

Case report: Expansion and closure of wound after severe necrotizing infection in patient with multiple comorbidities: the need for robust soft tissue coverage to function with a myoelectric prosthesis

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Case report #48

Prior to application of DERMACLOSE device: A 46-year-old female patient was referred as an outpatient to our team with concerns for necrotic infected carpus, loss of extensor tendons, loss of multiple fingers, and loss of soft tissue domain on dorsal forearm and dorsal hand. The patient also carried severe medical comorbidities including end-stage renal disease and type 2 diabetes. It was determined that salvage of the upper extremity would not be feasible or possible, and therefore, transradial amputation was recommended with plans for eventual targeted muscle reinnervation as well as fitting for myoelectric prosthesis.

DERMACLOSE device application: Because the patient's medical co-morbidities were severe and likely to lead to post-operative wound healing complications, she was unlikely to tolerate large-scale flap-based intervention. It was determined the patient would benefit from tissue expansion as an attempt to provide robust soft tissue coverage and closure of the large open wounds.

Two DERMACLOSE expanders were placed at the time of her index operation. It was determined during her post-operative time frame that an additional expander would be necessary to provide the appropriate amount of expansion. Therefore, another expander was applied at the bedside for a total of 3 DERMACLOSE tissue expanders.

DERMACLOSE device removal: The expanders were maintained for a total of 11 days post application. The patient was then returned to the operating room where the expanders were removed, which allowed for a **complete closure of the wound** despite its original impressive size.

Follow-up: At 2 weeks post-operative, sutures were removed and the wound completely healed. The patient was integrated into an amputation reconstruction multidisciplinary care program where she completed rehabilitation for integration of targeted muscle reinnervation and obtained a myoelectric prosthesis. It was determined the patient would benefit from tissue expansion as an attempt to provide robust soft tissue coverage and closure of the large open wounds as skin graft reconstruction would likely break down in the face of a heavy myoelectric prosthetic. **Conclusion:** The durable soft tissue reconstruction allowed for pain-free utility of the myoelectric prosthetic without concerns for skin breakdown.

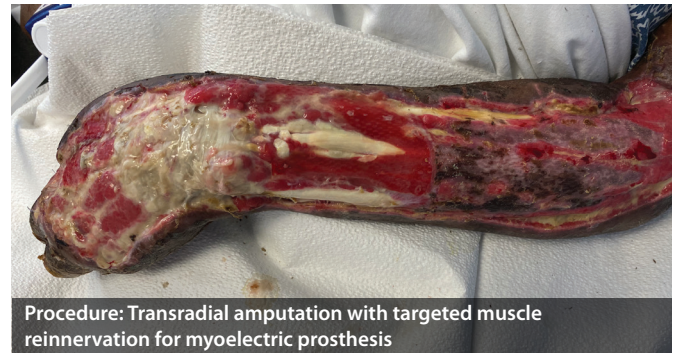
Call 800.510.3318 to place an order or email smca_orders@baxter.com.

INDICATIONS FOR USE: The DERMACLOSE Continuous External Tissue Expander is indicated for use in assisting with the closure of moderate to large surgical or traumatic acute full thickness wounds of the skin by approximating and reducing the size of the wound.

CONTRAINDICATIONS: The DERMACLOSE Continuous External Tissue Expander should not be used on ischemic, infected, or acute burned tissue. It should not be used on fragile tissue at the edges of a wound.

For single patient use only.

DERMACLOSE and the GEM design are trademarks of Baxter International Inc., or its subsidiaries.
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Procedure: Transradial amputation with targeted muscle reinnervation for myoelectric prosthesis



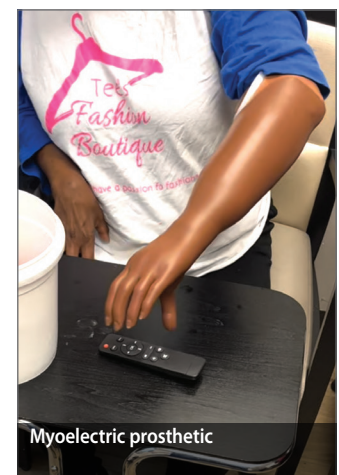
2 DERMACLOSE devices were applied during index operation



Additional DERMACLOSE device applied at bedside (not shown)



Wound completely healed 2 months post op



Myoelectric prosthetic

Case report courtesy of Ajul Shah MD.