

Title of Presentation:

Mid-substance Peroneal Tendon Defects Augmented with an Acellular Dermal Matrix Allograft

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BACKGROUND:

The purpose of this study was to evaluate a surgical repair augmented with an acellular dermal matrix allograft to span the tissue gap for chronic mid-substance combined peroneous longus and brevis tendon tears. The hypothesis of this study was that acellular dermal matrix allograft augmentation of chronic longitudinal mid-substance or complete tears of both peroneal tendons is effective and provides sufficient initial strength to allow a rapid rehabilitation program.

METHODS:

Starting in 2007 a consecutive series of mid-substance peroneal tears with tissue loss at the fibula were prospectively collected. Demographic data, American Orthopaedic Foot and Ankle Society hindfoot-ankle scores, a subjective questionnaire, and functional tests were obtained for all cases. Physical examinations (including ranges of motion), pre-operative radiographs, and MRIs were sulcus deepening, and augmentation with a “gap jumping” tubular grafting with an acellular dermal matrix. An accelerated rehabilitation protocol was followed.

RESULTS:

Seven cases were included (6 females and 1 male). The average age was 43 years (range, 28-61). The average follow up was 8.8 months (range, 6-12 months). All patients were treated nonoperatively for at least 6 months. Two patients had undergone lateral ankle instability surgery including peroneal tendon rupture on MRI. The mean AOFAS hindfoot score was 92 (range, 81-100) at follow up. Three patients had 1 cm of calf atrophy and four had no measurable atrophy. All patients were able to perform single-heel rise, walk on their tiptoes, and had full painless ankle and foot range of motion bilaterally.

CONCLUSION:

An acellular dermal matrix graft provides an effective “gap jumping” augmentation for repairs of chronic degenerative peroneal tendon tears.