

## FREE FUNCTIONAL LATISSIMUS DORSI MUSCLE FLAP IN THE TRAUMATIC LOWER EXTREMITY: A CASE REPORT AND LITERATURE REVIEW

**Ragnild Redit**<sup>1,2\*</sup>, Fatimah Mat Johar<sup>2</sup>, Wan Azman Wan Sulaiman<sup>2</sup>

<sup>1</sup>Reconstructive Sciences Unit, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, 16150 Kota Bharu, Kelantan, Malaysia

<sup>2</sup>Hospital Universiti Sains Malaysia, Jalan Raja Perempuan Zainab II, Kubang Kerian, 16150 Kota Bharu, Kelantan, Malaysia

\*Corresponding author's email: [ragnildr@gmail.com](mailto:ragnildr@gmail.com)

### ABSTRACT

The reconstruction of the traumatic lower extremity remains a challenging task for both the orthopaedic and plastic surgeon. Various options of reconstruction are available with muscle flaps being one of the most reliable for soft tissue coverage. Nevertheless, there are limited reported cases in literature on the functional reconstruction potential as a neurovascularised muscle flap in the traumatic lower extremity. A free functional muscle transfer is used to restore critically damaged extremities, in addition to functional limb salvage. Here, we present a case of a 62 years old gentleman with an open fracture of the proximal left tibia and fibula with vascular injury (Gustilo classification grade 3C), complicated with soft tissue necrosis and exposed proximal tibia bone post revascularization of the left anterior tibial artery, in which a free functional latissimus dorsi muscle flap was used for simultaneous soft tissue coverage and functional reconstruction of the anterior compartment of the leg in the traumatic lower extremity. At 6 months postoperatively, he had satisfactory functional outcome wherein active dorsiflexion of his ankle joint was restored, with minimal donor site morbidity.

**Keywords:** free functional muscle transfer, extremity