Treatment of Myotendinous Achilles Ruptures: A Retrospective Study

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Introduction
The Achilles tendon can be injured acutely in 3 different locations: the mid-substance, distal insertion, and myotendinous junction. While much has been written about mid-substance and insertional Achilles ruptures, there is scant literature regarding myotendinous injuries. The purpose of this study is to retrospectively examine clinical outcomes from uniform nonsurgical treatment of myotendinous Achilles ruptures.

Methods
Between November 2005 and May 2011, thirty patients presented with an acute, complete myotendinous Achilles rupture. The location of the Achilles injury was confirmed on magnetic resonance imaging (MRI) for all patients. All patients were treated non-surgically. This involved 4 weeks of non-weightbearing and then 4 weeks of progressive to full weightbearing in a Bledsoe Achilles boot. Physical therapy was provided for 4 to 6 weeks after this period of immobilization. 21 patients were male and the remaining 9 were female. The patients were aged between 24 and 54 years with the mean age being 40.8 years. 15 patients had the right Achilles myotendinous junction affected while the other 15 had the injury at their left Achilles. Patients were followed up from 7 to 73 months with the mean being 28.0 months.

Results
Full healing of the Achilles’ myotendinous junction was achieved clinically in all 30 patients (100 %). All patients experienced improved function and less pain at their latest follow-up. Mean Foot and Ankle Ability Measures – Activities of Daily Living (FAAM-ADL) increased from 20.2% at the time of initial presentation to 95.2% at the latest follow-up (P<0.05). Mean Visual Analog Scores (VAS) of pain decreased from 8.2 at the time of initial presentation to 1.3 at latest follow-up (P<0.01). 23 (76.7%), 6 (20%), and 1 (3.3%) patient rated their satisfaction as excellent, good, and fair respectively. No patients have developed recurrent myotendinous Achilles ruptures to date.

Conclusion
This study demonstrates that nonsurgical treatment of myotendinous Achilles ruptures results in a high rate of improved patient function and pain relief. Clinical outcomes from treating this type of Achilles injury in this manner have not been previously reported in the orthopaedic literature. As myotendinous Achilles ruptures are studied further, nonsurgical care should be strongly considered as treatment.