

A Direct Comparison Between a Split Thickness Skin Graft and a Regenerative Decellularized Dermal Allograft for Large Tissue Defect in the Reconstructive Phase of Necrotizing Fasciitis

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ABSTRACT OR INTRODUCTION

Introduction: Necrotizing fasciitis is a serious bacterial skin infection that spreads quickly and kills the body's soft tissue. This complex disease must be treated in stages by a multi-specialty team of healthcare practitioners.

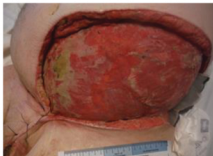
PURPOSE

This case study is a single wound comparison of a standard method of soft tissue coverage, Split Thickness Skin Graft (STSG), with a Regenerative Decellularized Dermal Allograft (RDDA).

METHODOLOGY

The treatment plan for this patient was STSG for soft tissue defect coverage to achieve wound closure while minimizing donor site morbidity¹. However, surgeons were only able to harvest enough tissue to graft the anterior portion of the wound bed. Applying RDDA to the posterior portion avoided another surgical procedure (and additional donor site wound) and presented us with a unique opportunity to evaluate the effectiveness of STSG and RDDA on the same wound.

CASE PHOTOS



On day 24 of the STSG application, the anterior portion of the wound is now closed but the donor sites still require a dressing.

On admission: Abdomen & Left Flank on admission

Day 24 of the STSG application

OUTCOMES

- On Day 24 after STSG application, the anterior portion of the abdominal wound was closed. On Day 3 post RDDA, the patient no longer required pain medication for dressing changes. By Day 13, all of the RDDA graft tissue was well incorporated and the wound defect was predominantly regenerated. NPWT was discontinued, Advanced Wound dressings were ordered to be changed every three days, and the patient was discharged to Home Health Nursing Care.
- Six and ten-month follow ups subjectively demonstrated the patient had a better outcome on the RDDA side of the wound as demonstrated in wound images. The patient also reports that he has more sensation over the RDDA site than over the STSG portion.



On day 3 of the RDDA application, the RDDA is well adhered to the wound bed and has started to incorporate into the wound bed. The patient no longer requires pain medication for the dressing changes.



10 months after the RDDA application

References:

1. Medscape: Necrotizing Fasciitis; Richard F. Edlich, MD, PhD, FACS, FACEP; Chief Editor: Michael Stuart Bronze, MD
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4. CDC: Features: Necrotizing Fasciitis: A Rare Disease, Especially for the Healthy
5. Technical Monograph: DermaPure® New Generation Decellularized Dermal Allograft