

## Islanded Gastrocnemius Musculocutaneous Flap For Coverage Of Large Wound In The Leg And Knee

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### INTRODUCTION:

Gastrocnemius muscle flap can only cover small wound in the proximal tibia. The flap size can be increase by including the skin overlying the muscle. The area of coverage and the reach of the flap will increase The main problem with this flap (gastrocnemius musculocutaneous flap) is the donor site morbidity because the expose soleus muscle raphe doesn't take the skin graft very well. To overcome this problem, we are now islanded the skin paddle and by doing this, the donor site can be closed primarily. Thus covering the soleus muscle raphe and avoiding skin graft over it. The aim of this study is to investigate the outcome of using gastrocnemius musculocutaneous flap to cover large soft tissue defect in the leg.

### MATERIALS & METHODS:

A consecutive series of 11 patients underwent islanded gastrocnemius musculocutaneous flap surgery in Orthopaedic Department, Hospital Tengku Ampuan Afzan Kuantan Hospital from 2004 till 2017.were reviewed retrospectively. There were 8 males and 3 females with the mean age of 30.6 years old (range 13 to 60). Seven cases were due to open fracture grade IIIB of the tibia, 2 due to degloving injury exposing the patella ligament and the patella, 1 due to open fracture of patella and 1 due to necrotising fasciitis. The wound size ranges from 12 cm<sup>2</sup> to 120 cm<sup>2</sup>.

### RESULTS:

All flaps survived. Three patients require skin grafting at the donor site while the rest the donor sites were able to close primarily. Three developed infection which requires debridement. One healed after vacuum dressing, one after bone transport and one after split thickness skin graft



**Figure 1: Open fracture patella**



**Figure 2: The knee after flap coverage and the donor site**

### DISCUSSIONS:

Chung et al developed a gastrocnemius adipofascial flap to overcome donor site problem. Calderon et al used a VY island gastrocnemius myocutaneous flap to allow primary closure of the donor site. We create a spindle shape skin paddle that allows us to close the donor site primarily. The empty space left after the muscle is transpose further facilitate the closure of the donor site.

### CONCLUSION:

Gastrocnemius musculocutaneous flap is effective for coverage of large soft tissue defect from the knee till half of the leg.

### REFERENCES:

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