

Anterior Tibial Tendon Rupture

Tye J Ouzounian, M.D.

Anterior Tibial Tendon Rupture Disclosure statement

- Consultant Motion Picture Industrial Health Plan
- Volunteer positions
 - COA
 - AAOS
 - AOFAS
 - Assistant journal editor – Foot & Ankle International

Anterior Tibial Tendon Rupture

- Anterior tibial tendon laceration
 - Often called a rupture
- Traumatic rupture
 - Complete
 - Incomplete
- Atraumatic rupture

Anterior Tibial Tendon Rupture

- Third most common tendon rupture in the lower extremity
 - Achilles tendon
 - Patellar tendon
- Less than 200 reported cases in the western literature

Anterior Tibial Tendon Rupture

- Ouzounian & Anderson
 - 1995 / 12 cases
- Markarian, Kelikian, Brage, Trainor & Dias
 - 1998 / 16 cases
- **110 reported cases by 2006**
- Kopp, Backus, Deland & O'Malley
 - 2007 / 11 cases
- Sammarco, Sammarco, Henning & Chaim
 - 2009 / 19 cases
- Ellington, McCormick, Marion, Cohen, Anderson, Davis & Jones
 - 2010 / 15 cases (33 – 18 excluded)

Anterior Tibial Tendon Rupture

Clinical presentation

- Male
- Ages 50 – 70
- Delayed presentation common
 - Minimal pain
- Most important issue is to recognize the tendon rupture

Anterior Tibial Tendon Rupture

Mechanism of injury

- Abrupt plantar flexion against resistance
 - Complete rupture
 - Often underlying tendon degeneration
- Contusion
 - Incomplete rupture
- Atraumatic
 - Approximately 1/3 of patients

Anterior Tibial Tendon Rupture

Clinical presentation

- Acute pop or snap
- Acute pain
 - Resolves rapidly
- Gait problems
 - Steppage or slap foot gait
- Decreased extension
- Anterior ankle mass

Anterior Tibial Tendon Rupture

Associated conditions

- Corticosteroid injection
- Systemic corticosteroids
- Diabetes mellitus
- Rheumatoid arthritis and related disorders

Anterior Tibial Tendon Rupture

Diagnosis and imaging

- Diagnosis is clinical
 - Defect in anterior tibial tendon
 - Dorsiflexion – inversion weakness
 - Anterior ankle mass
 - Inability to dorsiflex ankle with heel walk
- MRI
- Ultrasound

Anterior Tibial Tendon Rupture

Treatment options

- Operative
 - Acute rupture
 - Laceration
- Nonoperative
 - Atraumatic
 - Nothing
 - AFO

Anterior Tibial Tendon Rupture

Operative repair

- Tendon to bone
- Direct tendon repair
- Tendon sliding lengthening
- Tendon transfer / graft
- Consider Achilles lengthening

Anterior Tibial Tendon Rupture Results

- Operative
 - Most resume prior activities
 - Satisfied with outcome
- Nonoperative
 - Most had minimal symptoms at presentation

Anterior Tibial Tendon Rupture

Thank you to the following individuals who provided clinical photographs, although they were not utilized.

- Robert Anderson, MD
- Lew Schon, MD

THANK YOU