Lupus vulgaris in a mother and child

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DESCRIPTION

A 32-year-old woman presented to dermatology OPD with asymptomatic reddish lesions over left cheek and lower lip. She brought her 6-year old boy with similar lesions between left eye and nose. The lesions were present for 8 months in both mother and son and were increasing in size. There was no history of preceding trauma to the lesions. There were no systemic complaints in both mother and child. On cutaneous examination of the mother, there was a single well-defined 1×1 cm, erythematous, soft and non-tender nodule, present over left cheek along with an ill-defined, erythematous, oedematous, scaly plaque over lower lip ([figure 1A,B](#)). The boy had two, well-defined, erythematous, indurated plaques, one with size 2.5×2 cm, with slight scaling and crusting, present on left root of nose with encroachment towards the medial canthus and other of size 1×1 cm, over the left mid-mandible ([figure 1C,D](#)). There was no sensory loss over the lesion. On the basis of clinical history and examination differential diagnosis of borderline tuberculoid Hansen's disease, lupus vulgaris (LV), cutaneous leishmaniasis and sarcoidosis

were kept. Histopathological examination of skin biopsy specimen from both patient revealed epidermal atrophy with lichenoid damage, dermis showed top heavy, granulomatous infiltrate with multiple well-formed epithelioid granulomas without central caseation necrosis ([figure 2A](#)) and a few multinucleate Langhans giant cells ([figure 2B](#)) suggestive of lichenoid granulomatous reaction pattern compatible with diagnosis of LV. Stain for acid-fast bacillus was negative. Mantoux test of mother showed induration of 20 cm. The patients were counselled and antitubercular treatment (ATT) was started for both of them which resulted in resolution of the lesions in next 3 months.

Cutaneous tuberculosis (TB) constitutes around 1.5% cases of extra-pulmonary TB.¹ *Mycobacterium tuberculosis*, *Mycobacterium bovis* and attenuated bacille Calmette-Guerin organism can cause all forms of cutaneous TB.² LV is a chronic, progressive, post-primary, paucibacillary form of cutaneous TB, occurring in a person with moderate or high degree of immunity.³ It arises either endogenously from an underlying focus of TB or from exogenous inoculation.⁴ In India, buttocks and extremities are commonly affected unlike facial involvement in the West.⁵ It starts as brownish to red, soft, solitary plaque, having centrifugal growth. Diascopy reveals apple jelly nodules. Various clinical forms include papular, nodular, plaque, ulcerative, vegetative, hypertrophic, atrophic, tumour like and mutilating type.¹³ Dermoscopy of LV reveals linear telangiectasia on a yellowish golden background with whitish reticular streaks.⁶ The tuberculin skin test is usually strongly positive as seen in our case. Bacterial culture results may be negative.² Histopathology as described in present case is confirmative.

The most likely differentials are leprosy and sarcoidosis. The nodules of leprosy are firmer, and the nodules of sarcoidosis resemble grains of sand rather than 'apple jelly'. Complications include scarring, contractures and tissue destruction. In about 8% of patients, squamous cell and basal cell carcinomas or sarcomas can occur insidiously.³

Treatment involves standard short-course chemotherapy, four ATT drugs for the first 2 months (isoniazid, rifampicin and pyrazinamide), followed by isoniazid and rifampicin for 4 months.⁷

According to a study by Pai *et al*, there were 14 cases of LV collected over 5 years in a tertiary healthcare centre in India and only 1 case had positive family history.⁸ Our case was unique in that two members of a family (mother and child) had LV simultaneously, which is quite interesting and rare.

Figure 1 (A, B) Single, well-defined, 1×1 cm, erythematous, soft, non-tender nodule over left cheek along with ill-defined, erythematous, oedematous, scaly plaque over lower lip, in the mother. (C, D) Well-defined, erythematous, indurated plaques, one with size 2.5×2 cm, with slight scaling and crusting, present on left root of nose with encroachment towards the medial canthus and other of size 1×1 cm, over the left mid-mandible, in the son.

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Figure 2 (A) H&E, 10×: Epidermal atrophy with lichenoid damage, dermis showing top heavy confluent and bottom discrete granulomatous infiltrate with multiple well-formed epithelioid granulomas without central caseation necrosis. (B) H&E, 40×: multinucleate Langhans giant cells with lichenoid damage of overlying epidermis.

Learning points

- ▶ A high index of suspicion with histopathological examination helps in arriving at a diagnosis of lupus vulgaris.
- ▶ Family history of lupus vulgaris may be present in high endemic area.
- ▶ Treatment is with standard antitubercular treatment.

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