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Cutaneous Tuberculosis: Issues in the Diagnose

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#### **Abstract**

Liquenscrofulosorum, also known as tuberculosis cutis lichenoides, is a rare tuberculid that presents as lichenoid eruptions of minute papule, is an uncommon disease and easily misdiagnosed. The lesions are usually asymptomatic, closely grouped, skin colored to reddish-brown papules, often perifollicular. The eruption usually is associated with strongly positive tuberculin reaction. Diagnosis of the lesions can be difficult, as they resemble many other dermatological conditions that are often primarily considered. We report a case of lichen scrofulosorum in an adult male with a florid medical history. He responded promptly to antitubercular therapy with a complete clearance of the lesions after one month.

## **Keywords**

Lichen Scrofulosorum; Tuberculid; Antitubercular Therapy

## **Background**

This case highlights the uncommon, easily mis diagnosed but readily treatable case of lichen scrofulosorum.

# Introduction

Liquen scrofulosorum., also known as tuberculosis cutis lichenoides, is a rare tuberculid that presents as lichenoid eruptions of minute papule, is an uncommon disease and easily misdiagnosed. The lesions are usually asymptomatic, closely grouped, skin colored to reddish-brown papules, often perifollicular.

# **Case Presentation**

A 50 -year-old male presented with a history of itching skin rash for 1 month, accompanied by cough and shortness of breath more intense at night, he reports that the lesions started in the face and now is spread all over the body.

An examination revealed Vital signs: BP: 83/59 mmHg, Pulse: 128, Spo2: 93%

**HB**:7,8 g/dl **HGT**: 8,9 mmol/L

Skin: Generalized erythematous popular rash over the body from the face till the feet, with some lesions in plaques on the chest, not blister or vesicles.

**Mouth**: Whitish lesions in the oral mucous extended to the soft paladar.

Chest: A Skin biopsy was planned in consensus with the dermatologist (Figure 1-3).

#### **Investigations**

FBC, Sputum for GeneXpert, culture and cytology, Chest x rays, skin biopsy, CD4,V Load, Hepatitis B.

FBC CD4:9 Cryptococcal Antigen: Negative

WCC: 1,97 V Load: < 50 copies/ml RCC: 4,00 Hepatitis B: Negative

HB:10,9 Sputum: GeneXpert: Mycobacterium TB not detected Hematocrit:0,348 Culture: Normal respiratory flora isolated Platelet: 750 Cytology: Mixed non-specific bacterial flora

Fungal organisms detected.

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Figure 1: Lesions on the chest



Figure 2: Plaque lesions on the neck, shoulders and scalp



Figure 3: Lesions on the L shoulder, arm and back

# **Skin Biopsy**

The features are in keeping with Lichen Scrofulosorum. There is not atypia or invasive malignancy seen.

# **Differential Diagnosis**

- · Lichen spinulosis
- Psoriasis
- · Mucosis fungoid



Figure 4: Lesions on the neck



Figure 5: Lesions in the abdomen and chest

# **Treatment**

Fluconazol 200 mg daily x14/7

Allergex 4mg tds

Vit C 1 g daily

Emulsifying ointment as soap

RHZE (150/75/400/275) 4 tablets daily x 2 months

RH (300/150) 2 tablets daily x 4 months.

Antitubercular therapy started with conventional four first-line drugs (isoniazid, rifampin, pyrazinamide and ethambutol in daily dose regimen) for 2 months followed by two drugs (isoniazid and rifampin) for 4 months. His constitutional symptoms improved within 2 weeks of starting antitubercular therapy, and skin lesions subsided completely within 2 months. The below pictures revealed the improvement after 1 month of treatment. (Figure 4-8).

# **Discussion**

The tuberculids are a form of cutaneous tuberculosis caused by hypersensitivity reactions to *M tuberculosis*. The concept of tuberculid was introduced by Darier [1] in 1896. In contrast to 'true' cutaneous tuberculosis, properties of the tuberculids were explained

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Figure 6: Lesions on the back



Figure 7: Lesions on the R arm

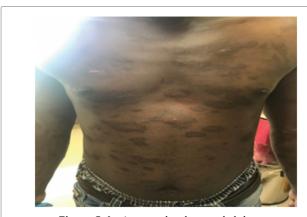


Figure 8: Lesions on the chest and abdomen

by a hypersensitivity response to mycobacteria or their fragments released from a different site of manifest or past tuberculous infection. Key features of tuberculids include a strongly positive tuberculin skin test, evidence of concomitant manifest or past tuberculosis and prompt response to ATT. They are classified into three types: (1) Papulonecrotic tuberculid, (2) erythema induratum of Bazin and (3) LS.

Papulonecrotictuberculid and LS represent true hypersensitivity reactions rather than the result of a local cutaneous tuberculosis

infection. LS is a rare tuberculid, initially described by Hebra[2] in 1860. LS is usually seen in children and young adults suffering from systemic tuberculosis, either pulmonary or extrapulmonary, and very rarely after BCG vaccination [3]. Clinically, LS is characterised by tiny, skin coloured, perifollicular papules in groups having a smooth surface but occasionally spiny projections with fine scales may be seen. The lesions reveal 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 M tuberculosis has been demonstrated in papulonecrotic tuberculid, another type of more frequently seen tuberculid [4]. Diagnosis of LS mainly lies on histopathology, tuberculin skin testing and evidence of systemic tuberculosis in the body. Treatment of LS is the same as that for systemic tuberculosis.

In a study by Varshneyet al.[5] the overall incidence of cutaneous tuberculosis was 0.7% (131 of 18 720 outpatients). The most common variants seen were scrofuloderma (36.5%), lupus vulgaris (31%), tuberculosis verruca cutis (12.9%), LS (11.4%), papulonecrotic tuberculids (3.8%), erythema nodosum (2.2%) and erythema induratum of Bazin (1.5%). Cutaneous tuberculosis may also be a direct manifestation of underlying tuberculosis as seen in the case reported by Al Zayyaniet al. [6] in which chronic tuberculous epididymo-orchitis presented as scrotal ulcers. Among the three tuberculids, the incidence of LS was found to be lowest (2%) in a large study conducted in Hong Kong [7]. Singhalet al. [8-12] studied 39 cases of LS, of which 72% had an underlying focus of tuberculosis while 28% had no identifiable focus of tuberculosis.

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