An Unusually Huge Giant Cell Tumor Of The Right Femur In A 30 Year Old Nigerian

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Citation

Abstract
A thirty-year-old Nigerian male presented with huge mass in the lower 1/3 of the right thigh, including the knee joint area of five years duration; the patient observed a rapid increase in size, in the last 6 months. The swelling is associated with chronic dull aching pain and there were multiple shallow ulcers on the mass. The initial diagnosis was Osteosarcoma of the right Femur; however, the final histological diagnosis was giant cell tumor.

INTRODUCTION
Giant cell tumor of bones is a benign but often locally aggressive neoplasm which accounts for about 5% primary bone tumors and approximately 20% of all benign bone tumors. The tumors most often occur in the third and fourth decade, and affects females 1.3 to 1.5 times as often as males. More than 75% of these tumors are located near the articular end of long bones; being most common in the knees and wrist. It is believed that this may be related to the intense osteoclastic activity of bone remodeling in the metaphyseo-epiphyseal areas.

We present a case of a huge giant cell tumor, measuring (42cm) in diameter of the right distal femur to demonstrate the ability of this tumor to grow to huge size, without metastasis.

CASE PRESENTATION
A 30 year old, Nigerian male, technician, presented on 12 July 1999 with a right knee joint swelling of five years duration, but noted an increase in the rate of growth 6 months before presentation.

He was pale and had bilateral pitting pedal edema. He had a mass in the right lower 1/3 of the femur measuring 42cm in diameter. The mass was firm, attached to the underlying bone, warm and tender to touch. The surgeon made a diagnosis of malignant bone tumor? Osteosarcoma.

The plain X-ray of the right knee joint, Fig. 1 demonstrated an expansive mixed osteolytic and osteoblastic lesion involving the distal metaphysioepiphyseal area of the right femur. The margins were sclerotic and thinned. There was suggestion of multiple breaks in the cortical bone. A huge soft tissue mass overlying the knee joint was demonstrated. The knee joint space was distorted. The appearances were suggestive of malignant bone tumor, most probably osteosarcoma.
Figure 1

However, the histology diagnosis is that of giant cell tumor. The patient had wide excision of the tumor mass with prosthetic replacement. We have followed up the patients for 5 years without recurrence.

DISCUSSION

Giant cell tumor has a wide spectrum of behavior. The typical radiological feature is a zone of radiolucency situated immediately beneath the articular cortex, sited eccentrically near the articular end of long bones. Osteoclastoma does not contain calcification or ossification unless complicated by a fracture. However, as this case demonstrated, extensive soap bubble pattern of calcification may be seen, in about 40% of cases. The tumor extension into the adjacent soft tissues does not necessarily imply malignant transformation, it is said to occur in about 50% of some series. Most cases of giant cell tumor in the developed countries, present when the tumor is about 20-30 mm, in contrast to our patient that presented when the mass became 42 cm in diameter.

In our environment, patients do visit traditional bone setters for ailments involving the limbs; this patient has visited the traditional practitioner over the years with worsening of the symptoms.

Malignant transformation can be inferred by a rapid change in size or character of the tumor on sequential radiographs. Although, in this patient an increase in the rate of growth was noted 6 months previously, there was no histological evidence of malignant transformation.

Giant cell tumor (Osteoclastoma) usually presents between the ages of 20-40 years, as illustrated by this case. Giant cell tumor rarely metastasizes, when it does, it is usually to the lungs seen in about 2% of cases.

A major problem of giant cell tumor is that it tends to recur after treatment. The treatment is wide and complete surgical excision in order to prevent recurrence.

References

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