

# Management of Highly Exudative Fasciotomy Wounds

JoAnn Hager, RN, BSN, CWOCN and Tamara Morehouse, RN, BSN, Barnes-Jewish Hospital, St Louis, MO

## Introduction

Fasciotomies are created to prevent complications from compartment syndrome<sup>1,2</sup>. The wounds generally have no depth and have exposed muscle and tendon. The wounds can be difficult to manage due to large amounts of drainage from edema in the lower extremity. Treatment goals included drainage absorption and protection of peri-wound skin from maceration.

## Case History

LJ was a 42 year old post coronary artery by-pass graft (CABG). She required a trip back to the operating room (OR) for re-exploration and placement of an IABP, (Intra Aortic Balloon Pump). The foot distal to the IABP site later became cold and pulseless. The IABP was immediately removed. Continued complaints of weakness and difficulty walking prompted a vascular consult that revealed compartment syndrome. She immediately was taken to the OR for lower leg fasciotomies and muscle debridement. The wound and ostomy team was consulted for wound management.

The patient had medial and lateral fasciotomies. Upon initial assessment, the patient had been soaking through multiple layers of absorptive dressings. The peri-wound skin became macerated. Negative Pressure Wound Therapy\* (NPWT) was initiated. Muscle and tendon were protected with non-adherent dressing. Flat, silicone drains were used, and the two wounds were "Y" connected to one pump. Protection of the peri-wound skin from maceration was accomplished by placement of transparent dressing around the wound edges prior to dressing application.

## Outcome

With drainage under control, the patient was able to participate in physical therapy without saturated dressings falling off. The edema continued to decrease in the leg, and the patient was transferred to an extended care facility to continue NPWT management and physical therapy.

Upon readmission to the hospital two months later, the medial wound was almost completely closed. The lateral wound required further debridement of necrotic muscle with further treatment with NPWT.

## References

1. Yang *et al.*, (2006). Vacuum-assisted closure for fasciotomy wounds following compartment syndrome of the leg. *J Surg Orthop Adv*, 2006 Spring;15(1):19-23.
2. Lee A *et al.*, (2005). Acute compartment syndrome of the thigh in a football athlete: a case report and the role of the vacuum-assisted wound closure dressing. *J Orthop Trauma*, 2005 Nov-Dec;19(10):748-50

\* EZCARE – Smith & Nephew Wound Management Inc., St Petersburg, FL

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Lateral fasciotomy wound



Application of non-adherent dressing to exposed muscle and application of transparent dressing to peri-wound skin



Application of NPWT dressing



Medial fasciotomy



Application of non-adherent dressing to exposed muscle



Application of NPWT dressing



Finished dressing application



Lateral wound two months later



Medial wound two months later