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Lazarine Leprosy: A Rare Case Report

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Abstract: ***Lazarine leprosy is a rare and severe ulcerative variant of leprosy, marked by spontaneous necrotic ulceration of pre-existing skin lesions. Originally described in the 19th century, the condition derives its name from the biblical figure Lazarus due to its dramatic ulcerative appearance that resembles necrotizing skin diseases. It is most commonly seen in borderline forms of leprosy and is often associated with Type 1 lepra reaction, resulting from an exaggerated cell-mediated immune response to Mycobacterium leprae antigens. Because of its rarity and clinical overlap, Lazarine leprosy can easily be mistaken for other ulcerative dermatoses, including pyoderma gangrenosum, cutaneous tuberculosis, vasculitis, and necrotizing infections. We report the case of a middle-aged male who presented with painful ulcerative lesions over the elbow. Examination revealed erythematous plaques with deep necrotic ulcerations, crusting, and serous discharge. Histopathological analysis confirmed leprosy. The patient was started on World Health Organization (WHO) multidrug therapy (MDT) along with supportive wound management, leading to progressive healing, granulation tissue formation, epithelization, and eventual scar development. This case underscores the importance of recognizing Lazarine leprosy in clinical practice to prevent misdiagnosis and inappropriate therapy. Early initiation of MDT, supplemented with anti-inflammatory measures when indicated, can yield favorable outcomes. In endemic regions, clinicians should maintain a high degree of suspicion when evaluating atypical ulcerative lesions. Reporting such cases contributes to the limited global literature and enhances awareness among dermatologists and leprologists.***

Keywords: Lazarine leprosy, ulcerative variant, rare case report, dermatology, necrotic ulceration, lepra reaction

1. Introduction

Hansen's disease, more commonly known as leprosy, is a chronic infectious condition caused by *Mycobacterium leprae*, an obligate intracellular acid-fast bacillus with a predilection for the skin, mucous membranes, and peripheral nerves [1]. Despite remarkable advances in diagnosis and therapy, leprosy continues to be a public health challenge in many endemic countries, including India. The disease exhibits a wide clinical spectrum, ranging from tuberculoid leprosy at one pole—characterized by localized lesions, granulomatous inflammation, and robust cell-mediated immunity—to lepromatous leprosy at the opposite pole, which manifests with diffuse lesions, high bacillary load, and impaired immunity [2]. Between these poles lies the borderline spectrum, which demonstrates immunological instability and is prone to developing lepra reactions.

Lepra reactions represent acute immunological episodes that can occur before, during, or even after completion of treatment. Among these, Type 1 (reversal) reactions are more frequent in borderline cases and are mediated by delayed-type hypersensitivity against *M. leprae* antigens [3]. Clinically, Type 1 reactions often present as erythematous, swollen, and sometimes tender plaques arising from pre-existing lesions. In severe cases, neuritis may also accompany skin inflammation, leading to long-term disability if not promptly addressed [4].

Lazarine leprosy is considered a rare ulcerative variant of Type 1 lepra reaction. First described in the 19th century, it is characterized by spontaneous necrotic ulceration of pre-existing plaques due to an exaggerated immune response [5]. The term "Lazarine" is derived from the biblical figure Lazarus, reflecting the dramatic ulcerative changes resembling severe necrotizing dermatoses. This presentation is not only alarming to patients but also poses significant diagnostic challenges, as it can mimic other ulcerative dermatoses such as pyoderma gangrenosum, cutaneous tuberculosis, vasculitis, and necrotizing bacterial infections [3,5].

The clinical rarity of Lazarine leprosy, coupled with its potential for misdiagnosis, underscores the importance of detailed documentation and reporting. We present this case to enhance awareness among dermatologists and leprologists about this unusual but clinically significant manifestation. By highlighting the diagnostic dilemmas, therapeutic approach, and treatment outcomes, this report aims to contribute to the limited existing literature and promote early recognition of this rare entity.

