

Figures for Osteoarthritis: What does imaging tell us about its etiology

Figure 1. Aetiology of osteoarthritis

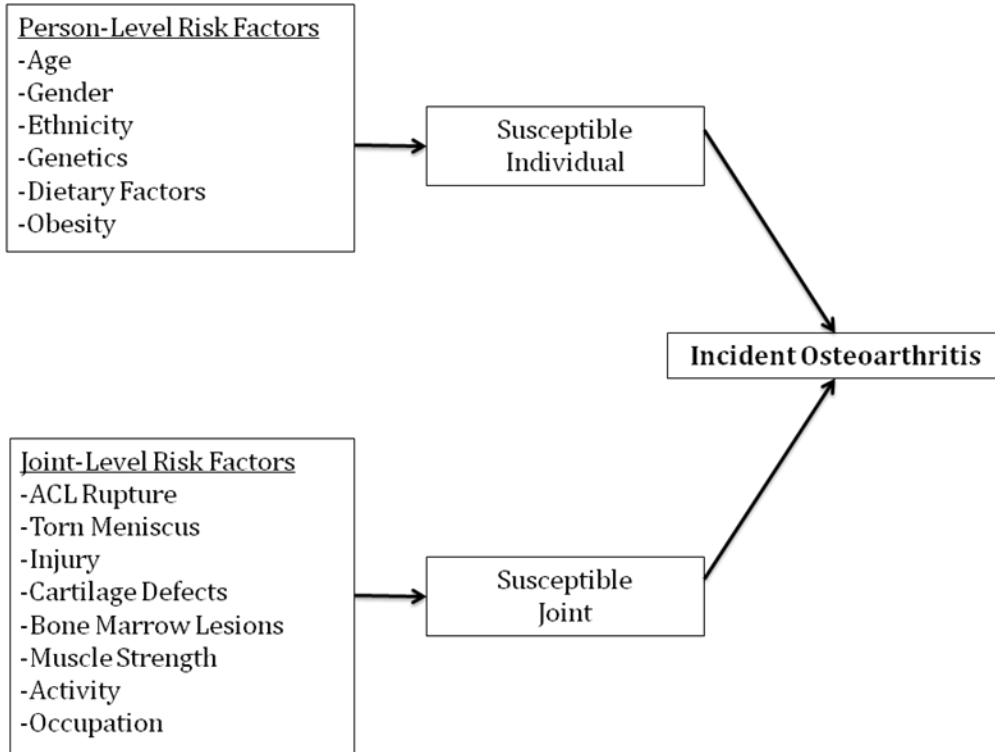


Fig 2a

Fig 2b

Fig 2 A 46 year old woman with recent acute twisting injury to knee resulting in anterior cruciate ligament tear, as well as tear of medial meniscus and a focal cartilage defect of the medial femoral condyle: (a) Sagittal fat suppressed fast spin echo proton density image of complete tear of anterior cruciate ligament with characteristic impaction bone bruises from translational component of injury (b) Coronal fat suppressed fast spin echo proton density image with vertical tear of the posterior medial meniscus (white arrow) and 10mm full thickness cartilage loss of medial femoral condyle (black arrow)

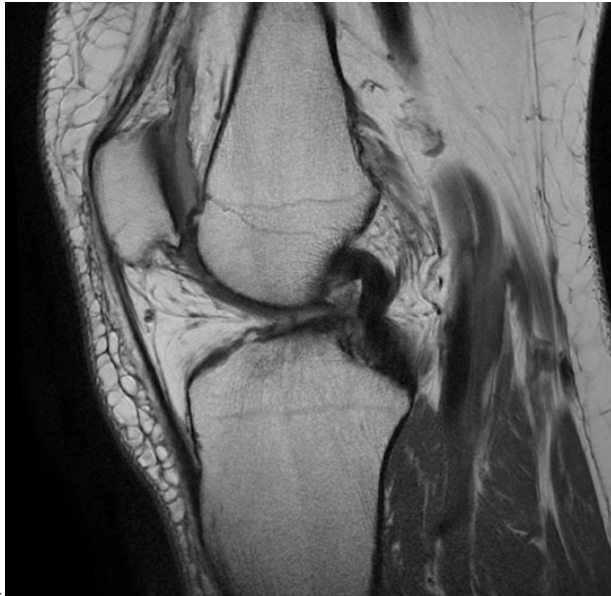


Fig 3a



Fig 3b

Figure 3 A 65 year old woman with extensive medial compartment osteoarthritis and chronic anterior cruciate ligament tear: (a) Sagittal fast spin echo proton density image with redundant posterior cruciate ligament as a result of anterior cruciate ligament deficiency (b) Coronal fat suppressed fast spin echo proton density image with marked longstanding cartilage loss and secondary tibial subchondral marrow lesion and cyst formation

