

A Curious Case of Non Healing Sinus in the First Web Space

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ABSTRACT

Introduction: Tuberculosis is a chronic, infectious disease that has been a growing concern worldwide. It predominantly affects the respiratory system. Of the various extra pulmonary manifestations, the least common is cutaneous tuberculosis. It then spreads to adjacent soft tissue and bones leading to osteomyelitis. Thus, a high index of suspicion is needed when patients present with atypical skin lesions and non healing sinus or ulcers to avoid dissemination of the pathology.

Case Summary: We report a case of a 70 year old male, who presented with a non healing sinus in the first web space of left hand 3 months after a minor surgical procedure following trauma to the left palm along with 2 non healing ulcers near the elbow of the same hand. There was no resolution of symptoms even after adequate antibiotic course. MRI revealed 84x22mm collection/abscess and FNAC of the left axillary lymph node was then done which revealed a tuberculous infection.

Conclusion: A high suspicion for tuberculosis should be maintained when a patient presents with a chronic, unusual lesion which cannot be explained otherwise. There might or might not be systemic manifestations of tuberculosis or history of TB exposure. Faster diagnosis and complete anti-tubercular treatment prevents spread to deeper structures and thus life threatening complication.

Keywords: Non healing sinus, Non healing ulcers, Cutaneous tuberculosis, Hand

INTRODUCTION

Tuberculosis is an infectious disease which is a worldwide concern, a leading cause of death and a global burden [1]. It is caused mainly by Mycobacterium tuberculosis. The main portal of entry is the pulmonary system. The spread of primary TB and reactivation depends on the immune system of the patient.

There has been a recent interest in tuberculosis because of the increase in immigrants, increasing age and the number of immunosuppressed people. Most cases of TB are pulmonary TB and extra pulmonary TB accounts for

8.4%-13.7% of all TB cases [2]. Cutaneous TB is a rare entity. It accounts for 1%-1.5% of all extra pulmonary TB cases across the world [2].

The mechanism of infection of cutaneous TB includes direct inoculation, contiguous dissemination or hematogenous spread. Clinical manifestations include tuberculid, lupus vulgaris, acute military TB, scrofuloderma, tuberculosis verusa cutis, buruli ulcers out of which, scrofuloderma is the most reported. Depending on the bacterial load it may be divided into- multibacillary and paucibacillary TB.

We present a case of cutaneous TB likely originated from underlying TB lymphadenitis.

CASE REPORT

70 year old male, known case of Diabetes Mellitus and Hypertension came to the out patient department 3 months back with a history of trauma to the palm of the left hand with a pencil tip. There was pain, swelling and redness of the left palm at the time of presentation. The patient underwent a minor surgical procedure which included removal of the foreign body and debridement under local anaesthesia along with oral antibiotics and painkillers. Daily dressing was advised and he was asked to follow up after 15 days.

The patient followed up after 1 month with pus discharge from the site of trauma. Considering it as a secondary infection, patient asked to take antibiotics for 7 days along with daily dressing of the wound.



Fig 1. Site of trauma

The patient lost to follow up and came back after 2 month with a sinus tract in the first web space with a non foul smelling discharge along with a similar discharge from the site of trauma on the palm. It was associated with redness and swelling of the first finger and the palm of the left hand. The patient also brought in our notice two ulcerating and fungating lesions on either sides of the elbow of the same arm. There was no discharge, bleeding or foul smell from the lesion. There was no pain or difficulty in range of motion of the joints. On palpating the arm further upto the left axillae, multiple firm, mobile lymph node masses could be palpable. Thus, there was a

suspicion for tuberculosis infection but there was no history of evening rise of temperature, cough, weight loss or loss of appetite.



Fig 2. Sinus in the first web space



Fig 3. Fungating ulceration on the medial aspect of elbow



Fig 4. Ulceration on lateral aspect of elbow

An MRI of the left hand upto the elbow was advised and the axillary lymph node FNAC was done along with GenerXpert and AFB smear from the discharge. MRI of the left hand revealed- e/o fairly defined heterogeneous altered signal intensity collection noted in the skin, subcutaneous and muscular plane on palmar aspect between index and middle finger measuring approx 84x22mm. No extension into bones. Possibility of infective/ inflammatory etiology- collection/ abscess. MRI of the left elbow revealed- e/o illdefined heterogeneous altered signal intensity collection noted in the skin, subcutaneous plane in anteromedial aspect of left lower arm measuring approx 37x24mm. There is gross skin subcutaneous intramuscular edema in the medial aspect of left lower arm and proximal forearm. There is also an e/o similar altered signal intensity collection noted in the skin, subcutaneous plane in posterolateral aspect of left proximal arm measuring approx 19x20mm. GeneXpert and AFB smears were negative for tuberculosis. FNAC of the left axillary lymph node was suggestive of a granulomatous inflammation probably of mycobacterial etiology.

The patient was then started on 6 months anti tubercular regime after testing his liver function and kidney functions.