2. Case Report

A 32-year-old male presented to the Dermatology Outpatient Department with complaints of painful ulcerative lesions over the right elbow for the past three weeks (fig.1and2). The patient had been initiated on multibacillary multidrug therapy (MB-MDT) two months earlier. According to the clinical history, the lesions initially appeared as erythematous plaques associated with mild swelling and burning sensation, which rapidly ulcerated within one week. There was no history of trauma, insect bite, irritant application, or systemic illness. Personal and family history were unremarkable, and no prior dermatological conditions were reported.

On clinical examination, two superficially ulcerated erythematous plaques were noted over the extensor surface of the right elbow, extending from the lower arm to the upper forearm. The plaques were well-defined with clean, indurated, and tender bases, surrounded by peripheral scaling. The right ulnar nerve was found to be thickened (grade 2), with associated grade 2 neuritis and evidence of ulnar claw deformity.

Figure 1: Extensive ulceration and necrosis involving the right arm, showing raw erythematous granulating tissue with

crust formation — consistent with active Lazarine leprosy lesions.

The surrounding skin shows erythema and partial epidermal loss, suggesting severe immune-mediated tissue destruction.

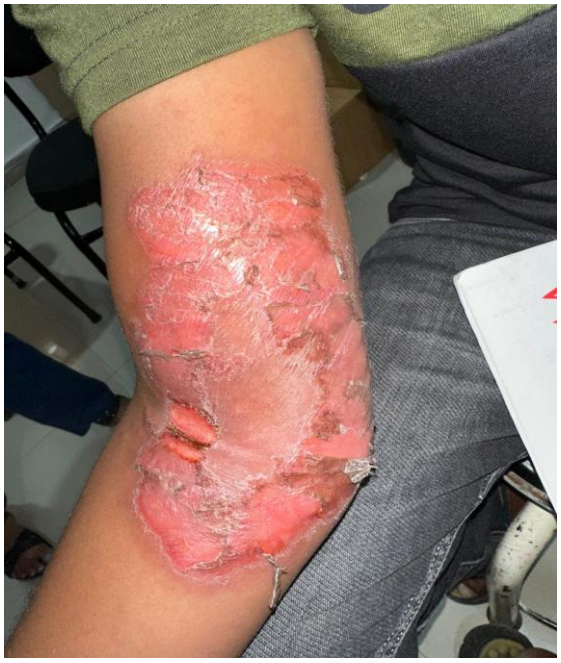

Figure 1

Figure 2: *A closer view of the same lesion showing multiple confluent ulcers with irregular margins and desquamation. The healing process appears in early granulation phase, typical of severe reactional episodes in multibacillary leprosy.*

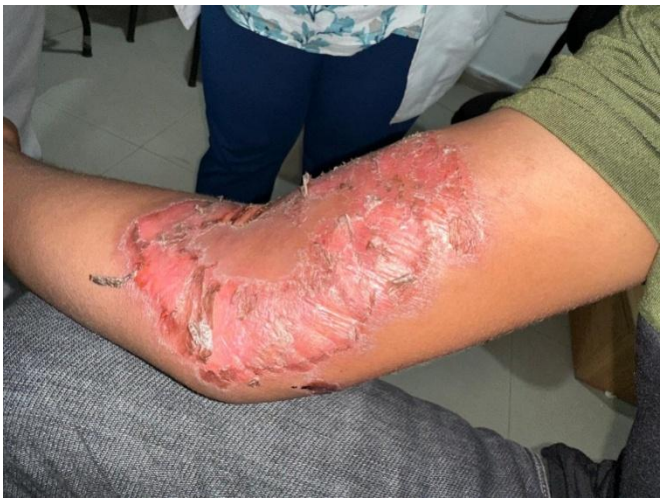

Figure 2

Figure 3: *Histopathological image showing epidermal ulceration with dense dermal inflammatory infiltrate composed of lymphocytes and foamy macrophages.*

The inset reveals granulomatous inflammation with fragmented bacilli, consistent with features of Lazarine leprosy.

