Tuberculosis presenting as multiple sporotrichoid cutaneous abscesses in an immunosuppressed patient – a rare case

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Sri Lanka Journal of Dermatology, 2018, **20**: 36-39

Introduction

Tuberculosis is an infection caused by *Mycobacterium tuberculosis* and it is endemic in developing countries including Sri Lanka, especially in communities with poor socioeconomic status and overcrowding.

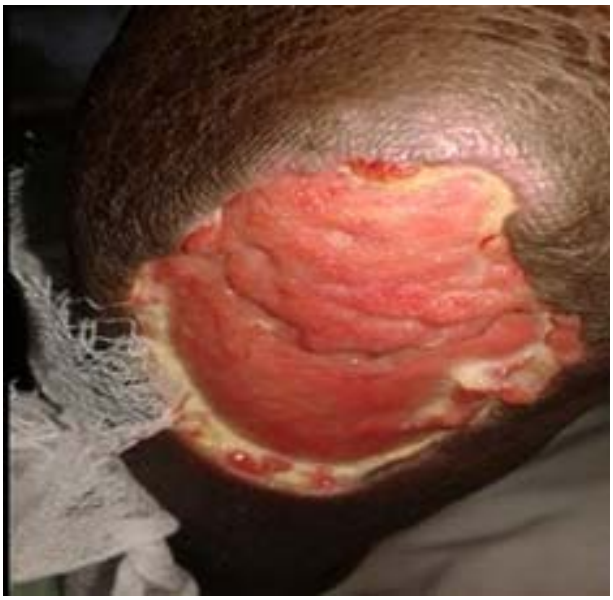
Cutaneous tuberculosis has a variety of classic clinical presentations but spototrichoid tuberculosis is a rare form. It primarily follow posttraumatic inoculation especially in children and immuno compromised patients. Here we report a case of 61-year-old lady who was on DMARD for long-standing rheumatoid arthritis, presented with multiple sporotrichoid cutaneous abscesses and ulcers.

Case report

A 61 year old lady who was on DMARD for long-standing rheumatoid arthritis, presented with spontaneously occurring skin swellings of 6 months duration. On examination, there were painless fluctuant swellings resembling abscesses, located on left upper limb and R/chest. Some were spontaneously ruptured leading to formation of ulcers. Irrespective of multiple surgical drainages and systemic antibiotics they recurred and expanded on same sites. She experienced similar new skin lesions over left forearm at the time of referral to Dermatology unit, General Hospital, Kandy.

She complained of loss of appetite, loss of weight for past 9 months duration. There were no other systemic symptoms.

Upon presentation she was ill, afebrile, mildly pale, had oral candidiasis, but no lymphadenopathy. There were large ulcers exposing tendons and muscles on right side of chest, left elbow extending to arm and forearm. Also there were 3-4 painless cutaneous abscesses on posterior aspect of left forearm in linear distribution with few scars of past surgical drainage on dorsum of left hand. Rest of the system examination was normal. There was no evidence of active arthrithis.



