



Generalised Osteolytic Lesions in an HIV Positive Male with Tuberculosis and Toxoplasmosis: A Rare Case Report

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ABSTRACT Presence of multiple osteolytic bony lesions is rare entity and even rarer in HIV patients. We present a 33 year old male patient who was admitted in this hospital for complaints of backache, fever since 15 days and altered sensorium since 3 days. After examination and detailed investigations, a diagnosis of HIV with disseminated Kochs with toxoplasmosis was made.

KEYWORDS : Toxoplasmosis, Osteolytic Bony Lesions, HIV, Disseminated Kochs.

INTRODUCTION:

Osteolytic lesions of the skull are an unusual complication in patients with AIDS. Other important causes are multiple myeloma, secondary metastasis and bacterial osteomyelitis¹¹ In healthy humans, the infection with *T. gondii* is usually asymptomatic, but it can be fatal in the immunocompromised individuals, such as HIV/AIDS patients¹. Tuberculous meningitis and cerebral toxoplasmosis can coexist and should be considered in the background of HIV infection⁷.

A rare case of toxoplasmosis with tuberculosis presenting as multiple osteolytic bony lesions in a middle aged HIV positive male is reported here.

CASE DETAIL:

A 33 year old male patient was admitted to our hospital with fever and low backache since 15 days. He complained of altered sensorium since last 3 days. The patient had also developed convulsions on the day of admission and was not able to see from his right eye. He was driver by occupation and there was no significant family or past history. On examination he was cachexic, drowsy and disoriented with pulse-92/min, respiratory rate- 18 /min and BP of 110/70mmHg. His plantars were normal, deep tendon reflexes were present. He was moving all 4 limbs but was unable to grasp objects with left hand.

His tongue showed whitish patch suggestive of oral candidiasis. He also had black pigmented patches over both the lower limbs (Fig. 1) and typical sternal tenderness.

His investigations revealed osteolytic lesions on the skull (Fig.2), clavicle (Fig.3) and also on the hip bone (Fig.4). His Hb-13.1g%, TLC-5800/mm³, platelet -1.03lac/mm³, rest blood indices and peripheral smears were normal. He was found to be reactive to HIV-1. His kidney function test, Sr. Uric acid level, Sr. calcium and Sr. parathormone level were normal. His protein electrophoresis revealed gamma globulin spike of 3.7; but no M spike. Beta 2 microglobulin was also high. Bence-jones proteins were absent in 24 hrs urine and his erythrocyte sedimentation rate was 16. His bone marrow aspirate revealed a dry tap and biopsy of the same showed 6% plasmacytosis. His CSF examination showed raised proteins and an ADA level of 6.42 for which he was put on AKT empirically although CSF CBNAAT was negative for *M. tuberculosis*. His CD4 count was 103 for which ART was started along with T. Cotrimoxazole and antifungal drug as a prophylactic measure. His VDRL test was negative and MRI brain showed multiple cerebral subcortical white matter lesions with gangliocapsular and brain stem & cerebellar involvement suggestive of ? progressive multifocal leukoencephalopathy; multiple skull lesions with dural enhancement & frontal sinus nodular lesions most likely suggestive of ? lymphoma ? tuberculosis ? kaposi's sarcoma ? toxoplasmosis ? cryptococcal infection.

After treatment for about 1 month, his MRI brain was repeated and it showed multiple focal hyperintense lesions in the periventricular white matter and basal ganglia on T2W images and hypointense on T1W images with subtle contrast enhancement and diffusion restriction (Fig.5) suggestive of ?Disseminated Tuberculosis? CNS toxoplasmosis which was further retrospectively confirmed with serology. His serum levels of IgG was significantly high- 650.0 (Positive > 1.1) and of IgM was 0.672 (Positive - > or = 0.6). The CD4 count had improved to 163. Later after taking written informed consent, a biopsy of osteolytic lesion from clavicle was performed and it turned out to be negative for CBNAAT, which was partly attributed to the prolonged course of treatment. Thus a diagnosis of toxoplasmosis with disseminated kochs with HIV was made.



