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Case Report

Disseminated tuberculosis in elderly-latent activation mimics metastasis: a case study

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ABSTRACT

Tuberculosis (TB) is an infectious disease caused by mycobacterium species, that affects the lungs and involvement of the musculoskeletal system is not uncommon. Two or more systemic non-contiguous spread is termed as disseminated TB, and its additional involvement of lungs constitute the diagnosis of miliary TB (MTB). Immuno-suppressive conditions including malnutrition and immune-senescence in elderly can predispose to reactivation of latent TB and wide spread dissemination of the bacilli. Screening for dormant TB infection remains an impractical task and its diagnostic confirmation remains a challenge. With raising elderly population, there is a need for a high index of suspicion in the diagnosis of disseminated TB and its management, as delayed approach has increased mortality. Atypical presentation of disseminated TB with concomitant vertebral collapse and extensive lymphadenopathy needs exclusion of metastatic disease although the old nemesis of TB remains a differential diagnosis. We present one such case in a 71 years old lady to highlight the atypical presentation of disseminated TB. The disease presentation had spino-dermal pattern with lympho-reticular involvement including asymptomatic lesions bilaterally in the adrenal glands lesions.

Keywords: Disseminated TB, Spino-dermal TB, Infective spondylodiscitis in elderly, Cutaneous verucosacutis

INTRODUCTION

Disseminated TB involves, non-contiguous two or more systemic involvement, with spread to the lungs constitutes 'MTB'. Extra pulmonary TB (EPTB) involves lymph nodes (19%,) cutaneous (1%,) bones (6%) endocrine glands in <1% cases the uncommon disseminated TB in 5.4% and MTB in 1-2%.[2,3] The global challenge continues in the diagnosis of latent TB.[1] Wide spread dissemination of tubercule bacillus occurs in immune compromised conditions including activation of latent TB in elderly that has a high mortality rate of 30% when the definitive treatment is delayed.[1,2]

CASE REPORT

A 71 years old lady presented with insidious onset of back pain and radicular right sided leg pain of 6 months duration. She had associated low grade intermittent fever and weight loss over 5 kg with restricted mobility for her ADL. Her comorbidities include diabetes mellitus, hypertension and dislipidaemia.

General examination revealed normal vitals, pallor but not icteric with significant axillary and inguinal lymphadenopathy. Spine assessment showed paraspinal spasm in dorso-lumbar region with increased thoraco lumbar kyphosis. Her sciatic nerve tension signs were negative but bilateral L2 nerve root compressive features were noted.

Her sciatic nerve tension signs were negative but bilateral L2 nerve root compressive features were noted. Her left olecranon region showed a warty overgrowth measuring 6×7 cm with scaly surface with well-defined margins. The lesion was firm in consistency not adherent to the bone suggestive of tuberculous verrucosa cutis. (TVC).

Further CT abdomen along with CT KUB showed pre aortic, para-aortic nodes, retroperitoneal lymph nodes, dilated pelvicalyceal system and cystic lesion in the left adrenal with calcific changes in the right adrenal glands.

Diagnostic FNAC of the axillary node was performed. It showed haemorrhagic inflammatory cells but aspirate was positive for AFB. Cutaneous lesion was biopsied and it showed the chronic inflammatory changes with multinucleated giant cells confirming histologically the diagnosis of TB. The planned trans pedicle biopsy was deferred as we had the confirmatory diagnosis without the same. The patient was started on anti-tuberculous treatment (4 drug regime-HZRE) and mobilised with Taylors brace.

DISCUSSION

Metastatic spine disease is common, and can closely present with clinical features similar to tuberculous spondylodiscitis in atypical disseminated TB. In the presence of generalised lymphadenopathy, a detailed clinical examination is needed to look for common primaries such as lung, breast, thyroid, kidneys, gastro intestinal and cervical cancers. PET CT scan is considered a routine standard but tissue confirmation needs a node biopsy or trans-pedicle biopsy of the involved vertebra. This remains mandatory as the treatment differs completely.

Activation of latent TB with 'immune-senescence' and increased inflammatory response to TB in elderly results in disseminated TB and to note it has an increased mortality.[4] With its atypical presentation diagnostic delay is inevitable in over 50% cases and missed in over 50% of MTB.[1,2] Blood investigations are indirect markers and will need MRI and CT scans of the involved regions prior to tissue biopsy for micro-histopathological confirmation. GeneXpert for TB is considered as one of the diagnostic criteria in disseminated TB.[1]

Cryptic type of TB is an atypical presentation that is more common in elderly patients.[3] Generalised debility and progressive weight loss but normal chest X-rays and absent fever delays the definitive diagnosis.

Dorso lumbar spine is affected in 10-30% of MTB.[3] Classically it presents with para-discal destruction of adjacent levels with pre and paravertebral abscess. Extent of epidural abscess determines neurological status. X-rays will show the extent of disc destruction with end plate erosion and associated segmental kyphosis but whole spine screening MRI is mandatory for skip lesions and detailed study of neural compromise. In atypical TB cases, metastatic disease needs exclusion by a trans-pedicle biopsy as early diagnosis and anti-tuberculous treatment avoids associated high mortality rate of 30%.[2] Lymphadenopathy occurs in 25-93% of disseminated TB cases with high diagnostic yield on FNAC than on cultures.[1] Axillary, cervical and inguinal nodes can be reached percutaneous but para-aortic and retroperitoneal nodes need CT guided aspiration studies.

Adrenal glands involvement in disseminated TB can manifest clinically as Addisonian crisis.[1,3] Asymptomatic cases can have cystic or calcific lesions of adrenal glands.

Cutaneous TB can occur due to endogenous or exogenous spread in isolation or in disseminated TB.[1,2] Lupus Vulgaris is the commonest form, seen as reddish-brown plaques over fascio-cervical regions.[5] TVC presents as warty growth over the trauma prone sites. Scrofuloderma are characteristic cutaneous TB ulcerations with puckered skin due to underlying lymph node or bone TB. Metastatic abscess is often seen in disseminated TB.[5] Other Immune mediated cutaneous manifestations are vasculitis, panniculitis and tuberculids.[5] Most of these lesions are stain and culture negative.

CONCLUSION

Activation of latent TB in elderly with disseminated presentation needs a high index of suspicion in the diagnosis. The challenge is early diagnosis with confirmation of TB and exclusion of metastatic disease. Although the metastatic disease remains most common in these elderly patients, early advanced diagnostic modalities should be initiated. Tissue diagnosis is confirmatory to exclude metastatic disease and for early anti-tuberculous treatment.

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