He is asked to follow up after 1 month with a liver and kidney function test.

DISCUSSION

This is a case of disseminated TB with multiple cutaneous involvement without pulmonary manifestations. The pathogenesis of cutaneous TB include direct inoculation through needle stick injury, insulin injections, acupuncture or lumbar puncture injuries, contiguous dissemination as in scrofuloderma or hematogenous spread mainly in immunocompromised individuals such as those with AIDS and CKD [3][4][5][6][7]. In our case cutaneous TB spread from right axillary lymph nodes which has rarely been reported. Cutaneous TB has a wide variety of presentations such as tuberculosis verrucosa cutis, tuberculous chancre, buruli ulcer or tuberculosis lupus and

those due to systemic spread of disease present as tuberculins tuberculosis lupus vulgaris, acute cutaneous military TB or orificial TB [8][9].

Cutaneous TB sites such as on the finger is rarely seen. There have been many more reported cases of TB tenosynovitis or dactylitis in the hands which present with pain and swelling rather than skin lesion [10][11][12][13][14]. While suspecting a tubercular infection- history, physical examination, risk factors give the most clues. The diagnostic tests confirm the suspicion. Few of these tests are- histological staining with an AFB smear, Culture and PCR. The cultures are the definitive diagnostic tests but take a long time to isolate the organism. PCR is one of the best options today as it can detect the presence of mycobacterium fast and even in a low bacillary load. It identifies specific DNA sequences and has a very high sensitivity and specificity [15].

After the confirmation of the diagnosis, the treatment is standard. A two month course of Rifampicin, Isoniazid, Pyrazinamide and ethambutol followed by 4 month course of Rifampicin and Isoniazid. Surgical excision, electrocautery and cryotherapy may be used as adjuncts to the antitubercular therapy. Immunodeficient states may require aggressive treatments owing to multi drug resistance [15].

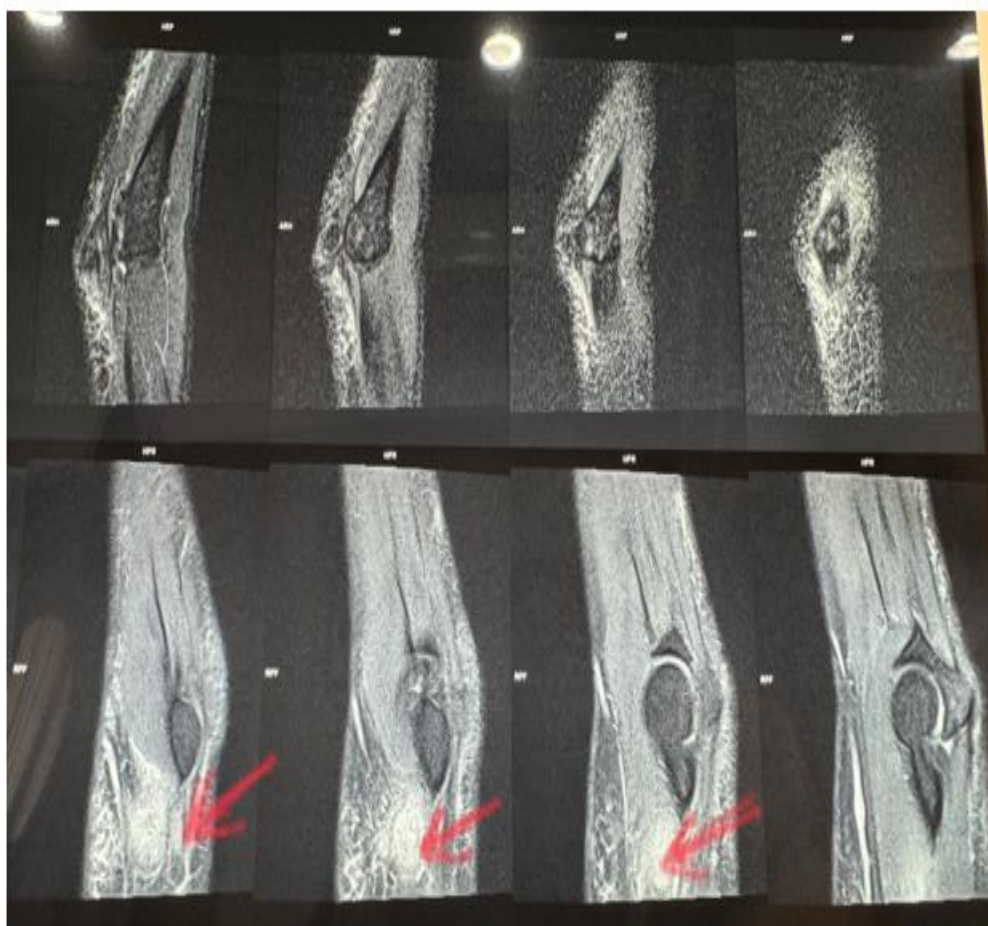


Fig 5. MRI of elbow. Arrow shows the collection/abscess.



