

Misclassification of Pure Neuritic Leprosy: Ruling out TB-Leprosy Coinfection in Cases Presenting with Caseating Lymphadenitis

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Received: 07.07.2025

Accepted: 24.09.2025

We critically evaluate the case report by Luthra et al, titled "Pure Neuritic Leprosy Primarily Presenting with Lymphadenopathy in Complex Lepra Reaction", highlighting multiple clinical and conceptual inconsistencies. The term "complex lepra reaction" used in the title lacks recognition in standard leprosy literature. The diagnosis of "borderline tuberculoid" leprosy was based solely on nerve biopsy, which is inappropriate since this classification requires evaluation of skin lesions, not just nerve histology. Furthermore, the presence of recurrent, widespread urticarial lesions contradicts the diagnosis of pure neuritic leprosy, especially as skin histology confirmed borderline tuberculoid leprosy. The patient's lymph node biopsy revealed caseating granulomas, suggesting tuberculous lymphadenitis rather than leprosy, and investigations to rule out tuberculosis were insufficient. Treatment choices also raise concerns: use of paediatric MDT for an adult, intravenous dexamethasone without justification, and the addition of thalidomide and colchicine—typically reserved for type 2 reactions—despite the diagnosis of type 1 reaction. Additionally, the rationale for attributing fever and lymphadenopathy solely to neuritic leprosy is unclear. These issues suggest diagnostic misclassification, therapeutic missteps, and a lack of adherence to established guidelines. We emphasize the need for comprehensive evaluation and clarity in reporting to avoid confusion and ensure appropriate management of atypical leprosy presentations.

Keywords: Leprosy, Pure Neuritic, Lymphadenopathy, Tuberculosis

Dear Editor,

All cases of neuritic leprosy- it being uncommon, draw interest more so when the clinical presentation is reported to be atypical as in the case report by Luthra et al titled "Pure Neuritic Leprosy Primarily Presenting with

Lymphadenopathy in Complex Lepra Reaction" (Luthra et al 2025). The authors report a case of 20-year-old female presenting with bilateral painful and tender inguinal lymphadenopathy and fever along with shooting pain along her right forearm of 2 months duration. We wish to highlight

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several conceptual and clinical inconsistencies in the workup, and interpretations, particularly regarding the diagnostic misclassification as pure neuritic leprosy (PNL), its management and the need to consider alternative diagnoses such as coexistent leprosy and tuberculosis.

1. The title of the case report mentions the term “complex lepra reaction”. However, no such term has been described in the literature pertaining to leprosy reactions.
2. The authors mention that the nerve biopsy led them to the diagnosis of “borderline tuberculoid” leprosy. While nerve biopsy can be used as an important additional aid in specific situations, classification of spectrum of leprosy based solely on nerve histology is not the practice. “Borderline tuberculoid” is a diagnosis based on morphology, type and distribution of skin lesions- and does not refer to nerve involvement or its histology. This is a factual error adding to the confusion. Sampling the effected nerve (ulnar nerve) and not an uninvolved nerve (radial cutaneous nerve) would have given a better picture.
3. The lymph node biopsy revealed caseating granulomas, a hallmark of tuberculous lymphadenitis, and the presence of Langhans giant cells and necrosis makes leprosy-related lymphadenopathy unlikely. Though TB PCR was negative, this does not exclude TB definitively given its variable sensitivity. It is also unclear whether a Mantoux test or interferon-gamma release assay (IGRA) was performed to investigate the possibility of disseminated or coexistent tuberculosis, which should have been considered in light of the caseating granulomatous lymphadenitis. It is a likely possibility in our country endemic for both the diseases.
4. The patient reported development of widespread transient urticarial wheals which were initially ascribed to a drug reaction- Which drug rash would be recurrent in a matter of days? Wide spread evanescent lesions are a feature of type 2 reaction; however, the description of the lesions is not very clear. In type 1 reaction the existing skin lesions become inflamed and infiltrated and few new lesions may appear mostly in the vicinity of old lesions. Interestingly, the histopathology of the skin lesions was consistent with borderline tuberculoid leprosy causing still more confusion, innumerable urticarial lesions- with BT histology where does it fit? The presence of skin lesions with infiltrate however, transient straight way negates the diagnosis of neuritic leprosy (IAL 1982).
5. The patient was prescribed WHO “child” MB-MDT pack. There is no justification given why an adult female patient was given the child MB MDT pack.
6. The patient was administered injection Dexamethasone 4mg twice daily – without any specific reason for the selection of I/V route. The standard dose schedule as recommended by the WHO for neuritis is 0.5 to 1 mg/kg of prednisolone tapered gradually given over a period of 20 weeks (WHO 2020). Lack of response is obviously because of the short duration (exact duration not given) of steroids, otherwise steroids are the best drug for acute neuritis. “Given the transient nature of the urticarial wheals, we added thalidomide (50mg twice daily) and colchicine (0.5mg twice daily) to the treatment regimen” - and the patient seemingly responded? This is another important issue related to therapy for reaction- thalidomide and colchicine, both

the drugs are for type 2 reaction and not for type 1 reaction as the diagnosis was made.

7. The lymphadenopathy has been considered to be due to leprosy only - then it is also essential to know that this type of bilateral lymphadenopathy occurs only in multibacillary disease- neither in pure neuritic leprosy nor in type 1 reaction. Similarly, fever is also a constituent of type 2 reaction. What made the authors so sure of it being due to neuritic/BT leprosy/type 1 reaction?
8. The statement that number of nerve trunk involvement determines the type of MDT-PB or MB is not true. All cases of neuritic leprosy irrespective of the number of nerves involved are to be treated with MB-MDT (WHO 2018).
9. The statement "New skin lesions (morphology and distribution- not mentioned) can appear during type 1 (reversal) reactions in leprosy patients including those with pure neuritic leprosy with some cases first observing lesions during these reactions) is the most intriguing.

There is a distinct possibility that this patient had minimally infiltrated indistinct lesions all over the body- which were not noticed and this led to the whole confusion about diagnosis and management. But this alone will not justify making a wrong diagnosis, improbable interpretation

of the clinical findings and inappropriate drugs given in inadequate doses.

In summary, the diagnosis of pure neuritic leprosy is not supported in this case given the repeated appearance of skin lesions mostly evanescent, with histopathology suggestive of BT and widespread symmetrical granulomatous lymphadenitis with caseous necrosis. We urge caution in labelling such a presentation as PNL and emphasize the importance of a comprehensive differential workup and strict adherence to clinical definitions to save the reader from confusion.

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How to cite this article : Herlekar R, Sharma A, Narang T et al (2026). Misclassification of Pure Neuritic Leprosy: Ruling out TB-Leprosy Coinfection in Cases Presenting with Caseating Lymphadenitis. *Indian J Lepr*. **98**: 103-105.

Dr P Luthra, lead author of article by Luthra et al discussed in this letter, was offered opportunity to respond but she did not - Editor