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## Outcome of Islanded Gastrocnemius Musculocutaneous Flap in Orthopaedic Practice

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### Abstract

Introduction: Large wounds in the leg require combination of local flaps or free flap for wound coverage. Gastrocnemius musculocutaneous flap (GMCF) allows a large wound to be covered by a single local flap. However, the conventional GMCF is often associated with donor site morbidity where the exposed soleus raphe causes poor uptake of the skin graft. Islanding the skin on the muscles allows the donor site to be closed primarily, thus avoiding the donor site morbidity.

Materials and Methods: Medical records of twelve patients who underwent islanded GMCF surgery from 2004 till 2018 were reviewed retrospectively.

Results: The mean age was 31 years old. Eight cases were with open fracture of the tibia, two degloving injury exposing the patella, one open fracture of patella and necrotising soft tissue infection. The wound size ranged from 12cm(2) to 120cm(2). All flaps survived. Three patients required skin grafting at the donor site while in the rest the donor sites were able to be closed primarily. Four patients developed deep infection, one healed after vacuum dressing, one after bone transport and one after split thickness skin graft. One patient ended up with below knee amputation after developing chronic osteomyelitis of the tibia.

Conclusion: Islanded gastrocnemius musculocutaneous flap is an effective simple alternative for coverage of large soft tissue defects from the knee to half of the leg distally with minimal donor site morbidity. Aggressive debridement of unhealthy tissue is necessary to prevent infection following wound coverage with this flap.

### Keywords

Author Keywords: surgical flaps; leg injuries; wounds

KeyWords Plus: MUSCLE FLAP; POSTTRAUMATIC OSTEOMYELITIS; MEDIAL GASTROCNEMIUS

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