

## Quick off the Mark with Achilles Tendon Rupture

**Authors :** Emily Moore, Andrew Gaukroger, Matthew Solan, Lucy Bailey, Alexandra Boxall, Andrew Carne, Chintu Gadamsetty, Charlotte Morley, Katy Western, Iwona Kolodziejczyk

**Abstract :** Introduction: Rupture of the Achilles tendon is common and has a long recovery period. Most cases are managed non-operatively. Foot and Ankle Surgeons advise an ultrasound scan to check the gap between the torn ends. A large gap (with the ankle in equinus) is a relative indication for surgery. The definitive decision regarding surgical versus non-operative management can only be made once an ultrasound scan is undertaken and the patient is subsequently reviewed by a Foot and Ankle surgeon. To get to this point, the patient journey involves several hospital departments. In nearby trusts, patients reattend for a scan and go to the plaster room both before and after the ultrasound for removal and re-application of the cast. At a third visit to the hospital, the surgeon and patient discuss options for definitive treatment. It may take 2-3 weeks from the initial Emergency Department visit before the final treatment decision is made. This "wasted time" is ultimately added to the recovery period for the patient. In this hospital, Achilles rupture patients are seen in a weekly multidisciplinary OneStop Heel Pain clinic. This pathway was already efficient but subject to occasional frustrating delays if a key staff member was absent. A new pathway was introduced with the goal to reduce delays to a definitive treatment plan. Method: A retrospective series of Achilles tendon ruptures managed according to the 2019 protocol was identified. Time taken from the Emergency Department to have both an ultrasound scan and specialist Foot and Ankle surgical review were calculated. 30 consecutive patients were treated with our new pathway and prospectively followed. The time taken for a scan and for specialist review were compared to the 30 consecutive cases from the 2019 (pre-COVID) cohort. The new pathway includes 1. A new contoured splint applied to the front of the injured limb held with a bandage. This can be removed and replaced (unlike a plaster cast) in the ultrasound department, removing the need for plaster room visits. 2. Urgent triage to a Foot and Ankle specialist. 3. Ultrasound scan for assessment of rupture gap and deep vein thrombosis check. 4. Early decision regarding surgery. Transfer to weight bearing in a prosthetic boot in equinus without waiting for the once-a-week clinic. 5. Extended oral VTE prophylaxis. Results: The time taken for a patient to have both an ultrasound scan and specialist review fell > 50%. All patients in the new pathway reached a definitive treatment decision within one week. There were no significant differences in patient demographics or rates of surgical vs non-operative treatment. The mean time from Emergency Department visit to specialist review and ultrasound scan fell from 8.7 days (old protocol) to 2.9 days (new pathway). The maximum time for this fell from 23 days (old protocol) to 6 days (new pathway). Conclusion: Teamwork and innovation have improved the experience for patients with an Achilles tendon rupture. The new pathway brings many advantages - reduced time in the Emergency Department, fewer hospital visits, less time using crutches and reduced overall recovery time.

**Keywords :** orthopaedics, achilles rupture, ultrasound, innovation

**Conference Title :** ICOSMAS 2022 : International Conference on Orthopedics, Sports Medicine and Arthroscopic Surgery

**Conference Location :** Paris, France

**Conference Dates :** October 27-28, 2022