Tuberculosis verrucosa cutis in a Pacific island

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Abstract
Cutaneous tuberculosis is rarely reported in Oceania. We describe a case of tuberculosis verrucosa cutis diagnosed in a Pacific island to underline the attention that clinicians should pay when confronted with a warty lesion in this region of the world.

Compared to other organs, skin is an uncommon site of tuberculosis involvement. We describe a case of tuberculosis verrucosa cutis (TVC), which is rarely reported in the Pacific islands, including Wallis Island (northeast of Fiji) where this case occurred.

Case report
A 70-year-old women presented to the hospital with a unique painless swelling on the medial side of left forearm. Cutaneous examination revealed a well limited, irregular, hyperkeratotic warty plaque associated with depigmentation areas and central involution with atrophic scar.

The patient’s history revealed that a skin lesion had developed 10 years ago after being injured by a metallic tool. The lesion persisted despite the use of various antibiotics and ointments including corticosteroids. The patient gave no history of tuberculosis in the family.

There was no regional or generalised lymphadenopathy. General physical examination, including the respiratory system, was normal. A complete blood count as well as hepatic and renal function analysis results were normal. Both HIV and the VDRL tests were negative but the tuberculin skin test was positive with erythema and induration of 30 mm after 48 h.

Histologic analysis of biopsy specimens from the lesion (see photo) showed caseating granulomas with giant cells, dense inflammatory infiltrate of neutrophils, and lymphocytes suggestive of TVC. Smear and culture from skin biopsies for Mycobacterium tuberculosis were negative.

Initial treatment included isoniazid, rifampin, ethambutol, and pyrazinamide for a course of 2 months followed by a dual therapy (isoniazid, rifampin) for an additional
6 months with close surveillance. The lesions healed and no recurrence was observed after 1 year follow-up.

**Discussion**

Tuberculosis verrucosa cutis (TVC) is one of the rarest forms of tuberculosis encountered. TVC occurs in previously sensitised individuals due to exogenous re-infection with *Mycobacterium tuberculosis* or *Mycobacterium bovis*. Mantoux test is usually positive as in this case. Staining and culture of skin lesions for acid-fast bacilli are usually negative\(^1,2\) as in our patient. She might have acquired the infection from direct inoculation into her wound 10 years ago.

Adult men are reportedly most commonly affected\(^3\) probably because they are prone to injuries facilitating the entry of the tubercle bacilli. Our patient, though female, was involved in heavy manual work predisposing her to skin lesions.

The most frequently reported location of TVC lesions is not the same on every continent—i.e. hands in Western countries,\(^4,5\) foot and sole in India,\(^6\) and buttocks and knees among Chinese people.\(^7\) Polynesian people, walking barefoot frequently should be at risk to develop TVC on their sole, although the incidence of cutaneous tuberculosis is generally unknown in this region of the world.

There are two other forms of cutaneous tuberculosis: lupus vulgaris and scrofuloderma. Cutaneous tuberculosis is a great masquerader. Its differential diagnosis is wide and includes mycotic infection (sporotrichosis, chromoblastomycosis, lobomycosis), Hansen disease, late syphilis, cutaneous leishmania, squamous cell carcinoma, amelanotic melanoma, and other dermatologic malignancies.

The present case of TVC is being reported to underline the attention that clinicians should pay when confronted with a warty lesion in a patient living on a Pacific island.

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