Functional Outcomes Of Medial Gastrocnemius Transfer as a Free Functional Muscle for Upper Limb Reconstruction: A Retrospective Study

Muhammad Talha Khan Lodhi[1] Muhammad Omar Afzal[2], Kamran Khalid[3]

[1]Shaukat Khanum Memorial Cancer Hospital and Research Centre, Surgical Oncology, Lahore, Pakistan.
[2]Jinnah Burn and Reconstructive Surgery Centre Lahore, Pakistan

OBJECTIVE

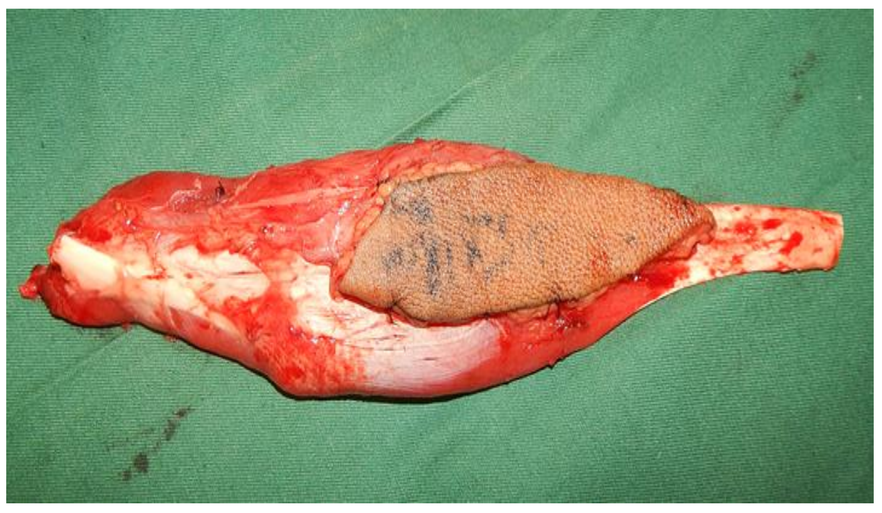
Functional reconstruction of forearm flexor compartment is quite challenging after severe Volkman's ischemic contracture, trauma or post tumor resection. Functional muscle transfer serves best solution to it. We present our cases of using free medial gastrocnemius muscle transfer a functioning muscle as opposed to traditional tendon transfer or free gracilis transfer for upper limb reconstruction.

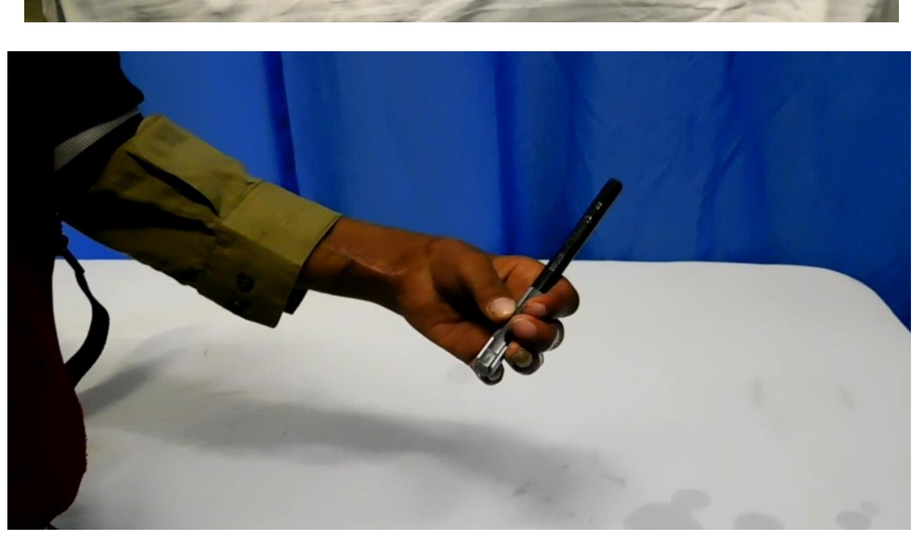
METHODS

In this study we conducted a retrospective analysis of 10 patients who underwent free gastrocnemius muscle transfer for functional reconstruction of forearm between January 2023 and December 2024. All patients were examined pre operatively and post operative assessment for grip strength, wrist and finger flexion and donor site morbidity were performed

TREATMENT

Flexor forearm reconstruction with Medial Gastrocnemius transfer as a Free Functional Muscle





RESULTS

A total of 10 patients with an average of 18 years who underwent flexor forearm reconstruction after Volkman's ischemic contracture, post tumor resection and post traumatic defect were included in this study.

All patients had 100% flap survival rate with 5/5 muscle grip strength, wrist and digital flexion at 12-18 months follow up.

CONCLUSION

Transferring free Medial Gastrocnemius as functional muscle is a safe and reliable option for upper limb reconstruction with advantages including a high success rate, rapid reinnervation, great strength and minimal donor-site morbidity