Fig 6,7. MRI of palm. Arrow shows collection/abscess



Fig 8. MRI of palm. Arrow shows collection/abscess.

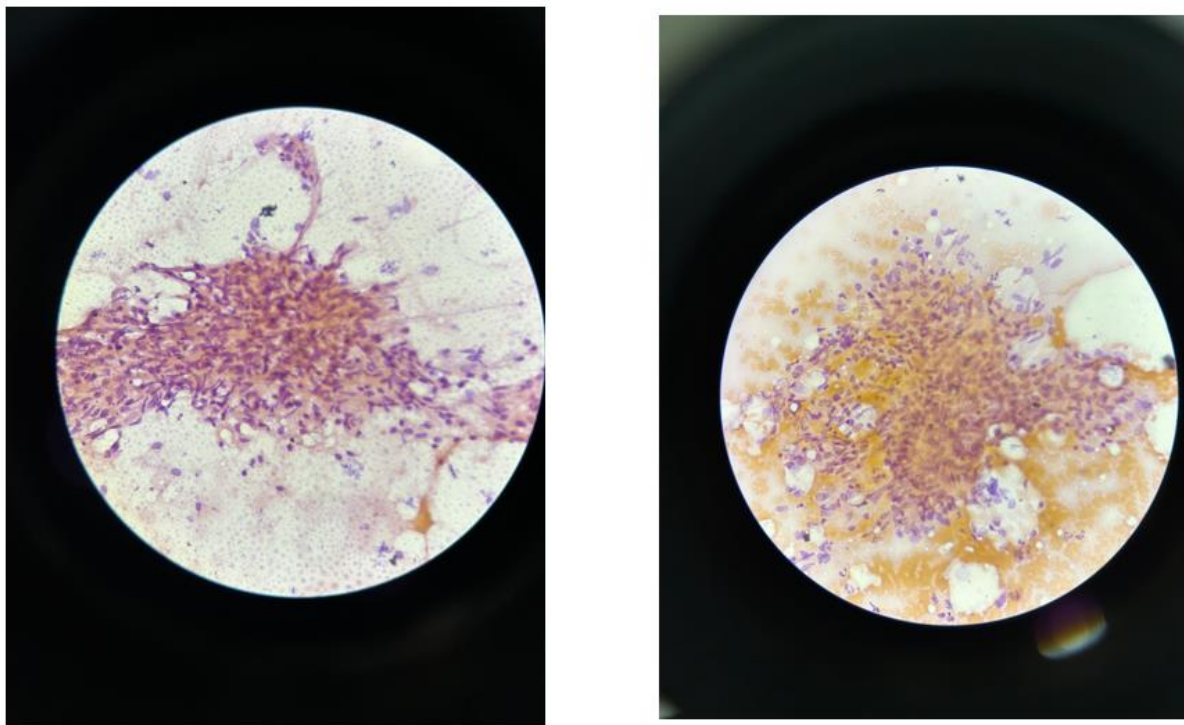


Fig 9,10. Smear of axillary lymph node shows granulomatous inflammation

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P.I.D. : JE5694017
Name : Mr. JAGDISHCHANDRA JHAWAR
Age/Gender : 86 Y (M)
V.I.D. : 10233490125
Ref By : DOSH SUMATICHANDRA H md

Registered On : 15-Dec-2023 11:02
Collected On : 15-Dec-2023 11:03
Reported On : 15-Dec-2023 19:03
Client Name : LAB

CYTOLOGY REPORT

SPECIMEN : Left Axillary Lymphnode.

MICROSCOPIC: Smears show sheets of lymphocytes along with few neutrophils against a haemorrhagic background. Few granulomas composed of epithelioid cells and lymphocytes are seen.
No evidence of haematolymphoid malignancy or metastasis.

Z N STAIN : Stain for Acid fast bacilli is negative.

IMPRESSION : LEFT AXILLARY LYMPHNODE
- GRANULOMATOUS INFLAMMATION, PROBABLY OF MYCOBACTERIAL ETIOLOGY.

ADVISED : Kindly correlate with clinicoradiologic findings.
Kindly correlate with AFB culture studies.
(Two smears enclosed)
*** End Of Report ***
Please use the P.I.D. for all your Future REF.

Dr. Nina Furia
M.D. PATHOLOGY
MMC NO : 2002/03/1655

Print Date/Print By : 15-Dec-2023 19:13/Nitesh_N Page:1 of 1

Clinical laboratory test results serve as an aid to diagnosis and should be interpreted in correlation with clinical findings by the Clinician. Unreported results should be reconfirmed with fresh specimen.

42 YEARS
NABH

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Fig 11. Cytology report of axillary lymph node FNAC

CONCLUSION

Cutaneous TB has varying presentations. Cutaneous TB should be considered when there are chronic skin lesions refractory to treatment.

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