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# Osteochondritis Dissecans Of The Knee Joint (Osgood-Schlatters Disease)

[1]A.I. UGOCHUKWU, K.K. AGWUNA AND [1]G.E. ANYANWU

[2]Department Of Radiology, University Of Nigeria Teaching Hospital Enugu Nigeria
Department Of Anatomy, Enugu State University, Enugu State Nigeria.

## ABSTRACT

An 18-year-old male professional footballer presented in the surgical outpatient department (SOP) of University of Nigeria Teaching Hospital Enugu complaining of bilateral knee-joint pains and tenderness severe enough to prevent him from participating in training sessions and professional league matches. Both knee joint were X-rayed and the radiographs revealed bilateral Osteochondritis dissecans of the knee joints (Osgood schlatters disease). This case is being reported to highlight on the epidemiology, etiology clinical appearance, possibilities for radiological diagnoses, classification of ostechondritis dissecans, the various treatment modalities available complications of osteochondritis dissecans and above all emphasizes on the benignity of the disease.

**Keywords:** Osteochondritis dissecans, Knee joints, Osgood Schlatters disease.

## CASE REPORT

An 18 years old male professional footballer presented in the surgical outpatient department (SOP) of University Of Nigeria Teaching Hospital Enugu complaining of bilateral knee joint pains and tenderness severe enough that prevented him from participating in training sessions and professional league matches.

On physical examination revealed moderately severe point tenderness in both knee joints, redness of the knee joint areas and basal routine laboratory investigation such as full blood count, ESR and urinalysis were normal.

Both knee joints were then x-rayed and the radiographs revealed bilateral osteochondritis dissencans of trbial tuberosity, which appear as elevated fragamented tibial tubercles associated with overlying soft tissues swelling.

Patient was completely restricted from physical activity and given asprin tabs 300mg three times daily for two weeks, which abated the symptoms.

Repeated radiograph was done to assess the efficacy of treatment and this revealed complete resolution of soft tissue swelling over the patela, but the fragment and elevated tibial tuberosity persisted as tale-tell sign.

## DISCUSSION

We present this case to highlight the epidemiology, etiology, clinical appearance possibilities for radiological diagnosis and different treatment modalities available.

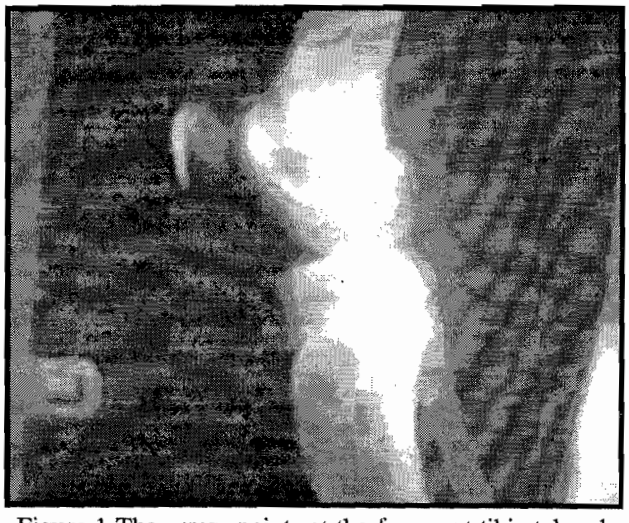

Figure 1 The arrow points at the fragment tibia tubercle (Osgood Schlatters disease.)

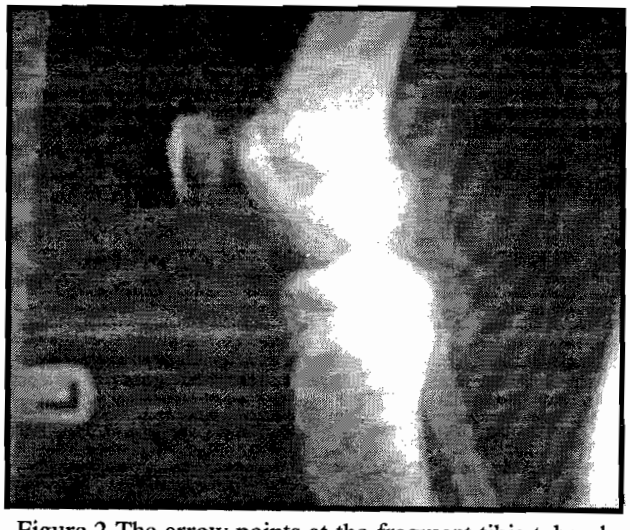

Figure 2 The arrow points at the fragment tibia tubercle (Osgood Schlatter's Disease.)

Osgood Schlatters disease is prevalent in boys than in girls with a ratio of 3:1and this is explained by the fact that boys are more actively involved in sporting activities than girls and 25% of cases are bilateral (Paul et al, 1999).

This disease occurs in boys between the ages of 11 and 15 but girls have an earlier onset between the ages of 10 to 14 years (Paul et al 1999).

The disease is an osteochondritis of tibial tubercle that is mainly cause by traumatic disruption of inferior patellar ligament attachment on the tibial tubercle Paul et al).

The clinical presentation of Osgood Schlatter disease include pain, tenderness, soft tissue swelling over the tibial tuberosity other clinical features include redness an on increase in temperature compared to the healthy knee as well as when the affected area is pressed, when squatting on when kicking a ball Paul et al; David et al.

Plain radiograph of the knee joint is a gold standard for the diagnosis is very cost-effective David et al.

The classical features seen in plain radiograph are swelling over the tibial tuberosity and fragmented elevated tibial tubercle and atimos calcification in the soft tissue.

Computerised tomographic imaging has no added advantage over simple plain radiographic and therefore should not be employed.

Magnetic resonance imaging (MRI) of the knee joint is more sensitive than the plain radiography and computerised tomography Clyde et al. Magnetic resonance imaging shows as diffuse low signal intensity in $T_1$-weigthed images in Osgood Schlatters disease Clyde et al.

There are different treatment modalities for Osgood Schlatters disease and treatment depends on the size of the lesion, location, stability of the fragment and skeletal maturity (Kutschar et al, 2004). Treatment can be conservative or surgical and the majority of conservatively (Clyde et al, 2000) Conservative therapy include quadriceps stretches which is done to stretch the tight and inelastic quadriceps muscle, complete restriction in physical activity in some cases with open patella splint to prevent any protective knee pad and also use of non-steroidal anti-inflammatory agents such as Ibuprofen and Aspirin (Paul et al 1999)

Surgical interventions include antegrade or retrograde drilling with optional refixation and osteochondral transplantation as well chondrocyte transplantation.

## CONCLUSION

Osgood Schlatters disease is a completely benign condition and should never be mistaken for malignant lesion. The diagnosis of Osgood Schlatters is confirmed by radiology and there is no need for histopathological evaluation, which can create confusion.

Furthermore 98% of cases of the disease resolve spontaneously (Paul et al, 1999) and only 2% of cases require treatment and the results of surgical intervention are quite promising nevertheless, further prospective comparative studies are necessary to evaluate efficacy (Kutschar et al, 2004).

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