Commentary

iMedPub Journals
www.imedpub.com

Insights in Biomedicine
ISSN 2572-5610

2021
Vol.6 No.11:51

Radiological Effects in Bone

Rita Badigeru*

Department of Medicine, G. Pulla Reddy College of Pharmacy, Osmania University, Hyderabad, Telangana, India

Received: November 08, 2021; **Accepted:** November 22, 2021; **Published:** November 29, 2021

***Corresponding author:** Rita Badigeru

badigeru.rita@gmail.com

Department of Medicine, G. Pulla Reddy College of Pharmacy, Osmania University, Hyderabad, Telangana, India.

Citation: Rita B (2021) Radiological Effects in Bone. Insights Biomed Vol.6 No.11:51.

Commentary

Osteochondritis dissecans (OCD) is the end result of the aseptic separation of an osteochondral fragment with the gradual fragmentation of the articular surface and results in an osteochondral defect. It is often associated with intraarticular loose bodies. Plain radiographs should be the first step in the evaluation of knee pain, however, unless advanced changes are present and/or a meticulous technique is employed, early findings of osteochondritis dissecans may be occult. The intercondylar "notch" view is very helpful. Early findings include subtle flattening or indistinct radiolucency about the cortical surface. As the process progresses, more pronounced contour abnormalities, fragmentation and density changes (both lucency and sclerosis) become evident.

If an osteochondral fragment becomes unstable and displaced, then a donor site and intra-articular fragment may be seen. Spontaneous healing is usual unless there is an unstable fragment, and treatment revolves around rest and immobilization for up to a year. When the fragment is unstable or displaced, without treatment patients are susceptible to premature secondary osteoarthritis. Numerous surgical approaches have been tried, including drilling, bone grafting, replacement of bone fragment and pinning. When surgery is performed, the results in most cases are only "fair". ~50% (range 35-70%) of patients achieve a "good to excellent" clinical outcome but even in these cases, the majority develop osteoarthritis.

Several pathologic conditions may manifest as an osteochondral lesion of the knee that consists of a localized abnormality involving subchondral marrow, subchondral bone, and articular cartilage. Although understanding of these conditions has evolved substantially with the use of high-spatial-resolution MRI and histologic correlation, it is impeded by inconsistent terminology and ambiguous abbreviations.

Common entities include acute traumatic osteochondral injuries, subchondral insufficiency fracture, so-called spontaneous osteonecrosis of the knee, avascular necrosis, osteochondritis dissecans, and localized osteochondral abnormalities in osteoarthritis. Patient demographics, the clinical presentation, and the role of trauma are critical for differential diagnosis.

A localized osteochondral defect can be created acutely or can develop as an end result of several chronic conditions. MRI features that aid in diagnosis include the location and extent of bone marrow edema, the presence of a fracture line, a hypointense area immediately subjacent to the subchondral bone plate, and deformity of the subchondral bone plate. These findings are essential in diagnosis of acute traumatic injuries, subchondral insufficiency fracture, and its potentially irreversible form, spontaneous osteonecrosis of the knee.

