Variability and Quality of Physical Therapy Protocols after Surgical Repair for Achilles Tendon Rupture Available Online for Patient and Therapist Education

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The authors have nothing to disclose

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We have no potential conflicts with this presentation.
Background and Objectives

- Orthopaedic practices post information on physical therapy exercises and post-surgical caution online for patients and physical therapists. This includes the case for rehabilitation after Achilles tendon repair.

- It is important to assess the consistency within the online available protocols and determine if they retain current evidence-based principles.

- The purpose of the current study was to evaluate the consistency and quality of online physical therapy protocols after Achilles tendon surgical repair available to patients and physical therapists.
Methods

- Protocols were searched on Google by using the term “(achilles AND repair) AND (rehabilitation OR physical therapy) AND (protocol OR guidelines)” on three different computers.

- Methodical protocols on rehabilitation after Achilles tendon rupture repair from the first 100 websites with each search were collected. Duplicated protocols and non-operative treatment protocols were excluded.

- A comprehensive, custom scoring system was created to assess the source and each rehabilitation components of the protocols, including ankle immobilization, weight bearing status, range of motion, strengthening exercises, proprioceptive activities, functional return, as well as the time line for each component.
Results

- Fifty-three protocols were included in the current study (35.8% academic). Orthopaedic surgeon-affiliated websites accounted for 86.8%.

- Thirty-six studies (67.9%) advised non-weight-bearing immediately after surgery. The timeline of weight bearing advancement varies among protocols (Fig. 1).

- Forty-four protocols (83.0%) mentioned utilization of heel lifts throughout the protocol with different recommendations on specific timing.

- Non-ankle specific exercises were recommended in forty-three (81.1%) protocols.

- Considerable variation existed in the types and time line of recommended exercises, including the ones for range of motion, strength, proprioception, overall function, and functional return.
Results

Figure 1. Types of websites of the included protocols
Results

Figure 2. Distribution of starting points in weeks of weight bearing status after surgery

NWB: non-weight bearing; TDWB: touch down weight bearing; TTWB: toe touch weight bearing; ParWB: partial weight bearing; ProWB: protected weight bearing; WBAT: weight bearing as tolerated; FWB: full weight bearing
Results

**Figure 3.** Distribution of starting points in weeks of on heel lift usage after surgery
Figure 4. Distribution of starting points in weeks of active ankle range of motion restrictions after surgery.
Results

**Figure 5.** Types of strengthening exercises recommended by the included protocols.
Figure 6. Types of proprioceptive exercises recommended by the included protocols.
Results

Figure 7. Types of functional exercises recommended by the included protocols.
Figure 8. Distribution of starting points in weeks of functional return recommended by the included protocols.
Conclusions

- Considerable variation existed in many components of physical therapy protocols for Achilles tendon repair after rupture, which subsequently could lead to confusion and misinterpretation among patients, and even therapist.

- Greater effort should be paid to create more evidence-based protocols that are both easy for patients and physical therapists to understand and execute.

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