

Case Report

Double trouble-pulmonary tuberculosis in a patient of lepromatous leprosy

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ABSTRACT

The association of two of the oldest diseases of mankind, leprosy and tuberculosis (TB) has been uncommonly reported within the literature. Herein, we report a known case of leprosy subsequently related to sputum positive TB complicated by a type-II lepra reaction. there's a requirement for screening of patients for TB in patients diagnosed with leprosy to stop the accidental misuse of a crucial drug, rifampicin to stop the likelihood of drug-resistant TB.

Keywords: Coexistence, Leprosy, TB

INTRODUCTION

TB and leprosy are endemic in India but co-existence of both disease is a uncommon entity.¹ The uncommon association of both TB and leprosy is based on the transmission dynamics of both infections, higher reproductive rate of tubercle bacilli when compared to lepra bacilli and a degree of cross-immunity within an individual, which does not allow both infections to occur at the same point of time.² Here we present a 17 year old boy diagnosed with lepromatous leprosy started on MB-MDT. He developed type 2 lepra reaction for which treatment was started. He subsequently developed severe cough with expectoration which on further evaluation revealed pulmonary TB.

CASE REPORT

A 17-year-old male came with complaints of painful erythematous nodules over B/L forearms, legs and face for 4 months with evening rise of temperature. Nodules were evanescent and transient in nature suggestive of type 2 lepra reaction. 1 year ago, he gives h/o multiple ill-defined hypopigmented anesthetic patches over trunk

which was B/L symmetrical in nature. He was diagnosed as case of lepromatous leprosy and was started on MB-MDT 4 months back. H/o cough with expectoration for the past 4 months. Patient gives H/o intermittent epistaxis. H/o nasal stuffiness. H/o redness of eyes. H/o infiltration of ears. No h/o loss of sweating, weakness. No h/o difficulty in carrying out day to day activities. He was started on oral steroids for his ENL reaction. Upon initiation of oral steroids patient reported exacerbation of his existing cough with expectoration. His sputum was sent for CBNAAT testing and it yielded positive results for TB. Chest X-ray showed features suggestive of pulmonary TB.

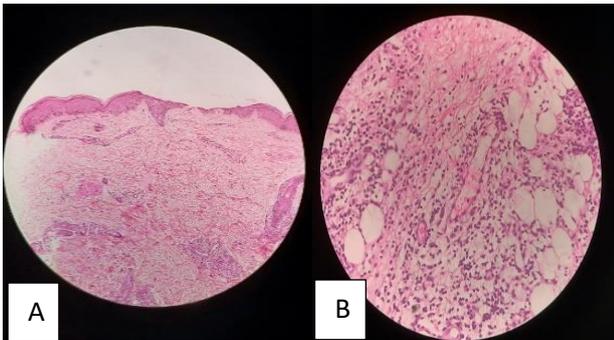


Figure 1: Erythematous nodules in his forearm.

Figure 1 shows tender nodules in his forearm Figure 2 shows infiltrated ears. The microscopic examination of specimen under low power view Figure 3A showed epidermal atrophy with Grenz zone Figure 3B shows both septal and lobular panniculitis with vasculitis, figure 4 chest X-ray shows cystic cavity along with fibrotic strands in his right upper zone.



Figure 2: Infiltrated ear by lepra bacilli.



**Figure 3: A Epidermal atrophy with Grenz zone seen.
B: Septal and lobular panniculitis with vasculitis.**

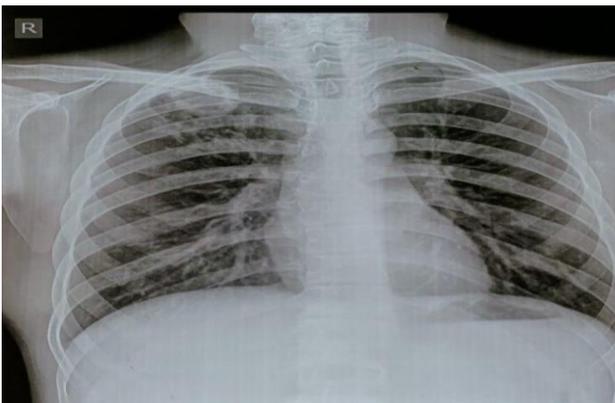


Figure 4: Cystic cavities with fibrotic strands seen in right upper zone.

DISCUSSION

Concomitant pulmonary TB and leprosy case is uncommon, even in countries like India where both mycobacterial infections are endemic. This is because the

presence of a bacillus Calmette-Guerin (BCG) vaccination scar offered 98% protection against MBL.³ On review of data from three leprosy referral centers in Hyderabad, India, from 2000 to 2013, three cases of this coinfection were identified.⁴ Kumar et al studied 117 patients of leprosy for evidence of concomitant TB. Nine patients (7.7%) showed evidence of active TB, bacteriologically and radiologically. The interaction between leprosy and TB and their repercussions on the incidence of each other still remain a matter of debate.⁴ Great attention about TB and leprosy coinfection was carried out by Chaussinand in 1948 and concluded that the prevalence of leprosy was inversely related with the prevalence of TB. In some leprosy communities, TB appears to be more common. TB was found to occur throughout leprosy spectrum.⁵ This may be because of a small group of people who are unable to defend both organisms. The principal method of transmission is through aerosol spread. Incubation period for leprosy varies from 6 months to 40 years or longer, while for TB, it is only 4 weeks. The interaction between leprosy and TB and their repercussions on the incidence of each other still remain a matter of debate.⁶ This is evidenced by protection offered by BCG vaccination. Development of pulmonary TB after taking corticosteroids for reactions in leprosy has been re-corded. In case of leprosy, corticosteroids are used primarily in the treatment of type I and type II reactions and silent neuropathy. Rawson et al reported development of pulmonary TB after corticosteroid intake in two cases of leprosy.⁴ Prasad et al reported also concomitant pulmonary TB and borderline leprosy with type II lepra reaction in a single patient who received corticosteroid for more than 3 months.⁷ Though TB might occur in LL, it has been seen in all types of leprosy. An inherent impaired immunity has been postulated against both mycobacterial organisms. Dual infections are associated with high mortality and morbidity.

CONCLUSION

Concomitant pulmonary TB and leprosy case is uncommon. Dual infections are associated with high mortality and morbidity so we should act promptly to bring down the risk. There is increased risk of pulmonary TB in patients with leprosy treated with glucocorticoids. Therefore, it becomes important for clinicians treating leprosy complications with steroids to have a high degree of suspicion to diagnose pulmonary TB.

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