

Aggressive early mobilization and weight-bearing in non-operative treatment of acute Achilles tendon rupture may increase the risk of rerupture – a retrospective cohort study

166.

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Background: The best treatment of acute Achilles tendon rupture remains unclear. Even within non-operative treatment regimes, it remains uncertain when mobilization and weight-bearing can be instituted without increased risk of rerupture.

Purpose / Aim of Study: In the present retrospective cohort study, two non-operative treatment regimens were compared in terms of rerupture risk

Materials and Methods: Between 2008 and 2014 the standard treatment protocol at Horsens Regional Hospital in Denmark for an acute Achilles tendon rupture was nonoperative. February 1st 2012, this protocol was changed from Treatment A (non-weightbearing equinus cast for the first three of 8 weeks) to Treatment B (non-weightbearing equinus boot for the first two of 8 weeks). The treatment protocols were otherwise mainly alike. From the diagnostic coding of Achilles tendon rupture and surgical coding in the digital patient records, the patients with an acute Achilles tendon rupture/rupture and their treatment were identified. Based on the time of diagnosis, the Relative Risk for rerupture was calculated for the two different treatment protocols A and B.

Findings / Results: Between 2008 and 2014, 389 patients were registered with an acute Achilles tendon rupture at Horsens Regional Hospital. Treatment A was given to 183 patients from 2008-2012. Treatment B was given to 179 patients from 2012-2014. Twenty-seven patients opted for primary surgery (Treatment C). Treatment A had 1 rerupture and 1 tendon malunion versus Treatment B with 8 reruptures and 2 tendon malunions (RR=4,9, p=0,039), most of which were treated with secondary surgical reconstruction. Treatment group C had 0 reruptures and 0 tendon malunions.

Conclusions: Aggressive early mobilization and weight-bearing in non-operative treatment of acute Achilles tendon rupture may increase the risk of Achilles tendon rerupture.

No conflicts of interest reported