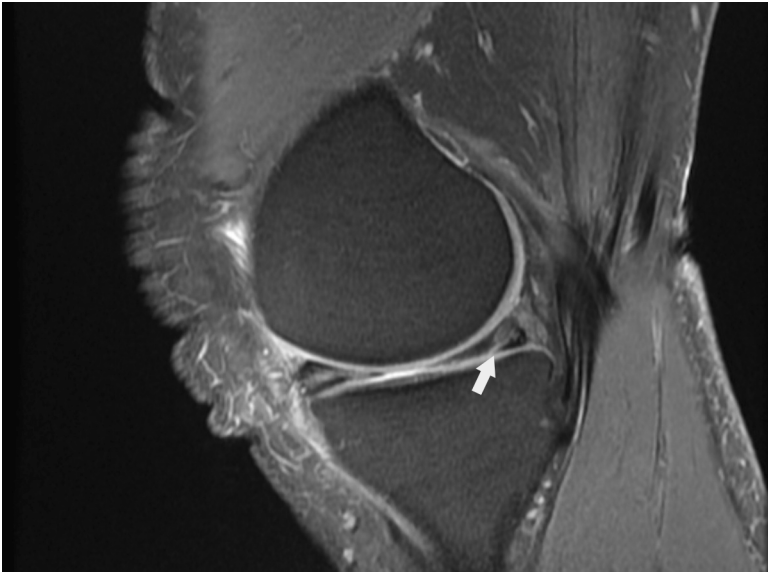


Fig 4

Fig 4 A 74 year old with degenerative horizontal tear of posterior medial meniscus and thinning of articular cartilage: Sagittal fat suppressed fast spin echo proton density image demonstrating a horizontal tear of the posterior medial meniscus (white arrow)

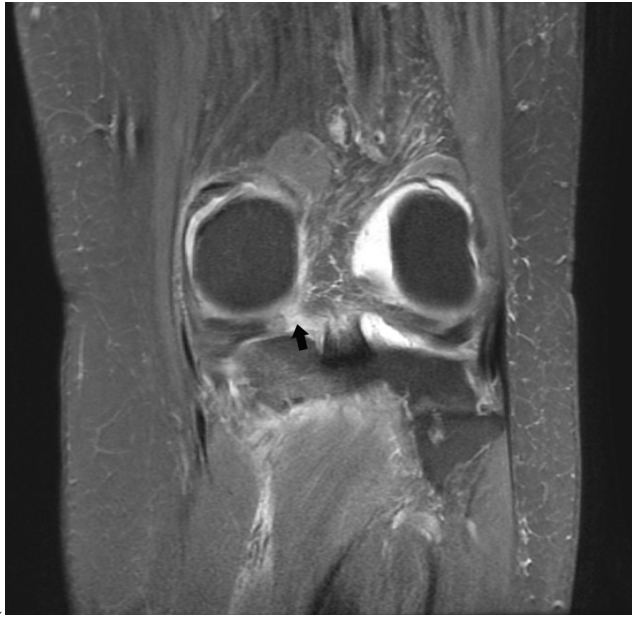


Fig 5a



Fig 5b



Fig5c

Fig 5 A 70 year old woman who had a minor injury, with a defunctioning medial meniscal root tear and displacement of the body of meniscus. (a) Coronal fat suppressed fast spin echo proton density image with tear of medial meniscal root (b) Coronal fat suppressed fast spin echo proton density image with medially displaced and defunctioned medial meniscus (c) A follow-up study 10 months later demonstrated rapid loss of articular cartilage and a focal subchondral collapse of the tibial plateau. Coronal fat suppressed fast spin echo proton density image with virtual loss of all articular cartilage over femoral and tibial surfaces as well as minor subchondral collapse, attrition and bone marrow lesion in the proximal medial tibia



Fig 6a



Fig 6b

Fig 6 A 70 year old man with an injury to knee resulting in focal cartilage loss: (a) Coronal fast spin echo proton density image with focal defect (b) Sagittal fat suppressed fast spin echo proton density image demonstrating focal cartilage defect (white arrow) with underlying bone marrow lesion and degenerative changes in posterior medial meniscus

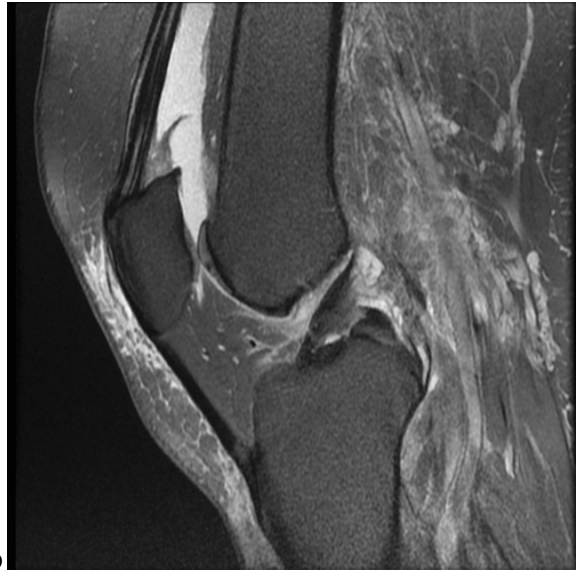


Fig 7a

Fig 7b

Fig 7 A 65 year old man with longstanding known osteoarthritis of knee and an episode of synovitis/ effusion:
(a) Coronal fat suppressed fast spin echo proton density image with moderate cartilage loss medial compartment as well as degeneration of medial meniscus.(b) Sagittal fat suppressed fast spin echo proton density image with prominent cartilage loss patellofemoral joint and large suprapatellar effusion.