In the disorder of posterior tibial tendon (PTT) dysfunction, it has been recognized that reconstruction of the spring ligament and PTT provides resolution of medial pain but not provide of the pes planovalgus et abducts deformity. For this reason, osteotomies, have been combined with tendon transfers in an attempt to give long-lasting correction of both pain and deformity. Both lateral column lengthening osteotomy of the calcaneus and medial displacement calcaneal osteotomy were shown to have an important role in management by restoring normal biomechanics and allowing the reconstructed and transferred tendons to function successfully.

The question which may arise regarding tendon reconstruction procedures is to what extent can elasticity and strength of the posterior tibial muscle be restored after surgical tendon reconstruction? Therefore, in 2004 we have performed a study to determine the recovery potential of the posterior tibial muscle after late reconstruction following tendon rupture in stage II of PTT dysfunction.

In total, 24 patients (18 women, 6 mean) with a mean age of 59.8 years were included into the clinical study with a mean follow-up of 47 months after surgical reconstruction of a completely ruptured PTT (end-to-end anastomosis, side-to-side augmentation with the flexor digitorum longus tendon). Additional, a distal calcaneal osteotomy with a tricortical iliac crest bone graft was performed to lengthen the lateral column. At follow-up, clinical and radiological assessment was performed including strength measurement and qualitative and quantitative MRI investigation.

The overall clinical results were graded excellent and good, in 12 and one patients, respectively. Postoperatively, all patients experienced significant improvement of the AOFAS hindfoot score. All patients showed a significant strength of the posterior tibial muscle on the affected side, but it was smaller than on the non-affected side. On postoperative MRI, the PTT could be found to be intact in all patients.

In conclusion we can state, that the recovery potential of the posterior tibial muscle was shown to be significant even after delayed repair of its ruptured tendon. A ruptured and/or diseased PTT should not be transsected as it excludes any recovery possibilities of the posterior tibial muscle.

**Literature**