A rare case of deep cutaneous *Mycobacterium Tuberculosis* with concurrent *Aspergillus Niger* infection and osteomyelitis of the left foot in a systemic lupus erythematosus patient

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INTRODUCTION:

Cutaneous extra-pulmonary tuberculosis (TB) with mold infection of the foot is a rare phenomenon. It is easily mistaken as a simple soft tissue infection or tumor.[1] Due to the uncommon site of manifestation of TB, an inadequate assessment and investigation could lead to misdiagnosis. We report a rare case of a cutaneous TB and *Aspergillus niger* infection of the foot with navicular osteomyelitis.

REPORT:

A 44-year-old female healthcare worker diagnosed with Systemic Lupus Erythematosus (SLE) on long-term mycophenolate immunosuppressant presented with a progressively increasing discomfort and swelling over the left foot for 3 months duration, with intermittent fever. There were no typical symptoms or constitutional signs suggestive of TB or malignancy.

Clinically, there was a swelling over the dorsum of the left foot measuring 4x4cm, with no erythema or punctum. The swelling was non-tender and fluctuant. The distal neurovascular status was intact.

The laboratory investigations revealed normal total white cell count, ESR, and C-reactive protein. Given the normal infective markers in a chronic swelling, an MRI scan to locally assess the swelling showed a solitary dorsal foot abscess with surrounding osteomyelitis.

The patient subsequently underwent an incision and drainage surgery for the abscess. The osteomyelitic bone was cleaned and dead tissue was curetted out. Intraoperative samples revealed a positive acid fast bacilli and TB PCR test from the pus – of which she was started on a course of rifampicin, isoniazid, pyrazinamide and ethambutol.

Despite 1 month of anti-TB, the foot discomfort persisted with minimal improvement in the swelling. By this time, the fungal PCR showed *Aspergillus niger* from the tissue sample taken during previous op, and was started on oral posaconazole after a 2 week course of Amphotericin B deoxycholate.

The wound was dressed daily until granulation tissue formed and allowed to heal with secondary intention.

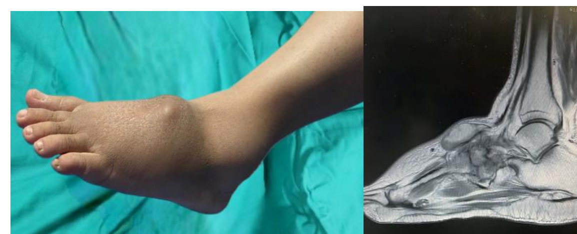

Figure shows the affected limb and T2 MRI images of the left foot.

CONCLUSION:

Chronic cutaneous swelling of the foot even without evident sepsis presenting in immunocompromised patients should always raise suspicion of opportunistic infections such as TB[1] and mold. In addition, the patient as a healthcare worker increases her exposure towards these infections[1,2]. Treatment of both infections is restricted due to potential drug-to-drug interactions anti mold with anti-TB. Suspicion of opportunistic infections warrants multiple tissue samples for investigations including TB-PCR and fungal PCR.

REFERENCES:

1. L. van Zyl et al., Tuberculosis 2015, page 629 – 638
2. Apriani et al., Journal of Infection Prevention, 2022, page 155-166