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Short Communication

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Papulonecrotic Tuberculid: A Rare Case Report

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ABSTRACT

Tuberculids were originally felt to be related to an allergic response to tubercle bacilli in a patient with tuberculosis at a remote site. They are currently believed to be the result of hematogenous dissemination of organisms from an internal focus to the skin, where they incite a cutaneous inflammatory response. Papulonecrotic tuberculid (PNT) is a form of tuberculids that as the name implies presents clinically as necrotic papules. Herein, we report a case of 59-year-old man who presented with recurrent asymptomatic symmetrical necrotizing papules scattered on his trunk for 9 months. The patient has also crusted plaque on his right forearm. Two skin biopsies were made, one from papulonecrotic lesion on his trunk and the other one from the crusted plaque on his right forearm. The crusted plaque on the forearm showed granulomatous cellular infiltrates and caseation necrosis in the dermis, whereas the papulonecrotic lesions showed patchy perivascular mononuclear cellular infiltrates as well as granulomatous cellular infiltrates in the dermis. Tuberculin test was positive. A diagnosis of lupus vulgaris on the forearm and PNT on the trunk were made based on clinicopathological findings. The patient was seen by chest physician where there was no systemic involvement. Patient was treated successfully with anti-tuberculosis drugs for 9 months with complete resolution of all skin lesions.

KEY WORDS: Papulonecrotic tuberculid; Anti-tuberculosis; Lymphadenopathy.

INTRODUCTION

Tuberculids were originally felt to be related to an allergic response to tubercle bacilli in a patient with TB at a remote site. They are currently believed to be the result of hematogenous dissemination of organisms from an internal focus to the skin, where they incite a cutaneous inflammatory response.[1] Tuberculids are uncommon manifestation even in a high prevalence TB areas. Once diagnosis of a tuberculid has been made, a thorough evaluation for active tuberculosis should be initiated. Mycobacterium tuberculosis culture from tuberculid is of low yield. Papulonecrotic tuberculid (PNT) is a form of tuberculids that as the name implies presents clinically as necrotic papules. Tuberculid was first described by Darrier in 1896. It represents an Arthus reaction (type III hypersensitivity reaction) accompanied by delayed-type hypersensitivity reaction (type IV).[2-5] Papulonecrotic tuberculid presents clinically as a chronic recurrent asymptomatic symmetrical necrotizing skin papules arising in crops and heal with atrophic varioliform scarring. It's primarily involving the extensor surfaces of extremities, trunk, and buttocks.[2-5] Treatment of PNT is like the treatment of tuberculosis by antituberculous treatment.

CASE REPORT

A 59-year-old man presented with 9 months history of recurrent asymptomatic skin lesions. The lesions last for 1-2 months then disappear spontaneously without treatment but recur again.

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Figure 1: (A) Forearm of the Patient showing Crusted Erythematous Plaque. (B) Trunk of the Patient Showing Multiple Discrete Non Scaly Erythmatous Papules with Necrotic Centers.

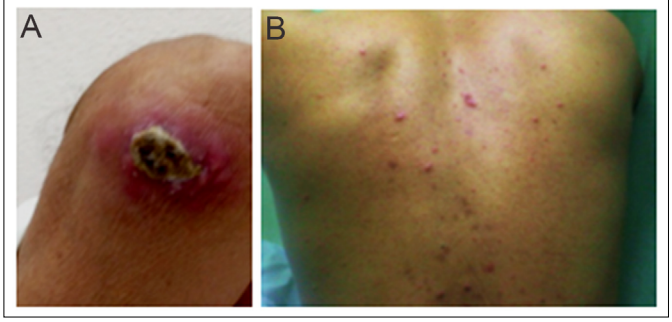
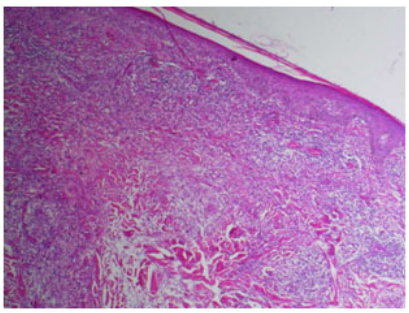


Figure 2: Histopathological Features of the Crusted Plaque on the Forearm of the Patient Showing Granulomatous Infiltration with Caseation Necrosis in the Dermis.



The patient has past medical history of cervical lymphadenopathy 6 years ago where it was excised surgically with unknown diagnosis. He did not receive any treatment at that time. No history of similar condition in his family. Reviews of systems were unremarkable. Skin examinations revealed two different types of skin lesions. The first one was crusted plaque measuring 5×5 cm on his right forearm. The second one was multiple discrete non scaly erythmatous papules with necrotic centers scattered on his trunk (Figure 1). There was no lymphadenopathy. Two skin biopsies were made, one from crusted plaque on his right forearm and the other one from the papulonecrotic lesions on his trunk. The crusted plaque on his forearm showed granulomatous cellular infiltrates and caseation necrosis in the dermis with positive acid-fast bacilli stain (Figure 2), whereas the papulonecrotic lesions showed patchy perivascular mononuclear cellular infiltrates as well as granulomatous cellular infiltrates in the dermis. Tuberculin test was positive. Sputum sample for TB staining and culture were negative. Chest X-Ray was normal. A diagnosis of lupus vulgaris on the arm and PNT on the trunk were made based on clinicopathological findings. The patient was seen by chest physician. There was no systemic involvement. Patient was treated successfully with anti-tuberculosis drugs for 9 months with complete resolution of all skin lesions.

DISCUSSION

Cutaneous tuberculosis (TB) is either "true" cutaneous TB (lupus vulgaris , TB verrucosa cutis , scrofuloderma , orificial TB , military TB) or tuberculids (Papulonecrotic tuberculid, nodular vasculitis, lichen scrofulosorum, and erythema nodusum).[1-6]

In cutaneous TB, the extracutaneous focus is found in only 30-40% of cases, with cervical lymph nodes being the most common site, as in our patient.[7]

Some authors proposed diagnostic criteria for PNT as the following: A strongly positive Mantoux test; chronic recurrent papular eruptions occurring in crops with necrosis, ulceration, and scarring; a tuberculoid histology with endarteritis and thrombosis of the dermal vessels; and regression in response to antituberculous treatment. Our patient fulfilled all diagnostic criteria of PNT.

Although PNT is a very rare, its association with lupus vulgaris is rarer.

Polymerase chain reaction (PCR) is a very sensitive tool to demonstrate organisms and the first instance of PNT yielding mycobacterium tuberculosis DNA was reported by Victor et al.[8]

CONSENT

Consent has been taken from the patient for purpose of using patient's photographs for publication in print or on the internet.

CONFLICTS OF INTEREST

The authors have no conflicts of interest that are directly relevant to the content of this review.

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