Ankle and Foot Injuries: Analysis of MDCT Findings

Reference:

Scientific Literature Review

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Podiatric Relevance:
Conventional radiography is an essential tool in the diagnosis of acute foot and ankle trauma. Yet, the advantage of computed tomography (CT) cannot be overlooked in complex injuries. This article assessed MDCT (multidetector computed tomography) findings and the advantages of MDCT compared with conventional radiography in patients with acute ankle and foot trauma.

Methods:
This retrospective study took place at a level-1 trauma center. 388 patients who underwent radiographs and MDCT for acute foot and/or ankle trauma were included. The MDCTs and radiographs were reviewed and compared by two radiologists experienced in musculoskeletal imaging.

Results:
Of 388 patients, 344 patients had one or more fractures in the ankle or foot. The fractures included ankle, calcaneal, talar, midfoot, and forefoot fractures. The three most common fractures in the ankle not detected on radiographs were posterior malleolus, medial malleolus, and Tillaux-Chaput fractures. The sensitivity of detecting talar fractures on radiography was 78%. In midfoot fractures, detection sensitivity was 33% on radiographs.

Conclusions:
This article emphasizes the importance of MDCT in foot and ankle trauma. Plain film radiographs are still the primary imaging technique in evaluating these patients, but in patients with complex fracture patterns and high-energy trauma, MDCT of the entire foot and ankle is recommended.