Fig. 1 Photograph showing black pigmented patches over leg.

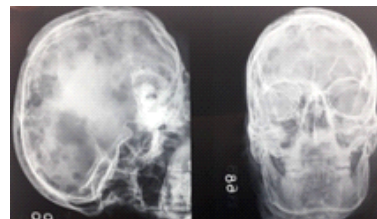


Fig. 2 Xray skull showing multiple osteolytic lesions.



Fig. 3 Chest Xray showing osteolytic lesion in right clavicle from where biopsy was taken.

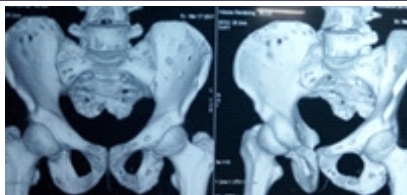


Fig. 4 NCCT hip bone showing multiple osteolytic lesions.

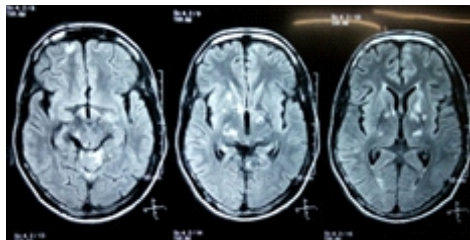


Fig. 5 MRI FLAIR sequence showing multiple focal lesions showing contrast enhancement and diffusion restriction.

DISCUSSION:

Tripathi et al reported osteolysis in a case of HIV disease due to Tuberculosis¹¹. Supriya et al also reported Tubercular osteomyelitis in a patient with HIV/AIDS⁹.

S. Murugan reported a case of multiple osteolytic lesions in a 14 year old boy with HIV where the lesions were thought to be the musculoskeletal manifestations of HIV itself⁴. Lauren et al stated that although rare, Kaposi's sarcoma can be a cause for lytic bone lesions in AIDS patients, and it is best visualised with MRI⁵. Isenbarger DW et al reported a case of lytic vertebral lesions as an unusual manifestation of AIDS associated Kaposi's sarcoma¹⁴. Bacillary angiomatosis, a bacterial opportunistic infection in HIV disease, can occur in individuals with CD4 count <50. It has been suggested that the radiographic presence of lytic bone lesions in association with skin lesions supports the diagnosis of bacillary angiomatosis. A case of osteolysis in HIV infection with Bacillary Angiomatosis was reported by Braekeveld et al¹³. Hertz et al reported a case of Cat-Scratch fever with AIDS presenting as soft tissue and osseous lesions¹⁵. Baron et al reported osteolytic changes in HIV disease in six of their patients with bacillary angiomatosis which improved following antibiotic therapy¹⁶.

In 2016, Tegegne D et al found that Immuno compromised patients have high rate of seropositivity for toxoplasmosis and recommended introduction of routine anti-T. gondii antibodies serological screening test prior to commencement of ART¹⁷. Again in late 2016, Bharti AR et al found that latent toxoplasma infection was associated with neurocognitive impairment especially in those with higher CD4 counts¹⁸.

While investigating the cause of osteolytic lesions, we found that the CD4 count of our patient had improved from 103 to 163 with significant clinical improvement, so secondary metastasis was ruled out though PET scan was not done due to resource limitation. The skin lesions over the legs were due to previous trauma and absence of any other cutaneous lesions makes the possibility of bacillary angiomatosis, Kaposi's sarcoma very unlikely. The biopsy taken from an osteolytic lesion on the clavicle after about a month was negative for CBNAAT which means that either the lesion was because of tuberculosis and it has got healed with the treatment or it was not due to Tuberculosis and the cause for it still remains unanswered.

SUMMARY:

Thus, based on raised ADA levels in CSF, negative bone biopsy for TB, healing osteolytic lesions, positive serology for Toxoplasmosis and relevant MRI findings, a diagnosis of Toxoplasmosis with Disseminated Kochs with HIV was made.

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