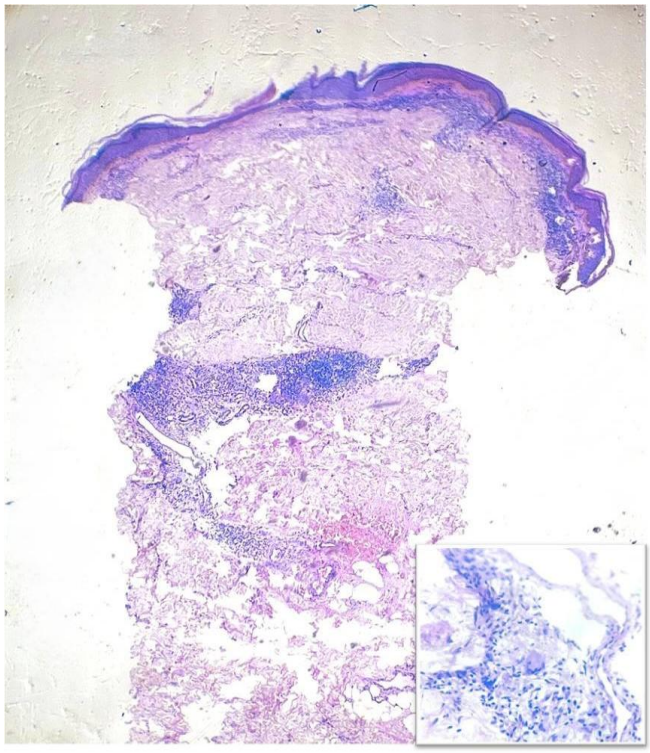

Figure 3

Figure 4*Post-treatment image showing significant epithelial regeneration with residual hyperpigmentation over the healed ulcer site. The absence of active erythema or discharge indicates good therapeutic response to multidrug and anti-reactional therapy.*

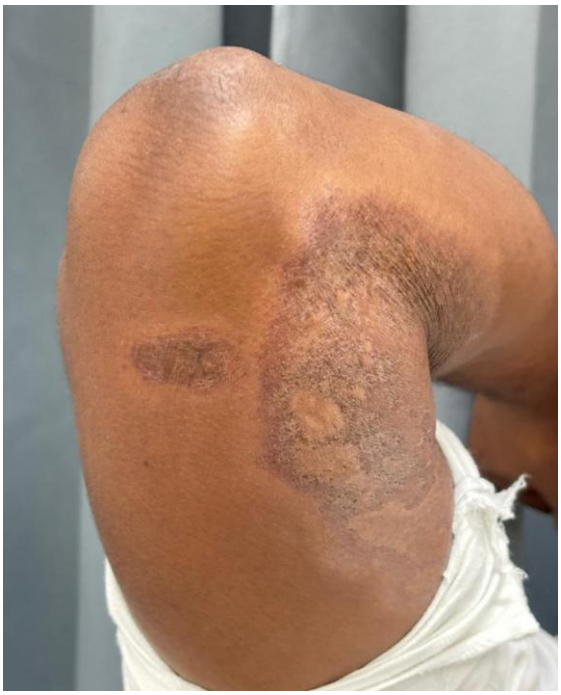

Figure 4

Figure 5: Healed lesion after complete treatment displaying patchy hypopigmentation and mild scarring.

The area exhibits restored skin integrity, highlighting favorable recovery following controlled immune reaction and wound care.

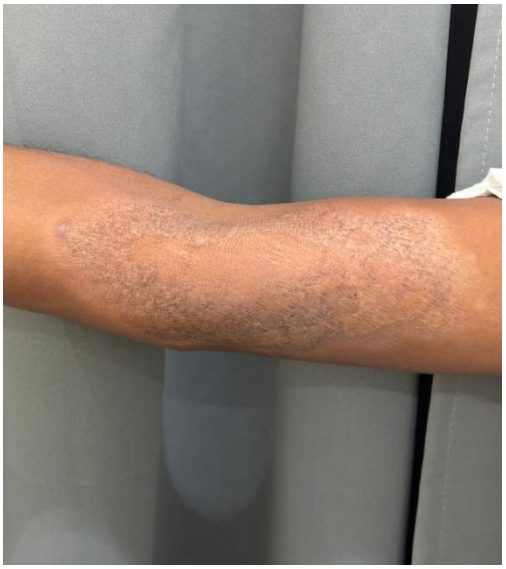

Figure 5

Slit-skin smear was positive (+1) for acid-fast bacilli (AFB) from both the ear lobes and lesion sites. Histopathological examination revealed dermal perivascular, periappendageal, and perineural epithelioid cell granulomas accompanied by edema and Langhans-type giant cells, consistent with borderline leprosy undergoing a Type 1 lepra reaction (fig.3). Routine hematological and biochemical investigations were within normal limits.

