

FUNCTIONAL RECONSTRUCTION OF A COMBINED TENDOCUTANEOUS DEFECT OF THE ACHILLES USING COMPOSITE FREE ANTEROLATERAL THIGH FASCIOCUTANEOUS FLAP WITH VASCULARIZED FASCIA LATA

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ABSTRACT

Combined tendocutaneous defect of Achilles tendon remains a complex reconstructive challenge whereby both the soft tissue coverage and tendon reconstruction have to be considered to achieve a good functional and aesthetic outcome. Potential regional vascular compromise from previously injured leg and inability to provide tendon-like structures have rendered the non-suitability of loco-regional flap. Thereby, in this scenario, compound free flap with multiple tissue components represents a better solution, which has the advantage of incorporating vascularized tendon and skin coverage together. We described a 14-year-old boy who sustained an open right calcaneum fracture (Gustilo-Anderson IIIB) with transected Achilles tendon and huge skin defect from motorcycle wheel spoke injury. He initially underwent wound debridement, primary repair of Achilles tendon and external fixator application of right ankle. However, there was gapping at tendon repair site 3 weeks after primary repair due to poor healing. Subsequently, simultaneous soft tissue coverage and tendon defects reconstruction for a sizeable, combined Achilles tendon (6 cm long) and overlying skin defect (12 X 6 cm) using composite sensate free anterior lateral thigh (ALT) fasciocutaneous flap with vascularized fascia lata was performed at approximately 1 month from initial injury. The vascularized fascia lata was tabularised to wrap the native proximal stump of Achilles tendon and secured using modified Krakow suturing technique. The Distal end of tubularized fascia lata was then secured by drilling across right calcaneum bone and passing the suture transosseously. He led an uneventful post-operative recovery whereby he was able to ambulate with normal gait and lift his own weight against gravity without donor site complication at 1 year after surgery. The case report aims to present the application of this technique and its advantages over other flap choices in such huge combined tendocutaneous defect.