

CASE REPORT

MANTOUX SKIN TEST INDUCED LICHEN SCROFULOSORUM

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ABSTRACT: Lichen scrofulosorum, also known as "tuberculosis cutis lichenoides," is a rare tuberculid that presents as a lichenoid eruption of minute papules in children and adolescents with tuberculosis. The lesions are usually asymptomatic, closely grouped, skin-colored to reddish-brown papules, often perifollicular, and are mainly found on the abdomen, chest, back, and proximal parts of the limbs. The eruption is usually associated with a strongly positive tuberculin reaction. We report a case of lichen scrofulosorum in an adult male following Mantoux tuberculin skin test.

KEYWORDS: Lichen Scrofulosorum, Mantoux test, Tuberculin Skin Test.

INTRODUCTION: Lichen scrofulosorum (LS) also known as tuberculosis (TB) cutis lichenoides, is a rare tuberculid that presents as a lichenoid eruption of minute papules in children and adolescents with TB. The lesions are usually asymptomatic, closely grouped, skin-colored to reddish-brown papules, often perifollicular, and are mainly found on the abdomen, chest, back, and proximal parts of the limbs. The eruption is usually associated with a strongly positive tuberculin reaction.^[1]

A 33 year old male patient came with the complaints of small raised skin-colored lesions over the left forearm and back for the past one week. No history of itching associated with it. There was no history of fever, cough, anorexia, weight loss or any other systemic symptoms. No history of exposure to the risk of acquiring Sexually Transmitted Infections. He also gave history of a strong positive reaction of Mantoux test which he underwent one month back as advised by a chest physician.

The raised skin-colored lesions initially started in the left forearm at the site of Mantoux test and he developed similar lesions over the back and the right forearm in the next few days. History of BCG Vaccination was present. Family history of tuberculosis is present. His father is a known case of pulmonary tuberculosis that has completed the treatment. Earlier he had gone to the chest physician for the fear of contacting Tuberculosis from his father.

Chest Physician had advised Chest skiagram, Sputum for AFB, ESR and Mantoux Investigations. His Chest Skiagram was within Normal Limits and Sputum was negative for AFB. His ESR was 42mm after one hour and Mantoux Intradermal test was strongly positive (25 mm).

On Dermatological examination, multiple perifollicular, skin coloured to hypo pigmented smooth scaly papules seen in groups over the left and over the back. Multiple skin coloured to hypo pigmented similar papules are seen in an annular fashion along the periphery of the Mantoux tuberculin test site. No excoriations seen.

No koebnerisation seen. General Examination including lymph nodes were normal. Cardiovascular, Respiratory and Central Nervous System Examination were normal. Examination of scalp, oral cavity, genitalia, palms, soles and nails were normal. Based on the history and the classical clinical features, a diagnosis of Lichen scrofulosorum was made. Other differential diagnosis that was considered is lichen nitidus, secondary syphilis and lichenoid sarcoid. He was explained about the condition and advised skin biopsy and VDRL.

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He was not convinced that to be a form of tuberculosis but to the contrary convinced it to be just an allergic reaction to Mantoux Skin Test. VDRL was non-reactive and Skin biopsy from the lesion on the Mantoux site showed epithelioid cell granulomas in the superficial dermis surrounding the hair follicle. Tubercle bacilli were not found in the histopathological section. This confirmed the diagnosis of Lichen scrofulosorum and ruled out the other possibilities of lichen nitidus, secondary syphilis and lichenoid sarcoid. He was started anti tuberculosis treatment.

He developed Lichen scrofulosorum following Tuberculin skin test, supported by the development of classical lesions after three weeks of Mantoux at the site of intra dermal skin test in the left forearm and the classical histopathological epithelioid cell granulomas confirming the diagnosis.

DISCUSSION: Tuberculids are a group of skin conditions associated with an underlying or silent focus of TB. Conditions in this group include: papulonecrotic tuberculid, LS, erythema induratum of Bazin, and erythema nodosum.

LS is a rare tuberculid, initially described by Hebra in 1860.^[2] It is clinically characterized by tiny, skin-colored, perifollicular papules arranged in groups; normally, they have a smooth surface, but occasionally spiny projections with fine scales may be seen. Histology shows non-caseating, epithelioid cell granulomas in upper dermis and around dermal appendages. Tubercle bacilli are almost never seen in the histology specimen, neither can they be cultured. However, rarely antigen of mycobacterial TB has been demonstrated in papulonecrotic tuberculid, another type of more frequently seen tuberculid.^[3]

In a study of 39 cases of Lichen scrofulosorum by Singhal et al., 72% cases had an underlying focus of TB and 28% cases had no identifiable focus.^[4] In this case, there was no evidence of tubercular infection presently or in the past. This patient already had a subclinical exposure to Tuberculosis from his father, and a moderately good immunity evidenced by the strongly positive tuberculin test reading.

So the tuberculin test PPD could have triggered the Lichen Scrofulosorum which is supported by the development of classical lesions after three weeks at the site of tuberculin skin test. Jean Bologna textbook of dermatology mentions that Lichen Scrofulosorum can follow tuberculin skin test in highly reactive patients. There are cases of lupus vulgaris following BCG Vaccination reported earlier. But so far no case of Lichen scrofulosorum following Tuberculin skin test has been reported.

CONCLUSION: It's very sad to know that most of the people are aware only about pulmonary tuberculosis and not about other system tuberculosis especially cutaneous tuberculosis. It was very difficult to convince this patient that he had cutaneous tuberculosis as he was in total belief that it was just an allergic reaction. Sometimes diagnosis of lichen scrofulosorum can be overlooked, as it can present as Malaria as reported by Priyanka seghal et al.^[5] Cases of cutaneous tuberculosis following BCG Vaccination has been reported earlier, but Lichen Scrofulosorum following tuberculin test has not been reported so far in India.

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Fig.1: Histopathology of the lesion showing superficial epitheloid cell granuloma. No tubercle bacilli was found in the section.

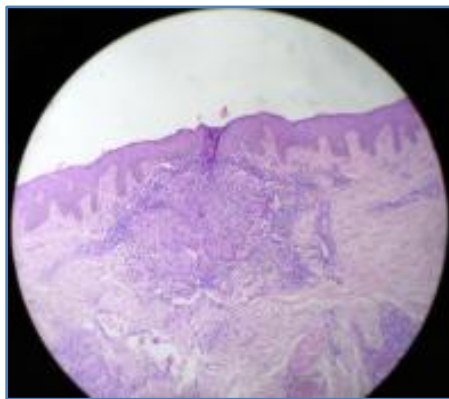


Fig. 1

Fig. 2: Close up view of epithelioid cell granuloma.

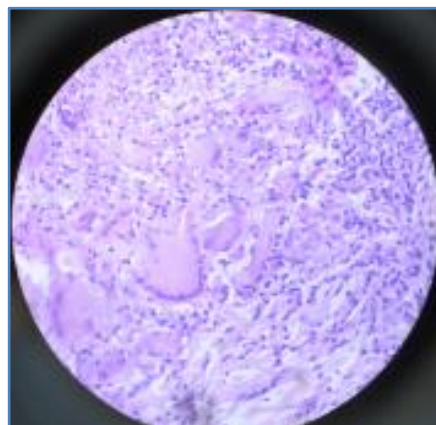


Fig. 2

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Fig. 3: Classical grouped perifollicular skin colored to hypopigmented scaly papules seen in an annular fashion at the site of mantoux skin test positivity.



Fig. 3

Fig. 4: Classical grouped perifollicular skin coloured to hypopigmented scaly papules seen over the back.



Fig. 2

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