Therapeutically, the patient was managed with systemic corticosteroids—oral prednisolone at 1 mg/kg body weight, tapered gradually over eight weeks—while continuing MB-MDT as per WHO guidelines. Supportive daily wound care with saline dressings and topical antibiotic ointment was provided. The patient showed progressive clinical improvement with significant reduction in pain and inflammation. Ulcer healing was evident with the formation of healthy granulation tissue, followed by re-epithelialization.

At the 3-month follow-up, complete ulcer healing was observed, leaving behind post-inflammatory pigmentation and residual scarring (fig.4and5). The patient also reported improved functional mobility of the affected arm, although ulnar claw deformity persisted.

3. Discussion

Lazarine leprosy represents a rare, ulcerative manifestation of Hansen's disease, characterized by spontaneous necrosis and ulceration of pre-existing lesions [3]. It is considered an exaggerated Type 1 lepra reaction, most frequently encountered in borderline forms of the disease [1]. The underlying immunopathogenesis involves a heightened delayed-type hypersensitivity response to *Mycobacterium leprae* antigens, which provokes intense dermal inflammation, vascular compromise, and eventual tissue necrosis [2].

Clinically, Lazarine leprosy differs strikingly from classical leprosy lesions. Conventional leprosy lesions are often hypesthetic, dry, and non-ulcerative, whereas Lazarine lesions are painful, erythematous, and ulcerated [5]. This paradoxical presentation frequently leads to diagnostic dilemmas, as the clinical picture may mimic several other ulcerative dermatoses, including pyoderma gangrenosum, necrotizing fasciitis, vasculitis, deep fungal infections, or cutaneous tuberculosis. In such scenarios, confirmatory investigations such as slit-skin smear and histopathology remain indispensable [4].

In the present case, the patient developed painful ulcerative plaques over the right elbow within weeks of initiating MB-MDT. The positive slit-skin smear and histopathological findings of dermal epithelioid granulomas with Langhans-type giant cells confirmed the diagnosis of borderline leprosy with a Type 1 reaction. The continuation of MB-MDT was emphasized, as treatment discontinuation during reactional episodes is a common clinical challenge, often leading to relapse or worsening disease [4]. Furthermore, management of neuritis and nerve function impairment is essential to minimize long-term disability, as highlighted in this patient who already exhibited ulnar nerve involvement [2].

The treatment approach combines WHO-recommended MB-MDT with systemic corticosteroids for controlling the acute inflammatory reaction. In our case, a tapering course of prednisolone along with supportive wound care led to significant clinical improvement, progressive ulcer healing, and eventual re-epithelialization with scarring. The prognosis in Lazarine leprosy is generally favorable when recognized early and managed appropriately.

This case emphasizes two critical clinical lessons. First, ulcerative variants of leprosy must be considered in the differential diagnosis of atypical, necrotic skin ulcers in endemic regions. Second, prompt diagnosis and integrated management—targeting both the infectious process and the immunological reaction—are vital to prevent morbidity.

To conclude, Lazarine leprosy remains an uncommon but clinically significant entity in the leprosy spectrum. Reporting such cases contributes to the limited literature, improves clinical awareness, and underscores the need for vigilance among dermatologists and leprologists, especially in endemic regions [3,5].

4. Conclusion

Lazarine leprosy is a rare and severe ulcerative manifestation of Hansen's disease that closely mimics other necrotizing dermatoses, often posing significant diagnostic challenges. Early clinical suspicion, supported by histopathology and slit-skin smear, is essential to avoid misdiagnosis and inappropriate treatment. Our case highlights that prompt initiation of WHO-recommended multidrug therapy, combined with systemic corticosteroids to control the lepra reaction and supportive wound care, can lead to favorable outcomes.

Documentation and reporting of such cases are important to expand the limited existing literature, enhance clinical awareness, and guide dermatologists and leprologists in timely recognition and management of this unusual but clinically significant presentation.

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