



Case Reports and Series

Intra-articular Plica Causing Ankle Impingement in a Young Handball Player: A Case Report

Nicolaas Somorjai, MD¹, Bob Jong, MD², W.F. Draijer, MD, PhD³

¹ Orthopedic Resident, Department of Orthopedics, Orbis Medisch Centrum, Sittard-Geleen, The Netherlands

² Radiologist, Department of Radiology, Orbis Medisch Centrum, Sittard-Geleen, The Netherlands

³ Orthopedic Surgeon, Department of Orthopedics, Orbis Medisch Centrum, Sittard-Geleen, The Netherlands

ARTICLE INFO

Level of Clinical Evidence: 4

Keywords:

ankle arthroscopy
ankle sprain
ligament
MRI
osteochondral defect
synovial plica
talus
tibia

ABSTRACT

Ankle sprains are common injuries that respond well to rehabilitation. In the case of persisting symptoms, the differential diagnosis should include osteochondral defects, tendon injury, mechanical instability, and ankle impingement. In the present case report, we describe a 16-year-old male handball player who presented with persisting pain and locking in the right ankle 3 years after having sustained multiple minor inversion trauma. The clinical examination and conventional radiography showed no abnormalities. On magnetic resonance imaging, a flake fracture at the anteromedial talar dome and/or loose body was assumed. Arthroscopic examination revealed an intra-articular plica originating from an osteochondral fossa at the anteromedial tibial plafond. The plica was debrided. Retrospectively, the arthroscopic findings matched the radiographs and magnetic resonance images. The postoperative protocol consisted of early mobilization. At 6 weeks of follow-up, the patient had no pain and had returned to his sports activities. The present case report illustrates, to the best of our knowledge, the first case of ankle impingement due to a, most likely congenital, intra-articular plica arising from an osteochondral fossa at the anteromedial tibial plafond. This rare clinical condition can be diagnosed with magnetic resonance imaging. Arthroscopic debridement will effectively relieve the symptoms.

© 2013 by the American College of Foot and Ankle Surgeons. All rights reserved.

Ankle sprains are common sports injuries, and, although most respond well to rehabilitation, 15% to 20% of the injuries will result in persisting symptoms. In these cases, the differential diagnosis should include osteochondral defects, tendon injury, mechanical instability, and ankle impingement (1–6).

Osteochondral defects are commonly appreciated on the antero-lateral or posteromedial portion of the talar dome. Osteochondral lesions of the tibial plafond are rare and challenging, because no treatment guidelines have been established (1).

Ankle impingement can be classified according to the anatomic position in relationship to the tibiotalar joint: anterior, anteromedial, anterolateral, posterior, and posteromedial. Most commonly, impingement results from repetitive trauma, leading to abnormal osseous and/or soft tissue thickening within the ankle joint. One of these soft tissue abnormalities is a synovial thickening or plica in the ankle joint (2–7).

In the present report, we describe a case of ankle impingement and locking in a young handball player that was caused by an

intra-articular plica-like structure arising from an osteochondral fossa in the medial tibial plafond. Unlike synovial plica in the knee and ankle, ankle impingement caused by an intra-articular plica, particularly descending from an osteochondral niche in the medial tibial plafond, has never been reported (8–13).

Case Report

A 16-year-old male handball player with no medical history presented with intermittent pain in the right ankle of 3 years duration after repetitive minor inversion trauma during handball. Pain and a locking sensation occurred, especially during sustained load and running while playing handball. He had no complaints of instability.

The clinical examination showed a normal ankle, with normal alignment of the foot and ankle, full range of motion, and no swelling. A slight tenderness during palpation of the anterior talofibular ligament was observed. The anteromedial ankle showed no significant abnormalities. No signs of instability were seen.

The findings from conventional radiography of the right ankle were diagnosed as normal (Fig. 1). On magnetic resonance imaging (MRI) a small intra-articular anteromedial structure was seen (Figs. 2 through 4) and was assumed to be a flake fracture at the anteromedial talar dome and/or a loose body.

Financial Disclosure: None reported.

Conflict of Interest: None reported.

Address correspondence to: Nicolaas Somorjai, MD, Department of Orthopedics, Orbis Medisch Centrum, Dr. H. van der Hoffplein 1, Sittard-Geleen 6162 BG, The Netherlands.

