

## Severely Reduced Functional Outcome at Mean 9 Year Follow-Up After Complications Associated with Acute Achilles Tendon Rupture

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### Summary:

119 patients investigated at mean 9 years follow up had a remarkable reduction of the ATRS and PCS. Patients suffering from re-rupture had a significant elongation of the tendon and reduction of strength in the affected limb.

### Abstract:

**BACKGROUND:** Treatment of acute Achilles tendon rupture is highly debated. In the pursuit of the best treatment severity of complications is important.

**PURPOSE:** To investigate the long term effect of deep infection, sural nerve injury and re-rupture in the treatment of acute Achilles tendon rupture.

**MATERIALS AND METHODS:** 324 patients made a claim to the Danish Patient Insurance in the period 1992 to 2010 due to a complication after acute Achilles tendon rupture. Of those 233 agreed to receive written information concerning the investigation and 119 patients (m/f = 77/42) returned the Achilles tendon Total Rupture Score (ATRS) and the Short Form-36 (SF-36) questionnaires. Patients suffering from deep infection (n=10), Sural nerve injury (n=10) and re-rupture (n=16) were invited to participate in a follow up investigation.

**RESULTS:** The mean follow up period was 8.9 years (3;21). Looking at the whole population a mean ATRS of 49 (SD 27) was found; in comparison healthy subjects have a median of 100 (94;100). The summary scores of SF-36 were PCS = 43 (SD 11) and MCS = 52 (SD 11); in comparison healthy subjects have a mean of 50 for both scores. No significant differences were found comparing the subpopulations who suffered from a deep infection, injury to the Sural nerve or re-rupture. The physical evaluation investigating tendon length and heel-rise work revealed a statistically significant difference between the affected and the unaffected limb after re-rupture ( $p < 0.01$ ) but not after injury to the Sural nerve (n.s.) and deep infection (n.s.).

**CONCLUSION:** The investigated patients who suffered from a complication after acute Achilles tendon rupture had a remarkable reduction of the ATRS and PCS at mean 9 year follow up. Patients suffering from re-rupture had a significant elongation of the tendon and reduction of strength in the affected limb.