

TENDON RUPTURE

Background

This case definition was developed by the Armed Forces Health Surveillance Center (AFHSC) for the purpose of epidemiological surveillance of a condition important to military-associated populations. Studies have shown that spontaneous tendon ruptures have a disproportionately large impact on military operational effectiveness and the military health system.^{1,2}

Clinical Description

Tendon ruptures are tears in the fibrous tissue that attaches muscle to bone. Tendon ruptures may occur without significant trauma (i.e., spontaneous rupture) and are commonly associated with strenuous activities. For example, running, sudden stops and starts, and jumping are often associated with Achilles tendon tears. Other risk factors include increasing age, male gender, use of certain medications (e.g., fluoroquinolone antibiotics, anabolic steroids), and degenerative changes in tendon tissue. In addition, there may be a genetic predisposition. Tendon ruptures can be chronically painful and disabling depending on the nature and location of the affected tendon. Most ruptured tendons can be repaired surgically or with immobilization; however, regardless of the therapeutic approach, there are often long periods of rehabilitation.³

Case Definition and Incidence Rules

For surveillance purposes, a case of tendon rupture is defined as:

- *One hospitalization or outpatient medical encounter* with any of the defining diagnoses of tendon rupture (see ICD9 code list below) in the *primary* diagnostic position.

Incidence rules:

For individuals who meet the case definition:

- The incidence date is considered the date of the first hospitalization or outpatient medical encounter that includes a diagnosis of tendon rupture.
- For analyses of all tendon ruptures in *any* location, an individual is considered an incident case once during the surveillance period. For analyses of ruptures of a specific tendon, an individual is considered an incident case once per specific tendon per surveillance period.

Exclusions:

- None

¹ Jarvinen TAH, Kannus P, Maffulli N, Khan KH. Achilles tendon disorders: etiology and epidemiology. *Foot Ankle Clin N Amer.* 2005; 10:255-266.

² White DW, Wenke JC, Mosely DS, Mountcastle SB, Basamania CJ. Incidence of major tendon ruptures and anterior cruciate ligament tears in US Army soldiers. *Am J Sports Med.* 2007 Aug; 35(8):1308-14.

³ Armed Forces Health Surveillance Center. Tendon Rupture, U.S. Armed Forces, 2000-2009. *Medical Surveillance Monthly Report (MSMR).* 2010 July; Vol 17(7): pp. 14-19.



Codes

The following ICD9 codes are included in the case definition:

Condition	ICD-9-CM Codes	CPT Codes
Tendon rupture	<p>727.6x Rupture of tendon, nontraumatic</p> <ul style="list-style-type: none"> - 727.60 (nontraumatic rupture of unspecified tendon) - 727.61 (complete rupture of rotator cuff) - 727.62 (tendons of biceps; long head) - 727.63 (extensor tendons of hand and wrist) - 727.64 (flexor tendons of hand and wrist) - 727.65 (quadriceps tendon) - 727.66 (patellar tendon) - 727.67 (Achilles tendon) - 727.68 (other tendons of foot and ankle) - 727.69 (other) 	NA

Development and Revisions

- This case definition was developed in July of 2010 by Armed Forces Health Surveillance Center staff for use in a MSMR article on tendon ruptures.³ The case definition was developed in consultation with external experts on tendon ruptures from the U.S. Military Academy and is also based on reviews of ICD9 codes, the scientific literature, and previous AFHSC analyses.

Case Definition and Incidence Rule Rationale

- Hospitalizations are restricted to tendon ruptures reported in the primary diagnostic position in hospitalization and outpatient records in an effort to increase the specificity of cases identified.

Code Set Determination and Rationale

- The code set was selected after a review of the scientific literature and of the relevant codes in the International Classification of Diseases, 9th Revision.
- The code set includes all codes pertaining to tendon rupture in the ICD9 revision. Codes specific for partial or incomplete tendon ruptures or tears are not included.

Reports

None

Review

Mar 2012 Case definition reviewed and adopted by the AFHSC Surveillance Methods and Standards (SMS) working group.



Jul 2010 Case definition developed and adopted by the AFHSC MSMR staff.

Comments

None

