MRI of Ankle Impingement Syndromes

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Highlights:

- Impingement is a clinical syndrome of end range joint pain and/or motion restriction due to the direct mechanical abutment of bone and/or soft tissues.
- High resololution non-arthrographic MRI can demonstrate osseous and soft tissue pathologies and anatomical variations that can predispose to impingement syndromes.
- Common sites of impingement in the ankle include posterior, postero-medial, antero-medial, antero-lateral and less commonly direct anterior.

Target audience: Radiologists reporting ankle MR examinations and technologists interested in the role MRI can play in the diagnosis of ankle impingement syndromes.

Objectives: Become familiar with the range of pathology that can cause ankle impingement syndromes and become familiar with their range of imaging appearances.

Synopsis: Impingement is a clinical syndrome of end-range joint pain and/or motion restriction due to the direct mechanical abutment of bone and/or soft tissues. Impingement syndromes at the ankle may occur after either acute macro-trauma or repetitive micro-trauma. Various underlying pathologies and anatomical variations may predispose to impingement. These include development bony prominences such as an os trigonum, acquired bony spurs and post-traumatic synovitis and intra-articular fibrous bands, capsular scarring / arthrofibrosis, loose bodies and ganglia. Modern imaging modalities can usefully demonstrate these changes and assist with patient management. Implicit in the definition of impingement as a clinical syndrome is that the diagnosis remains “clinical”, as imaging changes alone do not always reliably predict symptoms or clinical relevance. However, in general, the presence of synovitis, pericapsular oedema and bone marrow oedema in association with osseous and soft tissue pathologies and anatomic variations that predispose to impingement symptoms are, in the appropriate clinical context, suggestive of a degree of active impingement.

References:

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