Peroneal Tendon Abnormalities on Routine Magnetic Resonance Imaging of the Ankle

Joseph T. O’Neil MD, David Pedowitz MD, MS, Adam C. Zoga MD*, Patrick Kane MD, Steven M. Raikin MD

The Rothman Institute of Orthopaedics and *Division of Musculoskeletal Radiology
Thomas Jefferson University
All of the authors’ disclosures are in the final AOFAS Mobile App. None of the authors have any potential conflicts with this presentation.
Introduction

- Peroneal tendon injuries are commonly seen following inversion injuries and in cases of chronic ankle pain and instability.
- MRI is a commonly used imaging modality when evaluating chronic ankle pathology.
- Peroneal tendon abnormalities are often seen when looking at MRI’s of the ankle - but it is not known how often these abnormalities are seen on routine imaging.
Introduction

- MRI abnormalities in asymptomatic individuals well-documented in other areas of orthopaedics (Shoulder, Spine)
- Purpose: Determine incidence of peroneal tendon abnormalities on MRI of asymptomatic patients
Materials & Methods

- Included foot and ankle MRIs performed at our institution in July 2012
- Exclusion criteria:
  - Inversion injury
  - Ankle sprain
  - Lateral ankle trauma
- 305 MRIs identified > 158 included in study
- Patient questionnaire for medial, lateral, or “other” pain obtained
Materials & Methods

- Each MRI reviewed by a single attending musculoskeletal radiologist (AZ)
  - Integrity of peroneal tendons
    - Pathologies included tendinosis, tenosynovitis, chronic tears, tendon splits, pseudosubluxation
  - Confirmation of primary pathology noted in initial report
Results

- 100 females, 58 males
- Avg age: 47.27 yr
- 25 patients (15.8%) documented trauma to other areas of ankle (not lateral)
- 29 patients (18.3%) documented lateral ankle pain at time of MRI (but not reason for study)
- Most common primary diagnoses
  - Achilles tendinosis (25.9%)
  - Plantar fasciitis (12.6%)
  - PTT dysfunction (12.6%)
64/158 (40.5%) MRIs demonstrated pathology involving peroneal tendons

**Pathologies:**
- Tendinosis (60.9%)
- Tendon split (23.4%)
- Chronic tear (12.5%)
- Tenosynovitis (6.25%)
- Pseudosubluxation (3.1%)
- No acute tears
Discussion

- Around 40% of individuals can have peroneal tendon pathology on MRI of the foot and ankle when performed for reasons other than instability or lateral ankle trauma.
- Similar to what has been shown in the literature regarding MRI of the spine and shoulder, abnormalities must be correlated with clinical findings.
- Many MRI findings are clinically silent.
Orthopaedic surgeons or any other physician providing musculoskeletal care can provide counseling and reassurance to patients who present with peroneal pathology on MRI but an absence of clinical findings.
THANK YOU.
References