E-mail address: nicolaas_somorjai@hotmail.com (N. Somorjai).



Fig. 1. Radiograph of the right ankle, anteroposterior view. No abnormalities were seen initially. Retrospectively, a subtle tibial articular surface alteration with focal depression and discrete subchondral sclerosis were seen at the medial border of the talonavicular articulation (*arrow*).



Fig. 2. Magnetic resonance imaging scan of the right ankle showing sagittal T₂-weighted proton-density fat-suppression, preoperative view. A flake fracture at the anteromedial talar dome and/or loose body was assumed (*arrow*).

Our preliminary diagnosis consisted of chronic repetitive ankle pain due to a small flake fracture at the anteromedial talar dome, resulting in a loose body. Therefore, ankle arthroscopy was performed. Arthroscopy showed a slightly irritated synovium. The view of the anteromedial corner and the medial malleolus was obstructed by a white soft tissue structure (*Fig. 5*). This structure originated from an anteromedial osteocartilaginous gutter between the tibial plafond and medial malleolus (*Fig. 6*). It most resembled a fibrous intra-articular plica, arising from the osteocartilaginous gutter, fanning out anteriorly. The plica could easily be removed with the shaver (*Figs. 7 and 8*). The osteochondral fossa was small ($\pm 10 \times 3$ mm) and covered with a thin layer of cartilage; therefore, we believed aggressive debridement was not needed. The postoperative

protocol consisted of early mobilization with partial weightbearing. At 2 weeks postoperatively, the wounds had healed nicely, but the ankle was still slightly swollen and painful. At 6 weeks of follow-up, the pain had completely disappeared, and the patient had resumed his sports activities. The patient remains without complaints at 2 years postoperative.

Discussion

We have described a unique case of ankle impingement. Our preliminary diagnosis consisted of a small flake fracture at the anteromedial talar dome, resulting in a loose body. However, during arthroscopy, no abnormalities were seen at the talar dome, although

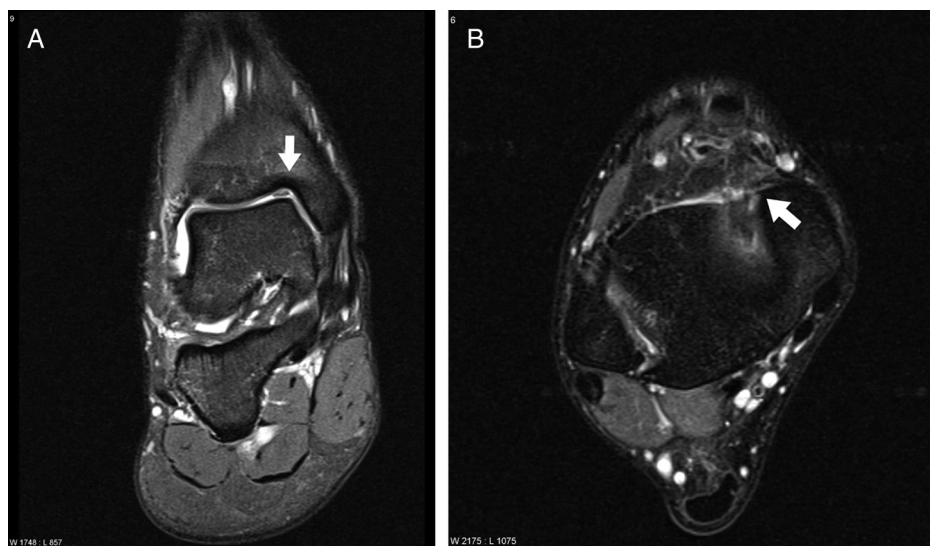


Fig. 3. (A) Magnetic resonance imaging scan of the right ankle showing coronal T₂-weighted proton-density fat-suppression, preoperative view. (B) Magnetic resonance imaging scan of the right ankle showing axial T₂-weighted, proton-density fat-suppression, preoperative view. A small intra-articular anteromedial structure (*arrow*) was assumed to be a flake fracture and/or loose body.

Download English Version:

<https://daneshyari.com/en/article/2715488>

Download Persian Version:

<https://daneshyari.com/article/2715488>

[Daneshyari.com](https://daneshyari.com)