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Letter

**Lupus Vulgaris Erythematoides: report of a patient initially misdiagnosed as dermatitis**

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## Abstract

A small percentage of patients with tuberculosis present with cutaneous findings, which may be difficult to diagnose. We present a patient diagnosed with a rare, non-scarring form of cutaneous tuberculosis (CTB), classically termed as lupus vulgaris erythematoides

## Introduction

A small percentage of patients with tuberculosis present with cutaneous findings, which may be difficult to diagnose [1]. We present a patient diagnosed with a rare, non-scarring form of cutaneous tuberculosis (CTB), classically termed as lupus vulgaris erythematoides [2]. We emphasize herein: a) The atypical macular appearance of the lesion, being initially misdiagnosed as eczematous dermatitis; b) Demonstration of mycobacterium tuberculosis was achieved by culture. Our patient's course may have been influenced by of a previous treatment with topical steroids and calcineurin inhibitors.

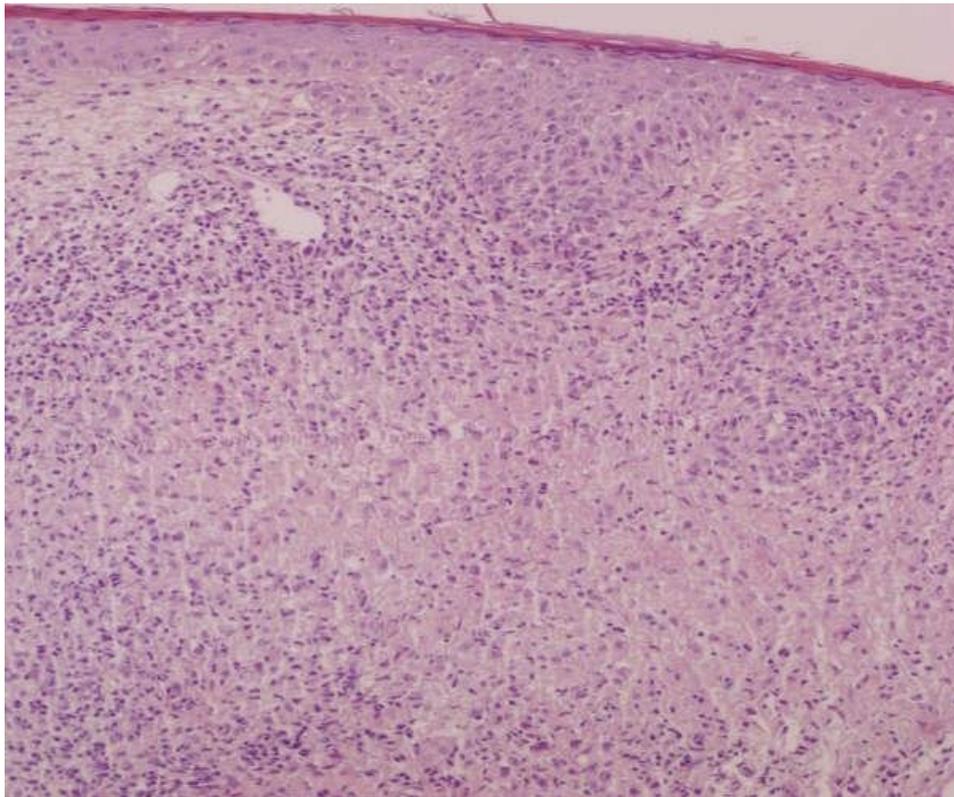
## Case Report

A healthy 80-year-old woman was evaluated because of a 2-year history of an asymptomatic skin lesion located on the nose. She denied fevers, night sweats, weight loss, cough, or dyspnea. Physical examination showed a well-defined, 1,5-cm, flat, scaling, reddish plaque located on the nasal ala (Figure 1).



**Figure 1:** Erythematous plaque with central atrophy related to prior biopsy.

The plaque had a central atrophy secondary to a biopsy previously performed in another hospital, which was reported as devoid of evidence of carcinoma, granuloma, lymphoma, or leishmaniasis. She had been diagnosed with eczematous dermatitis and been treated unsuccessfully with topical steroids, antibiotics, and calcineurin inhibitors over several months prior to being evaluated in our department. Biopsy was then repeated revealing a dermis diffusely infiltrated with epithelioid cell granulomas, with minimal necrosis. Langhans giant cells were evident (Figure 2).



**Figure 2:** Histopathological examination showing a normal epidermis overlying a dermis diffusely infiltrated with almost confluent epithelioid cell granulomas.

The tuberculin test was strongly positive (induration of 22 mm- in- diameter). The chest x-ray showed calcified left paratracheal and hilar lymphadenopathies.

Routine laboratory studies were within normal limits. Significantly, a tissue culture did yield a *Mycobacterium tuberculosis* complex species. A diagnosis of paucibacillary cutaneous tuberculosis was made, in the clinical form of lupus vulgaris erythematoides. A combined therapy (isoniazid, rifampicin, pyrazinamide) was maintained until total remission of the disease, without occurrence of significant adverse events.

## Comments

Cutaneous tuberculosis (CTB) is a very rare event in Europe at the present time [3]. Lupus vulgaris (LV) and scrofuloderma are the most frequent forms. LV is a chronic, disfiguring disease, generally of the face. LV lesions are scarring, but this is a late event and the initial lesions may be macular. These macular forms were termed LV planus erythematoides by Darier [2], who highlighted the difficulty of its diagnosis. In our opinion, the patient reported herein had lupus vulgaris erythematoides, which is only rarely reported at the present time. This atypical clinical appearance was probably owing to its relatively short evolution.

A satisfactory classification of CTB is lacking, reflecting the difficulty in classifying a disease whose diverse manifestations are dependent on many factors. The current classifications [4,5] are based on the mechanism of dissemination and the immune status of the host. They are useful but have no practical value because it may be impossible to identify the mechanism of dissemination of many clinical forms. In this way, LV may result from reinfection, direct extension, lymphatic and hematogenous dissemination. In addition, it may appear at the site of BCG vaccination.

Thus, we consider it of interest to emphasize the utility of a new classification of CTB based on the bacterial load, similar to the current classification of Hansen's disease [6]. Two major forms are considered: multibacillary CTB and paucibacillary CTB (Table I).

**Table I. Cutaneous tuberculosis (CTB): classification according to the bacterial load**

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**1. Multibacillary CTB**

- Primary tuberculous chancre
- Scrofuloderma,
- Orificial CTB
- Miliary CTB
- Tuberculous gumma

**2. Paucibacillary CTB**

- Tuberculosis verrucosa cutis
  - Lupus vulgaris
- 

This classification avoids the confusion related to LV pathophysiology and provides information relevant to the diagnosis by emphasizing to non-experts the level of difficulty in demonstrating the bacillus in suspected TB lesions.

TB is a potentially lethal and contagious disease. This report highlights that CTB must still be considered in the differential diagnosis of atypical macules, papules, and plaques located on the face, even in developed countries. Negative microbiological cultures are not rare in lupus vulgaris, even in long-standing lesions. However, we were able to demonstrate *M. tuberculosis* in the isolated lesion of this patient, in spite of its small size and its relatively short evolution. It can be speculated that the bacterial load of the lesion could have been increased by the previous treatment with topical steroids and calcineurin inhibitors. Dermatologists must be aware of this rare variant of CTB in order to avoid misdiagnosis and delay of treatment.

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