

## Evaluation of The Outcome of Surgical Management of Chronic Insertional Achilles Tendon Ruptures and Augmentation with Flexor Halluces Longus Tendon Transfer (FHL).

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### Abstract

**Introduction:** Achilles tendon is considered one of the most commonly ruptured tendons in lower extremity and it's injury considered an important cause of marked impairment in foot and ankle function. Chronic Achilles Tendon rupture is defined as ruptures that occurs within 4 to 6 weeks after injury. Operative management for chronic ruptures is the gold standard management unless there are contraindications to surgery. Chronicity, degeneration and negligence of Achilles tendon rupture results in large gap making direct repair difficult or unapplicable; therefore, the call for reconstructive surgery of the Achilles tendon is more important. Many surgical techniques are described for reconstruction of chronic Achilles tendon rupture, flexor hallucis longus (FHL) transfer to augment the Achilles tendon gap was described as a reliable method of augmentation of the Achilles Tendon insertional rupture.

**Patients and Methods:** This is a prospective study that was conducted upon 11 of patients from March 2015 to February 2018, to evaluate the functional outcome of the repair of chronic insertional Achilles tendon ruptures using anchors and augmenting the repair with transfer of flexor Halluces Tendon (FHL), and V-Y Tenoplasty of the gastrocnemius tendon via separate incision. And evaluation of its probable effect on hallux function.

**Results:** This study was conducted upon 11 of patients of chronic insertional Achilles tendon ruptures. The results of AOFAS Ankle Hind foot markedly improved in all cases with significant relation (P-Value =0.003) between our procedure and the outcome. Regarding the relations between AOFAS Hind foot and some important patient's characteristics, we found a significant relation with the age group between 50-59 years (P-Value =0.011), a significant relation with comorbidities particularly diabetes mellitus (P-Value =0.030), and a significant relation with the presence of post-operative complications like wound infection (P-Value =0.048), We found a significant correlation between the results of AOFAS Ankle Hind foot and injury-intervention interval (P-Value =0.007), and Body Mass Index (P-Value =0.004).

**Conclusion:** Reconstruction of chronic Achilles Tendon insertional ruptures with a FHL tendon transfer with V-Y plasty of gastrocnemius by way of a two incisions appears to be an acceptable approach, with good overall outcomes, including Achilles Tendon function, physical function, and pain relief, with a low complication rate.

**Keywords:** Insertional Achilles Tendon Rupture, Flexor Halluces Tendon Transfer, Gastrocnemius V-Y Plasty.

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