

Clinical Quiz

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Osteopoikilosis

Clinical Presentation

A 20-year-old male patient presented to the orthopedics outpatient department with low velocity injury to his right knee following a road traffic accident. Examination revealed only mild swelling, tenderness and painful restriction of right knee movements, while other joints, and limbs are normal. Radiograph of right knee antero-posterior (AP) and lateral view shows minimally displaced tibial plateau fracture, with incidental finding of multiple osteosclerotic lesions (Figure 1). Radiograph of pelvis with both the hips AP view also reveals multiple osteosclerotic lesions involving the whole of the pelvis (Figure 2).



Figure 1 - Radiograph of the right knee antero-posterior and lateral view.

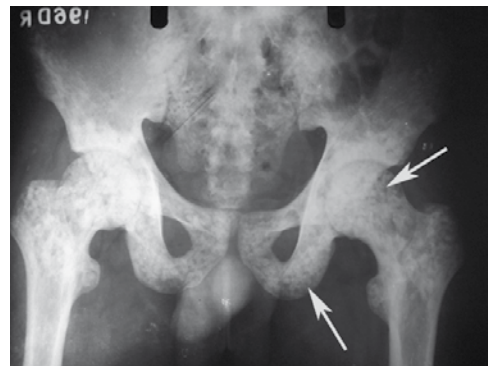


Figure 2 - Radiograph of pelvis with both the hips antero-posterior view.

Questions

1. What are the features seen on the radiographs?
2. What is the diagnosis?
3. What is the management?

Clinical Quiz

Answers

1. Radiograph of the right knee in AP and lateral view shows minimally displaced tibial plateau fracture, with multiple, small, well circumscribed round to oval osteosclerotic lesions involving epiphysis and metaphysis of distal femur, proximal tibia, and patella (**Figure 1**). Radiograph of pelvis with both the hips in AP view shows multiple, small, well circumscribed round to oval osteosclerotic lesions involving whole of the pelvis and proximal femur (**Figure 2**).
2. This 20-year-old male patient has “osteopoikilosis”. Diagnosis is usually made on the basis of radiological examination. A young male presenting with injury to his right knee following trauma and an incidental radiological finding of multiple small, well-circumscribed, round to oval osteosclerotic lesions involving epiphysis and metaphysis of long bones and pelvis, is diagnostic of osteopoikilosis.
3. Management is mainly conservative. In this patient, the fracture was managed by applying a long leg cast, which went into union uneventfully with acceptable range of movements at the right knee joint.

Discussion

Osteopoikilosis is a rare congenital bone disorder, transmitted as an autosomal dominant trait,¹ with an estimated incidence of 1/50,000,² characterized by diffuse symmetrical bone islands throughout the skeleton. The disease develops during childhood and persists throughout adult life, typically asymptomatic and is usually found as an incidental radiographic finding. The typical radiographic finding of osteopoikilosis is sufficiently specific to avoid false diagnoses, which includes multiple, variably shaped, small, radio dense foci, particularly in the metaphyses of long bones and the pelvis.³ Osteopoikilosis although benign, may be confused with bony metastases, it has been reported that bony metastases from patients with breast cancer have been missed owing to the presence of osteopoikilosis.⁴

References

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