

Delayed primary closure of fasciotomy wound by dynamic dermatotraction technique with cable tie application

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INTRODUCTION:

Closure of fasciotomy wounds in compartment syndrome cases possess a challenge for surgeons. Dynamic dermatotraction technique with cable tie has shown a favorable wound healing outcome^{1,2}.

REPORT:

A 47-year-old man had alleged motor vehicle accident, sustained open fracture of left femur (Gustillo IIIA) complicated with left thigh compartment syndrome. Wound debridement, left thigh fasciotomy, and high tibial pin insertion was done, creating huge fasciotomy wounds on the left thigh (Figure 1). He underwent re-wound debridement, cable tie application on both fasciotomy wounds and external fixation left thigh later on. Postoperatively, the cable ties were tightened gradually after the thigh swelling reduced. 1 week later, distal one-third of the medial wound was fully approximated, medial wound size is reduced. The proximal and distal pole of lateral wound was reduced in size too, slower progression than the medial wound due to skin loss in previous debridement (Figure 2).

DISCUSSION:

Dynamic dermatotraction technique with cable tie method has high wound closure rate without skin grafting^{1,2}. It is widely available and inexpensive compared to dermatotraction devices in the market².

CONCLUSION:

Dermatotraction technique with cable tie is a good choice of treatment for fasciotomy wound closure in view of inexpensive, high success rate, and lower chance for secondary procedure.

Figure 1: Fasciotomy wound on medial (a) and lateral side (b) of left thigh before cable tie application.

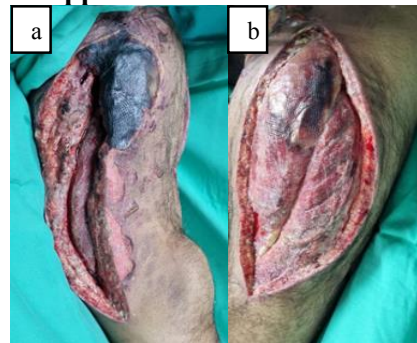
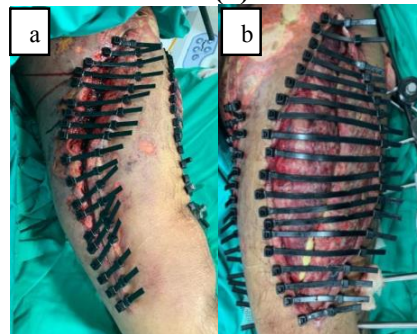


Figure 2: Fasciotomy wound on medial (a) and lateral side (b) after cable tie tightening.



REFERENCES:

1. Garcia, AS., et al. "A Case Series Study to Explore the Efficacy of Plastic Bands in Closure of Fasciotomy Wounds and Open Fracture II, IIIA, IIIB: A Dynamic Wound Closure." *MOJ Orthop Rheumatol*, vol.1, no.4, pp.97-100, 2014.
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