

Treatment Of Complicated Post-Operative Vascular Wounds: Utilizing A Novel Transforming Powder Dressing In Lieu Of Conventional Wound Dressings

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INTRODUCTION

Management of surgical site wounds and complications is an important consideration for any vascular surgery team. Patients desire a dressing which is pain-free, easy to apply and requires minimal changes and manipulation. This case series evaluates the use of a novel transforming powder dressing (TPD*) with extended wear time (up to 30 days) as a wound dressing option in managing amputation sites and incisional surgical wounds complicated by dehiscence. TPD is a powder dressing that transforms upon hydration to form an oxygen permeable matrix that covers and protects the wound.

METHODOLOGY

We performed observational case reviews of post-surgical wounds in two patients with severe vascular pathology and significant comorbidities. TPD was used as an alternative to conventional wound dressings. Patient demographics, past medical and surgical history, and anatomical pathology were described. Evaluation of wound closure progress was followed with the participation of multi-specialty teams.

DISCUSSION

Both patients experienced remarkable wound healing results and reduced pain using TPD. TPD provided the benefit of promoting wound healing, while being a less expensive alternative to other modalities that require more frequent dressing changes. It also allowed for ease of use in both clinic and home settings, significantly reducing the need of office visits for dressing changes.

Based on these results, we concluded that TPD is an appropriate treatment for use in the post-surgical setting that may be easily and competently managed by a patient at home.

RESULTS

#1 AMPUTATION SITE WOUND

71 y/o male with h/o HLD, DM, CAD (s/p CABG 1993), severe AS (s/p TAVR 2021), COPD, PAD s/p LLE angiogram with L SFA atherectomy and angioplasty on 10/2022

- Open surgical wound of the foot s/p partial 1st ray resection and wound debridement performed 11/2022 for OM
- Location: Left foot
- Baseline Measurements: 4.5 x 4.0 x 1.3 cm
- Dressing: TPD, contact layer, rolled gauze wrap
- Dressing Frequency: Weekly
- Time to Healing / Total Applications:
 - 85 days
 - 12 total applications



#2 SURGICAL WOUND C/B DEHISCENCE

72 y/o male with h/o HTN, AAA, depression, CKD3, HLD, A-fib, MI, diverticulitis, colovesicular fistula, PAD s/p R iliac stenting with femoral endarterectomy (08/2022) with postop course c/b by R groin infection and wound dehiscence

- Location: Right groin
- Baseline Measurements: 3.0 x 2.0 x 0.5 cm
- Dressing: TPD, contact layer, rolled gauze wrap
- Dressing Frequency: Weekly changes at home
- Time to Healing: 57 days with four clinic visits



*Altrazeal® Transforming Powder Dressing, USA. For application instructions and risks of this device please refer to Altrazeal Instructions for Use.

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