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Case Report

Annular vesiculobullous eruptions in type 2 reaction in borderline lepromatous leprosy : a case report

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An untreated case of BL presented with clinical features of type 2 reaction (T2R) confirmed by histopathology. The case was a 18-year-old female with borderline lepromatous leprosy who developed annular vesiculobullous eruptions over some of the pre-existing plaques on arms and upper back along with fever and severe neuritis after a short course of ofloxacin intake prescribed for urinary tract infection. In addition to the above lesions, some of the existing lesions showed acute exacerbation characterized by erythema, oedema, tenderness and vesiculobullous eruption. This can be considered as an example of leprous exacerbation as described in older literature. T2Rs are common in lepromatous leprosy and not so uncommonly are observed in borderline lepromatous leprosy. The vesiculobullous and crusted lesions developing over the existing borderline plaques, some of them presenting in an annular pattern in T2R in the form of leprous exacerbation, have been reported rarely in the literature.

Key words : T2R, Leprous exacerbation, Bullous ENL, MDT

Introduction

Type 2 reactions (T2Rs) are less frequently observed in borderline lepromatous (BL) leprosy. Leprous exacerbation, an atypical form of T2Rs, is described in the older literature (Dharmendra 1978) as an exacerbation of the existing skin lesions (EEL) of lepromatous leprosy with vascular engorgement not only in the skin lesion but also in the mucous membrane lesions. In severe cases, there is sloughing of the lesions and ulcers are formed when the slough separates. However, bullous lesions presenting in annular pattern over the existing borederline lesion have been rarely reported in the literature in T2R. We are reporting here one such case.

Case Report

A 18 year old female, resident of Delhi, presented with complaints of hypopigmented patches over trunk,upper and lower limbs for last 1 year, fever for last 15 days and fluid filled, crusted lesions over face, upper limbs and lower limbs for last 15 days. She also had bone pain in both legs for last 10 days. she did not seek any medical attention for asymptomatic hypopigmented patches till fifteen days back when she suddenly developed redness, pain and blistering over few of the patches predominantly over face and upper limbs with moderate grade continuous fever and non migratory bone and joint pains. Few days prior to the onset of this episode, she had taken a course

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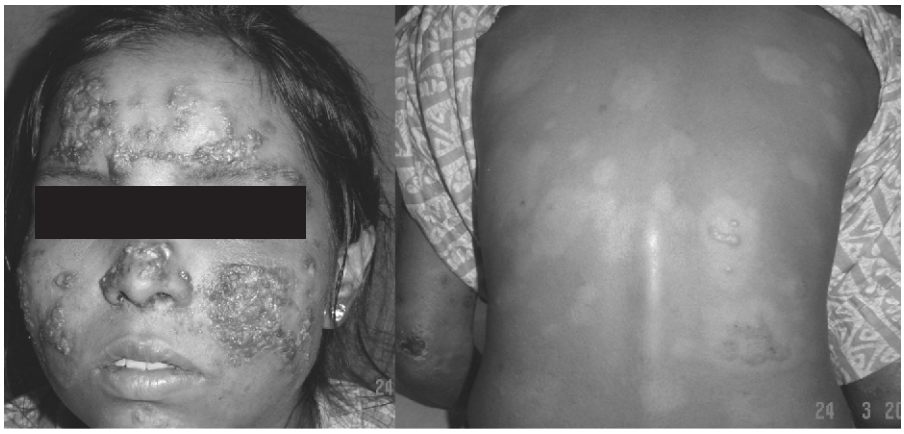
of oral ofloxacin for her urinary tract infection. General physical examination revealed moderate fever (101°F) and bony tenderness of the long bones of upper and lower limbs. Right ulnar nerve at elbow joint was uniformly thickened and severely tender. On cutaneous examination, patient had multiple well defined, erythematous, infiltrated, tender, hypoaesthetic plaques with sharp borders and topped by vesiculobullous lesion, ulcerations and crusting over some of the existing plaques on arm and face (Figure 1).

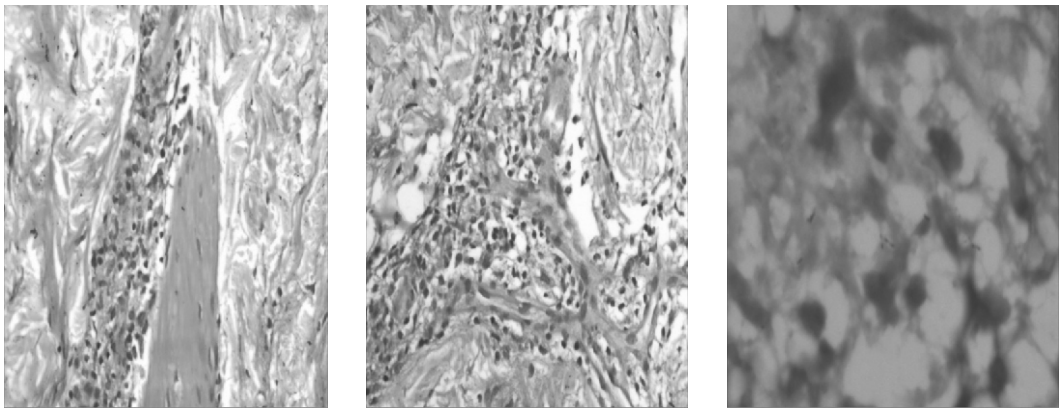
Over few of these plaques on the arm and upper back, these bullous lesions were present in annular pattern (Figure 2). The slit-skin smear examination from both ear lobes, eyebrows and two plaques showed 4+ BI on average. Skin biopsy from the reactive lesion (Figure 3a and 3b) showed foci of neutrophils superimposed on multibacillary leprosy suggestive of T2R. There was superficial and deep dermal infiltrate of foamy histiocytes and few lymphocytes around blood vessel, nerves and sweat glands. Dermal oedema was also noted. Acid fast bacilli were seen on Fite staining (Figure 3c).

