Osteochondroses

Synonyms: the ischaemic necroses

This group of conditions mainly affect children; and all involve a defect in ossification at either the bone epiphysis (growing plate), the joint surface itself, or at an apophysis (bony projection).[1]

When articular surfaces become ischaemic, osteochondritis develops - this is associated with avascular necrosis and sclerosis.

Aetiology

The underlying defect in the different osteochondroses is usually not known but the mechanism often relates to trauma or stress on the area affected. Commonly there is breakdown of the area with poor mineralisation. Articular surfaces that develop osteochondritis may fragment (osteochondral fracture = osteochondritis dissecans), eg in the knee, elbow, ankle, etc.

Classification

The osteochondroses are often classified as follows (click on links for separate related articles):

- Articular osteochondroses:
  - Calvé-Legg-Perthes Disease (hip/femur)
  - Köhler's Bone Disease (ankle navicular bone)
  - Freiberg's Disease (2nd metatarsal head)
  - Panner's Disease (capitulum of humerus)

- Non-articular osteochondroses:
  - Osgood-Schlatter Disease (tibial tuberosity)
  - Sever's Disease (calcaneus)
  - Sinding-Larsen and Johansson Syndrome (inferior tip of patella)

- Epiphyseal osteochondroses:
  - Scheuermann's Disease (vertebral bodies)
  - Blount's Disease (proximal tibial epiphysis)

Further reading & references

- Panner's Disease; Wheeless' Textbook of Orthopaedics
- Adolescent Blounts Disease, Wheeless' Textbook of Orthopaedics
- Bui-Mansfield LT; Osteochondritis Dissecans, eMedicine, Aug 2009.
