Introduction

Chronic osteomyelitis is a great clinical and radiologic mimic, which merits recognition by the clinician and pathologist. Awareness of the spectrum of histologic features encountered enables a correct diagnosis to be made in the appropriate clinical setting. The patient can thus be reassured of correct early treatment and a favorable prognosis. Prior to biopsy, the clinical and radiologic differential diagnoses included Ewing's sarcoma, Osteosarcoma; Langerhans cell histiocytosis and chronic infection, notably tuberculosis. The spectrum of histopathologic changes range from acute (acute inflammatory infiltration, active bone resorption and necrosis, reactive bone formation) to subacute (predominantly lymphocyte and plasma cell infiltration) to chronic inflammation (fibroblastic organization and bony sclerosis). Histologic changes radiologic findings, correlate poorly with clinical features.

Case Report

We report an 11 years old male complaining of pain and swelling of right upper thigh for 8 months. Initially there was an insidious onset progressive tennis ball size swelling on the antero-lateral surface of the upper part of right thigh with pain, fever, loss of appetite and loss of weight of about 18 kg over the 8-month period. On examination the swelling of 15 cm X 12 cm X 10 cm was predominantly posterolateral, was tender, no differential warmth over it, variegated consistency and visible dilated vein, Fig 1.

On x-ray examination there was destruction of lateral cortex of upper fourth of femur with extension into soft tissue, wide zone of transition, spicule calcification and periosteal reaction. Fig 2 Clinico-radiologically this looked malignant. However, aspiration revealed pus, which on culturing was positive for streptococcus viridians sensitive to cloxacinil. Baseline investigations revealed Hb-6 g/ dl, TLC-8, 700 mm cubic, Neutrophils-70 %, Lymphocys-28 %, Monocyts -2 %, ESR-68, HBsAg and a HIV negative. Patient could not afford an MRI or CT Scan. Fine needle aspiration cytology showed no malignant cell. Investigations therefore favored infection. Therefore exploration and evacuation was done evacuating about 1.5 liters of pus (liquid pus) and material sent for histopathology.

Histology showed small bits of necrotic bone, fairly good amount of osteoid and reactive bone and necrotic soft tissues relatively and did not help a diagnosis. There was no evidence of tuberculosis/granulomatious infection. The histopathological examination concluded that the diagnosis was chronic pyogenic osteomyelitis. However, the patient did not respond to a 3 weeks of antibiotics course and there was persistent discharge from the wound.

Fig1. Diffuse swelling of upper height

For the developing country set-up we have to treat the patients in limited resources. In this back to the wall situation anti tubercular drugs isoniazid-5-10 mg/kg, rifampicin-10-20 mg/kg, ethambutol-25mg/kg daily along with supportive therapy for first 4 months. For second month's 4-months isoniazid and pyrazinamide- 40mg/kg and for the third four months isoniazid and rifampicin is given. In the four months period only isoniazid is continued. It was therapeutic trial to which the patients responded well.

After wound healing in 4 weeks one and half hip spica was applied and the patient was...
discharged from hospital. On subsequent visits at 6 weeks interval patient appetite and his weight gradually increased. At last follow up at 8 months of start of antitubercular treatment, there was 2 cm shortening with the initial antero lateral bowing of the upper ½ of femur persisting. Full ROM movement at hip joint, abduction 40 degree, adduction 20 degree, exaggerated external rotation (80 degree), internal rotation not possible and movement at knee joint 0 degree to 110 degree. Functionally the gait was short limbed and the patient could sit cross-legged but squat with difficulty. Radiologically there was complete union at disease area, anterolateral bowing of upper fourth of femur and with coxa-Vara Fig 3.

With histopathology unable to identify mycobacterium, this is likely to be Pyogenic organism sensitive to antitubercular drugs. But this should have responded to a therapeutic trial of antibiotic according to culture and sensitivity. In fact, Streptococcus virulence was isolated on culture sensitive to cloxacillin. But adequate doses of cloxacillin failed to produce any clinical response forcing the authors to start anti Tubercular Drugs without any clinical, radiological, histological or bacteriological evidence whatsoever. Clinical response to Anti Tubercular Treatment confirmed the diagnosis.

In the mountain kingdom of Nepal one of the poorest countries in the world almost half of the over 20 million populations are infected with tuberculosis. Of these, up to 90,000 people have active tuberculosis and these are 44,000 new cases of the disease every year. The evidence of malignancy was on X-ray, destruction of lateral cortex of upper fourth of femur with extension into soft tissue, wide zone of transition, spicule calcification and periosteal reaction and clinically patient was cachetic, margin of swelling was illdefined, variegated consistency, venous prominence over the swelling

Fig2. Destruction of Lateral cortex with soft tissue extension

Discussion
Chronic Osteomyelitis is an infrequent cause of a soft tissue mass and is usually diagnosed clinically by a combination of radiological and microbiological characteristics. Rarely; Chronic Osteomyelitis mimics a primary bone neoplasm. Therefore the pathologist must obtain X-rays before attempting to make a diagnosis in a bone tumor. Errors are also made both with benign and malignant lesions associated with calluses. Infection may simulate a malignant bone tumor radiographically and pathologically. To re-emphasize the problem, the pathologist must have all the clinical information and X-rays before attempting a diagnosis of a bone tumor otherwise errors are almost inevitable. Awareness of the spectrum of histologic features encountered enables a correct diagnosis to be made in the appropriate clinical setting only then the patient can be reassured of a correct early diagnosis and a favorable prognosis. Till this is widely practiced such back to the wall situations are inevitable. The initial diagnosis was Pyogenic but was ruled out when appropriate antibiotic (Cloxacillin) given in adequate doses for adequate period failed to produce a clinical response. The major point in favor of tuberculosis is response to a therapeutic trial of Anti Tubercular Treatment. The report merits publication only because despite no clinical, radiological, histological or bacteriological evidence of tuberculosis, Clinicians in a developing country set up may have to resort to trial and error to strike at the correct treatment, response to which alone is the proof that the disease was tuberculosis.

References
3. www.who.int/inf-new/tuber4.htm