with a bacteriological index of 6.0. His hemogram, renal function test, liver function test,

urine routine, and microscopy were normal. Patient was started on adult Multidrug therapy multibacillary (MDT MB) pack consisting of cap rifampicin 600 mg once a month, tab clofazimine 300 mg once a month and 50 mg daily, dapsone 100 mg daily, and topical emollient.² Post-exposure prophylaxis consisting of cap rifampicin 600 mg, tab clarithromycin 500 mg, tab minocycline 100 mg once a month for 3 months Post exposure prophylaxis++ (PEP++) was given to all household contacts. The patient was counselled on treatment adherence and the nature of the disease.

DISCUSSION

Nasal symptoms are among the earliest clinical manifestations of lepromatous leprosy, owing to *Mycobacterium leprae's* predilection for cooler body sites, particularly the nasal mucosa. Early complaints such as sneezing, persistent rhinorrhea, nasal stuffiness, epistaxis, and obstruction are common and can closely mimic allergic rhinitis, often resulting in delayed or incorrect diagnosis.³ The nasal mucosa not only manifests early disease but also plays a central role in disease transmission. In this case, persistent allergic rhinitis-like symptoms overshadowed the more subtle dermatological signs, delaying appropriate diagnosis. The lack of response to standard antiallergic therapy prompted re-evaluation, ultimately revealing classical features of lepromatous leprosy such as ear lobe infiltration, madarosis, and thickened nerves. Delayed diagnosis can lead to irreversible nerve damage, deformities, and continued transmission. Clinicians must consider leprosy in patients presenting with chronic or refractory nasal symptoms, even in the absence of significant cutaneous findings.⁴ As our patient is a personal car driver, all family members had prolonged frequent exposure; hence, chemoprophylaxis was given, regular follow-up, and careful observation for skin lesions or symptoms are crucial for all those who are exposed. Chemoprophylaxis plays an important role in breaking the chain of transmission. The administration of PEP++ (rifampicin + clarithromycin + minocycline)^{5,6} to all households was important as it offers broader protection. Its use is increasingly recognized as an effective strategy for reducing secondary cases.

CONCLUSION

Leprosy can be misdiagnosed as persistent allergic rhinitis, resulting in diagnostic delay. This case underscores the need

for a thorough skin and peripheral nerve examination in patients with chronic nasal symptoms. Early detection and initiation of MDT, along with chemoprophylaxis for close contacts, are essential to prevent complications, improve patient outcomes, and reduce community transmission.

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Declaration of patient's consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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REFERENCES

1. Jopling WH, McDougall AC. Handbook of leprosy. 6th edition. New Delhi: CBS Publishers; 1996.P 29-31.
2. World Health Organization. Guidelines for the diagnosis, treatment and prevention of leprosy. Geneva: World Health Organization; 2018. Last accessed 14 November 2025
3. Indian Association of Leprologists. IAL textbook of leprosy. 3rd edition. New Delhi: Indian Association of Leprologists; 2021.P 268-271
4. World Health Organization. Global leprosy (Hansen disease) update, 2022: new paradigm – control to elimination. Wkly Epidemiol Rec. 2022;97:429-50.
5. Hinder DC, Taal AT, Lisam S, da Rocha AM, Banstola NL. The PEP++ study protocol. BMC Infect Dis. 2024;24:226.
6. Schoenmakers A, Mieras L, Budiawan T, van Brakel WH. The state of affairs in post-exposure leprosy prevention: a descriptive meta-analysis on immuno- and chemoprophylaxis. Res Rep Trop Med. 2020;11:97-117.

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