Histopathology from one of the non reactive lesion was consistent with borderline



1 2

Figure 1 and 2 : Ulcerated and crusted lesion on face and annular bullous lesion on the back.



a b c

Figure 3 : Skin biopsy from the reactive lesion (a and b). Acid fast bacilli in Fite-Faraco staining (c)

lepromatous leprosy. Urine examination at the time of admission revealed proteinuria and RBC's 10-15 per hpf. TLC was 15,000/Cmm and DLC was suggestive of relative neutrophilia.

The patient was put on multibacillary MDT alongwith oral prednisolone 60 mg/day in March 2008, at the time of admission after baseline investigations. She responded very well to the treatment with resolution of fever and vesicobullous lesions within two weeks. Neuritis improved and the lesions became flattened, redness subsided and blisters started healing up. The dose of prednisolone was tapered by 5 mg every 2 weeks after stabilisation of signs and symptoms. At 30 mg dose, she developed second episode of classical ENL reactions in the form of crops of evanescent tender nodules with mild fever but not associated with the clinical neuritis. Now the clinical features were consistent with moderate type 2 reaction. The dose of prednisolone was again increased to 60 mg and the ENL was controlled. Tapering of prednisolone dose was done very slowly by 5 mg and then 2.5 mg every 2 weeks when she had another episode of ENL crops with fever and right ulnar nerve neuritis. She was restarted on 60 mg prednisolone with paracetamol 500 mg twice a day for 5 days. In August 2009, she got a fresh episode of ENL reaction while she was on a daily maintainance dose of 5 mg prednisolone alongwith MB-MDT. At this stage, BI was 3+. We have increased the dose of clofazimine to 300 mg OD alongwith usual MDT and 60 mg dose of prednisolone.

Discussion

The term leprous exacerbation has been used in older literature as one of the clinical manifestation of reactions in lepromatous leprosy. T2R is a type 3 hypersensitivity reaction which occurs exclusively in lepromatous and occasionally in borderline lepromatous leprosy. It usually occurs late during the treatment when skin lesions are quiescent and most of the bacilli are granular but in some patients, it may be the initial clinical presentation. Lesions appear in crops of tender, evanescent nodules with or without constitutional symptoms, commonly over face, arms, and thighs. In severe T2R, ENL lesions may become vesicular or bullous and breakdown to form necrotic ulcers called as erythema nodosum necroticans. Classical histopathological features of active ENL lesions are increased vascularity with many dilated capillaries in the upper dermis and in the lower dermis, an intense infiltration with neutrophils around blood vessels, invading their walls. There is oedema of the endothelium of veins, arterioles and small arteries. In case of erythema nodosum necroticans, there is obliterative angitis and endarteritis. Fite-Faraco stain may reveals few or many bacilli which are mostly fragmented and granular(Jopling and Dougall 1995).

A review of literature shows few reports of bullous ENL. The clinical features were of large pustular and haemorrhagic bullae (Couppié et al 1998, Sethuraman et al 2002) often showed central necrosis and ulcer formation (Barman et al 2005, Rai and Balachandran 2006). The mechanism of bullae formation has been described sometimes as due to severe dermal oedema or leucocytoclastic vasculitis. One case of annular bullous ENL has been recently described by Kamat and Shukla (2007) in pregnancy which was controlled by treating the urinary tract infection. In most cases, lesions were recurrent and responded better with thalidomide than corticosteroid (Couppié et al 1998, Rijal et al 2004).

In this female patient, some of the classical hypopigmented well defined normoaesthetic macules of borderline leprosy over trunk were unchanged morphologically and some developed annular bullous lesion over the pre-existing macules with tenderness and erythema. This pattern can be considered as leprous exacerbation reaction. However, the atypical presentation as bullous lesion presented as an annular pattern over many tender, erythematous

plaques is extremely uncommon and has been reported only once recently in 2007 by Kamat and Shukla which was controlled by treating urinary tract infection with inj. ceftriaxone, tab. fluconazole, and cap. clofazimine 300 mg OD without requiring systemic corticosteroids. In our case, reaction was probably precipitated by ofloxacin, a known bactericidal drug for *M. leprae*, prescribed for urinary tract infection.

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