

Case Report

Lichen Scrofulosorum: An Important Diagnostic Marker of Underlying Tuberculosis

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Abstract

Lichen scrofulosorum (LS) is a rare tuberculid seen in children and young adults with underlying tuberculosis, which may be difficult to diagnose otherwise. Present communication describes two cases presenting with characteristic skin lesions of LS and later diagnosed as intracranial tuberculosis and pulmonary tuberculosis respectively. In both the cases the skin lesions served as an important diagnostic marker for tuberculosis. Skin lesions disappeared completely within four weeks of initiation of ATT.

ABBREVIATIONS

LS: Lichen Scrofulosorum; ATT: Anti Tubercular Therapy; TB: Tuberculosis; AFB: Acid Fast Bacilli

INTRODUCTION

Tuberculosis (TB) remains a major public health problem in India with varying pulmonary and extrapulmonary manifestations. Cutaneous TB accounts for 1-2% cases of extrapulmonary TB in children [1]. Scrofuloderma and lupus vulgaris are two most common forms of cutaneous TB [2]. Tuberculids are rare cutaneous manifestations of tuberculosis due to delayed type of hypersensitivity reaction to tubercular bacilli and characteristically do not contain acid fast bacilli (AFB). Lichen scrofulosorum is a rare form of true tuberculid, often serves as an important marker of occult tuberculosis in children [3]. Recently, cases of LS have been reported from India in dermatology literature [4]. However, there is paucity of similar type of reports in pediatrics literature. Present communication describes two cases presenting with characteristic skin lesions, who were later diagnosed with intracranial TB and pulmonary TB respectively. In both cases, the characteristic skin lesions served as an important diagnostic marker for underlying tuberculosis and prompted us to look for other evidence of tuberculosis. Skin lesions resolved completely within four weeks of initiation of ATT.

CASE PRESENTATION

Case 1

A seven year old female child was brought to the emergency with history of focal movement of left upper and lower limbs for last 30 minutes with associated loss of consciousness. The episode of seizure was aborted with injection diazepam and she regained consciousness in about thirty minutes with no post

ictal weakness or disorientation. There was no prior history of fever, seizures or head trauma. There was history of contact with paternal uncle with sputum positive pulmonary tuberculosis.

On physical examination, height (112cm) and weight (15 kg) were less than third percentile for her age (CDC growth charts). BCG scar was present. There were multiple discrete as well as grouped skin coloured papules over the trunk (Figure 1a). Rest of the general physical and systemic examination was unremarkable. Lesions were suspected as LS and a skin biopsy was performed.



Figure 1 a) Multiple discrete as well as grouped skin coloured follicular papules over chest and axila. b) CECT brain shows multiple conglomerated ring enhancing lesions in bilateral frontoparietal regions in parafalcine location with mild to moderate perilesional edema suggestive of tuberculomas.

Investigations revealed anemia with normal leukocyte and platelet count and reactive Mantoux test (30×20mm). Two samples of gastric aspirate for AFB were negative. Renal and liver function tests and cerebrospinal fluid examination was normal. Contrast enhanced computed tomography (CECT) brain showed conglomerate ring enhancing lesions in right fronto-temporal and left parietal lobe suggestive of tuberculoma (Figure 1b). Skin biopsy revealed epitheloid cell granuloma with Langhans giant cells in papillary dermis; stain for AFB was negative. Biopsy findings were consistent with the diagnosis of lichen scrofulosorum.

Diagnosis of intracranial tuberculoma with lichen scrofulosorum was made and the child was started on four drugs ATT with steroid. Carbamazepine was added to control seizures. One month after initiation of therapy, skin lesions completely resolved without scarring.

Case 2

An eleven year old girl, presented to Out Patient Department with non itchy skin rash on trunk and legs for the past one month. There was history of fever and cough for last fifteen days. No history of anorexia or significant weight loss was present. However, her mother had completed ATT for pulmonary TB six months back from DOTS center. Child had been completely immunized for age and BCG scar was present.

On examination, there were multiple grouped hyper pigmented papular skin lesions over trunk and extensor aspects of lower limbs associated with scaling. General physical and systemic examination was normal. A diagnosis of LS was suspected and skin biopsy was performed for histopathological confirmation.

Laboratory reports revealed anemia; Mantoux test was reactive (18×15mm). Chest X ray was suggestive of mediastinal lymphadenopathy. Skin biopsy confirmed the diagnosis of LS and

the child was started on 4 drugs ATT from DOTS centre. After four weeks of ATT, the girl was asymptomatic and skin lesions disappeared completely.

DISCUSSION

Lichen scrofulosorum is a rare tuberculid, characterized by skin coloured to hyperpigmented perifollicular lichenoid eruptions over the trunk, axilla and extremities. It is more commonly seen in children with moderate to high immunity with underlying TB and the lesions characteristically do not harbor the tubercular bacilli. A high index of clinical suspicion is required to diagnose LS.

In a study by Singal et al, LS was diagnosed in 7.6% cases of cutaneous TB with majority (84%) of cases being less than 15 years of age. Systemic focus of TB was seen in majority (72%) of cases with maximum percentage (32%) of cases having evidence of lymph node TB, followed by pulmonary and intracranial TB [5]. Both of our cases were less than twelve years of age, first case having evidence of intracranial TB and the other with pulmonary TB.

Diagnosis of LS is sometimes delayed because of similarity to other skin lesions like lichen planus, lichen nitidus and psoriasis [6,7]. However, presence of characteristic perifollicular granuloma in absence of tubercle bacilli should point towards diagnosis of LS. Resolution of skin lesions with ATT also confirms the diagnosis of LS.

To conclude, presence of LS should prompt to look for systemic evidence of tuberculosis and therapy with ATT should be started without any delay.

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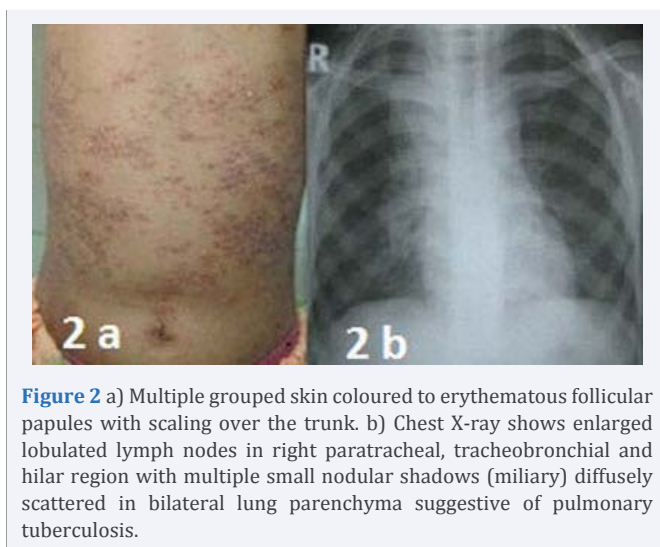


Figure 2 a) Multiple grouped skin coloured to erythematous follicular papules with scaling over the trunk. b) Chest X-ray shows enlarged lobulated lymph nodes in right paratracheal, tracheobronchial and hilar region with multiple small nodular shadows (miliary) diffusely scattered in bilateral lung parenchyma suggestive of pulmonary tuberculosis.

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