Summary: We present a clinical case report of a 40-year-old HIV positive male patient presenting with fever, cough with expectoration and osteolytic, cystic, multiple soft tissue swellings of skull (aspirate showing AFB). The various clinical possibilities are discussed along with interpretation of subsequent investigations.[Indian J Tuberc 2007; 54: 193-195]

Key words: Tuberculosis, Skull, HIV, Osteolytic lesion.

INTRODUCTION

Tuberculosis of bone may evade diagnosis for a long time, as it usually remains silent till either involvement of a neighbouring joint or development of a soft tissue swelling due to cold abscess formation. The osteolytic lesions of tuberculosis may closely mimic those due to multiple myeloma or secondary malignant deposits. Tuberculosis of flat bones of the skull vault is a relatively rare disease. The skull lesions are usually secondary but primary disease have also been reported though uncommonly1. Osteolytic lesions of the skull are an unusual complication in patients with AIDS2. Other important causes are multiple myeloma, secondary metastasis and bacterial osteomyelitis. A case of tuberculosis presenting with osteolytic soft tissue swellings of skull in a middle aged HIV positive male is reported here.

CASE REPORT

A 40-year-old male patient, smoker, presented in HIV clinic with complaints of fever, loose motions along with loss of appetite for two to three months and cough with expectoration for last fifteen days. On general examination, all systems were within normal limits, except bilateral crepts and ronchi on respiratory system examination. He was found to be HIV positive by ELISA done at Voluntary Counseling and Testing Centre following pre-test counselling. Other investigations revealed: Hemoglobin -8.5 gm%, TLC -7100 cells/cu mm, DLC -P70 L19 EO1 M10, Platelet count -2,93,000/ cu mm. Absolute CD4 lymphocyte count was 11 cells/cu mm. Chest X-ray revealed features of chronic bronchitis with increased broncho-vesicular markings. He was put on supportive treatment including antibiotics, hematinsics and bronchodilators along with co-trimoxazole Prophylaxis for Pneumocystis jirovecii pneumonia and antiretroviral drugs (Stavudine 30 mg, Lamivudine 150 mg, Nevirapine 200 mg) were started. He was on regular monthly follow-up since then.

After four months, the patient was hospitalized with complaints of evening rise of temperature and cough with expectoration for last fifteen days. He had developed multiple, spherical, cystic swellings over the forehead for one week. There were three swellings in the frontal region of about 2.0 x 1.5 cm size each and multiple small swellings in the parietal region. Bony margins were felt all around the swellings. Swellings were non-tender and normal in temperature.

He was anemic and revealed fine crepts on respiratory examination.

Investigation reports were: Hemoglobin -4.2 gm%, TLC -7000 cells/ cu mm, DLC - P31 L60 EO M03, Platelet count -50,000/ cu mm, random blood
sugar -110 mg%, B. urea - 48 mg%, S. creatinine - 1.7 mg%, S. sodium - 124 mg%, S. potassium - 3.1 mg%, S. bilirubin - 0.5 mg%, SGPT - 21 IU/L, SALP - 40 IU/L, S. protein - 5.9 gm%, S. albumin - 2.6 gm%, S. lipase - 22 IU/L. Aspiration from the cystic swelling was sterile after 24 hours of incubation with AFB positive. Ultrasound abdomen showed multiple lymphadenopathy and mild splenomegaly with hypo echoic areas.

X-ray skull (lateral view) revealed multiple, fairly defined lytic lesions in the frontal region. Such lesions were also noted in the parietal and occipital regions. A lesion in the frontal area was surrounded by sclerosis. There was disruption of the inner table of the frontal bone with presence of air in the diploic space. There was no radiological evidence of disruption of the outer table.

The patient was put on anti-tubercular treatment. Anti-retroviral therapy was stopped as the patient could not afford an Efavirenz based regimen. The patient was later discharged but did not come for follow-up treatment.

DISCUSSION

Tuberculosis (TB) is rampant and endemic in developing countries. The incidence of skeletal manifestation in tuberculosis is only 1-2%. Bones generally involved are the spine (dorso-lumbar), skull, shoulder girdle and hip bones; the orbit being only rarely involved. Multi-focal involvement is more common than unifocal lesions. Involvement of atypical sites and unusual manifestations are seen specifically in the pediatric age group. Tuberculosis of the bone, in general usually begins in the cancellous portion of the bones involved. The flat bones have little cancellous portion, hence are rarely involved. Two types of lesions are generally recognized i.e. the circumscribed or perforating type and progressive infiltrating type. The perforating type lesions occur much commonly.

The osteolytic lesions in tuberculosis need to be differentiated from multiple myeloma, secondary metastasis and bacterial osteomyelitis. Skeletal TB commonly gives rise to a lytic, destructive lesion, sometimes associated with button sequestrum characteristically seen in the skull. With such an osteolytic lesion and overlying soft tissue swelling, the possibility of osteomyelitis, dermoid and epidermoid, eosinophilic granuloma, neuroblstoma, lymphangioma, Ewing’s sarcoma should be considered.

A positive Mantoux test and raised E.S.R. give important diagnostic clue for tuberculosis. However, Mantoux test may be negative in 10% patients, while the E.S.R. may be normal in a similar number of patients. Definitive diagnosis depends upon the histopathological finding of the bone lesions. The use of histopathology, culture and guinea pig inoculation together may confirm the
diagnosis in all these cases.

The presence of osteolytic lesion of skull is atypical and rare. However, such rare presentations may occur in the setting of HIV infection. The knowledge of such presentations are important in order to make a differential diagnosis of such cases.

REFERENCES