Ulcers on left upper limb

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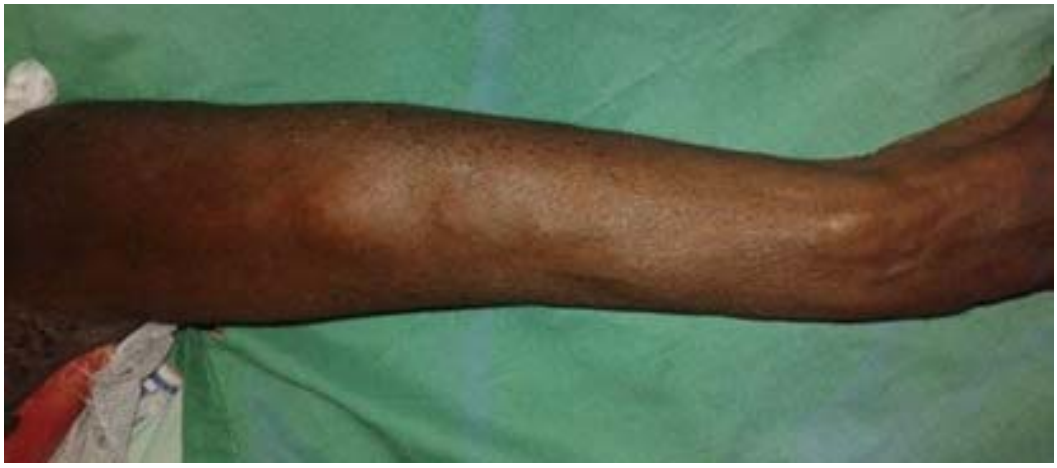
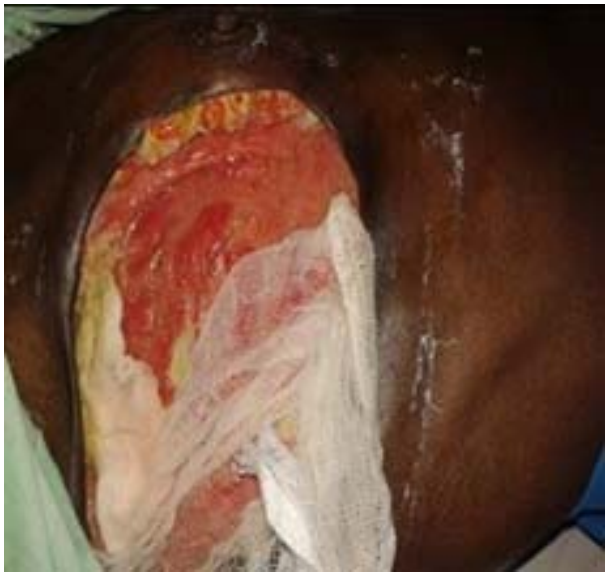
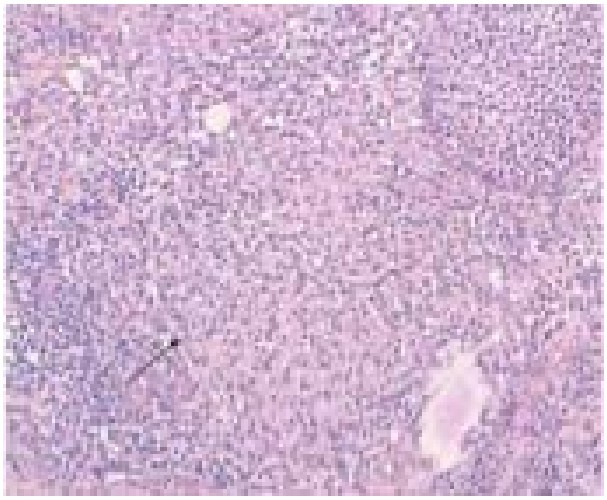


Abscesses with linear distribution on right posterior forearm.



Ulcer on chest wall



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Investigations revealed neutrophil leukocytosis in FBC, high ESR of 140, CRP-166, positive wound swabs with EBSL.

USS of left forearm reveled echogenic fluid collection around left radius, extensor muscles, and tendons up to wrist joint.

Skin biopsy showed several epithelioid granulomas with necrotizing suppuration.

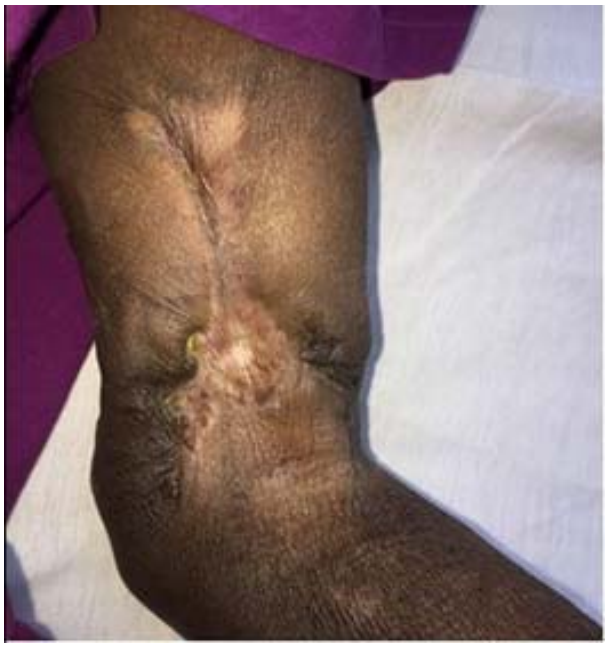
Fungal studies were negative. Mantoux test was highly positive of 30 mm. Pus aspirate of left forearm abscesses was positive for AFB stain and TB PCR but TB culture was negative.

