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PRELIMINARY EVALUATION ON THE APPLICATION OF A POWDER DRESSING IN THE FIXATION AND TREATMENT OF CHRONIC WOUNDS RESULTING FROM TRAUMA WITH EPIDERMAL SEPARATION



Purpose

The purpose of this evaluation was to test a protocol in the management of chronic wounds resulting from trauma with epidermal separation combining a novel powder dressing for both fixation and moist wound healing.

Background

A common wound seen in wound care centers is a chronic wound resulting from trauma with epidermal skin separation. This primary acute wound is commonly called a skin tear and is typically found on elderly patients. This wound often becomes chronic if not treated properly. Skin tears have been identified as a common, acute injury sustained by the aged in extended care facilities¹⁻³ and changes to aging skin make this population more susceptible to skin tear injuries^{1,3-9}. A skin tear is defined as "A laceration of the epidermis, most often associated with minor trauma and involving a separation of the epidermis from the underlying connective tissue so that a flap of skin is created".

Methods:

Six patients were evaluated in a case series without controls. Patients ranged in age from 62 to 93 with a mean age of 76 years. For each patient, wounds were assessed and treatment history was documented. In all cases the trauma with epidermal separation occurred prior to referral to the wound center. The wounds were cleaned and the powder wound dressing was applied. The intact dressing was covered with a contact layer followed by a rolled gauze dressing and/or ace wraps for compression if indicated. Patients were assessed at approximately 7 day intervals at which time the dressings were changed and the wound size and appearance were evaluated.

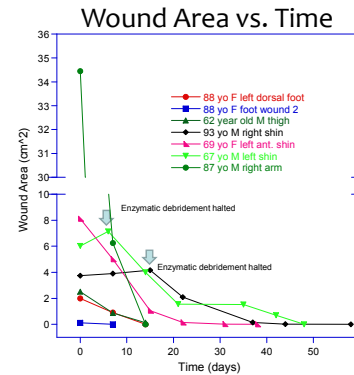
92 year old female with chronic wound resulting from skin tear on anterior tibial surface



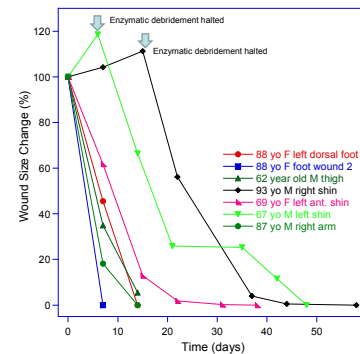
Application of powder dressing after assessment and debridement



Day 28 after weekly evaluation and dressing changes



Wound % of Original Size vs. Time



Results

For the patients evaluated, six (6) patients had a total of seven (7) wounds that healed using the powder dressing. No wounds failed to heal. The data was not generated as a prospective clinical study with inclusion criteria. Data are shown below for wound healing with and without periods of enzymatic debridement:

Parameter	Post Enzymatic Debridement	Debridement Included
Minimum Healing Time	7 days	7 days
Maximum Healing Time	36 days	48 days
Mean	19.8 days	24.6 days
Median	14 days	14 days
Std Deviation	10.5	16.4

Two patients showed an initial increase in wound area. These increases occurred with the application of an enzymatic debriding agent in conjunction with the powder wound dressing.

Of the six patients, only two reported pre-treatment pain. Both reported a decrease in pain after the application of the powder wound dressing. One reported a change from 8 to 1 with the application of the dressing on a pain scale of 1-10 (10 being the worst) and the other 5 to 0.

In all cases the dressing was applied without adhesive fixation and wrapped loosely in cotton gauze. The dressings were changed on a weekly schedule with the exception of two 14 day intervals when patients were not present for weekly dressing changes.

The dressing remained in place for all patients during the evaluation period.

Conclusions

The data shows that the powder dressing can be safely applied to a skin tear and used to anchor that tear during a treatment protocol with a 7 day interval between evaluations. A clinical study has been implemented using randomization and controls for the treatment of skin tears using this treatment protocol.

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