USS abdomen, CXR, sputum AFB, HIV screen, melioidosis antibodies were negative with normal baseline LFT, RFT. X-rays of left forearm did not show evidence of osteomyelitis.

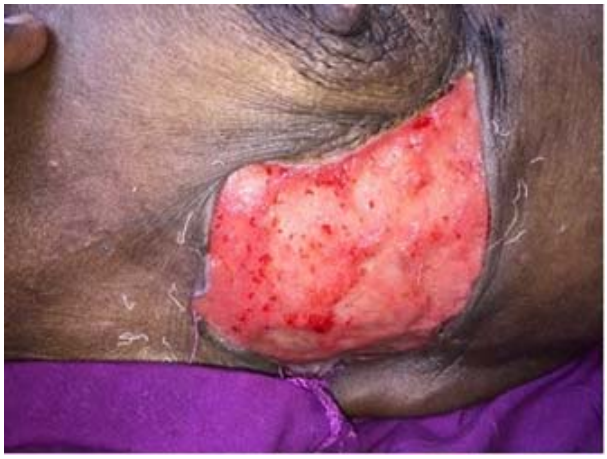
Patient was started on Category 1 Anti TB Therapy after obtaining opinion of a Consultant Chest Physician. A good response was observed with reduction in ulcer size, improving general condition and reducing inflammatory markers.

Upper limb ulcer

3 months of anti TB therapy



8 months of anti TB therapy



Chest wall ulcers – 8 months of anti TB therapy

Discussion

Tuberculosis is a bacterial infection caused by *Mycobacterium tuberculosis* (MTB). It is endemic in several countries, including developing countries like Sri Lanka. Cutaneous tuberculosis is the fifth most common form after pleuropulmonary, glandular, digestive and urogenital tract tuberculosis.

Cutaneous tuberculosis has variety of classic clinical presentations depending on mode of inoculation and spread (endogenous/exogenous) as well as host immunity.

Sporotrichoid tuberculosis is a rare form of cutaneous tuberculosis more prone to occur in immunosuppressed patients and children. This form of tuberculosis was described for the first time by Premalatha[2] in 1987 in India, and then it has been reported in other countries such as Hungary[3], India[1] Turkey[4] Canada[5] and Tunisia[6]. A review of the literature found only 10 cases of sporotrichoid tuberculosis.

This form commonly affects limbs and may take form of abscesses, gummas[6], plaques or nodules[1,2,3,4], leading to classic stages of crudity, softening fistula/ulceration with possible progression to scarring after several months, they have a linear distribution along a lymphatic pathway[7], often with satellite lymph nodes[8,10]. In our patient lesions resembled abscesses and some were leading to ulcerations but due to frequent surgical manipulations they did not show the classic sequale. Her lesions on forearm were distributed in linear manner suggesting sporotrichoid spread.

Sporotrichoid cutaneous tuberculosis mimics the clinical aspects of sporotrichosis. The main differential diagnoses are: leishmaniasis, sporotrichosis, nocardiosis, atypical mycobacteria (*Mycobacterium marinum*), pyogenic infections (*Staphylococcus aureus, Streptococcus*), and deep fungal infections[3,8].

The diagnosis is difficult to make. The bacteriological examination can isolate the organism in only one third of cases. The culture on Lowenstein-Jensen medium is often negative as in our patient. Histological study does not always provide definitive diagnosis[7], but often shows multiple epithelioid granulomas with/without caseation. The new genomic amplification techniques (PCR) now allow the rapid identification of the organism, as in our case. Treatment needs full course of standard multibacillary anti TB therapy.

Conclusion

Although cutaneous tuberculosis has a variety of classic clinical presentations, sporotrichoid tuberculosis abscesses are rarely reported in literature. This case report serves to highlight the importance of investigating for tuberculosis when a patient present with spototrichoid abscesses.

Conflict of interest

None declared.

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