Use of a Cellular Human Repair Matrix for Chronic Wounds in Patients Taking Long-term Corticosteroids

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Abstract

Introduction

Despite the evolution of advanced wound therapies, patients with underlying auto-immune disorders requiring chronic, oral corticosteroids pose a complicated challenge for practitioners. Corticosteroids have been shown to reduce re-epithelialization, decrease fibroblast response, and inhibit collagen synthesis leading to delayed wound healing and delayed wound closure. A retrospective study evaluated patients with chronic wounds on oral corticosteroids and a cellular repair matrix.*

Methods

Seven patients (6 female, 1 male) requiring chronic, oral corticosteroids at doses of 5-30 mg per day for rheumatoid arthritis (n=6) or advanced COPD (n=1) were treated with the cellular repair matrix at an outpatient wound care center between April 2010 and March 2012. Wound types included 2 traumatic leg ulcers, 4 venous leg ulcers, 1 diabetic foot ulcer, and 1 pressure ulcer (descending aorta pseudoaneurysm). Wound size was recorded at each visit and follow-up visits were held at each clinic visit. Patients received an average of 3 grafts (range 2 to 7). There were no reported safety issues related to application of the grafts.

Results

Complete re-epithelialization was achieved in all 7 patients within 16 weeks (range 2-16 weeks). Among patients with VLUs, mean time to closure was 4.25 weeks (range 2-16 weeks). Patients received an average of 3 grafts (range 2 to 7). There was no recurrence of any wound with maximum follow-up out to one year. There were no reported safety issues related to application of the grafts.

Conclusion

A retrospective study evaluated patients with chronic wounds on oral corticosteroids and a cellular repair matrix.* All patients had prior to treatment failed advanced therapies. Corticosteroids have been shown to reduce re-epithelialization, decrease fibroblast response, and inhibit collagen synthesis leading to delayed wound healing and delayed wound closure. A retrospective study evaluated patients with chronic wounds on oral corticosteroids and a cellular repair matrix.*

Case 1

Patient Information and Medical History

50 year old female.
- History of rheumatoid arthritis, chronic obstructive pulmonary disease.
- Taking 10 mg of prednisone daily.

Wound Description

- Failed alginate dressing and compression treatment.
- Wound present for 10 weeks prior to application of cellular repair matrix.

Treatment and Outcome

- Patient received 7 applications of the repair matrix.
- Wound closure in achieved in 7 weeks.

Case 2

Patient Information and Medical History

74 year old female.
- History of rheumatoid arthritis, venous insufficiency, taking 5 mg of prednisone daily.

Wound Description

- Failed silver dressings and porcine small intestinal submucosa product.
- Wound present for 16 weeks prior to application of cellular repair matrix.

Treatment and Outcome

- Patient received 3 applications of the repair matrix.
- Wound closure achieved in 4 weeks.

Case 3

Patient Information and Medical History

65-year old female.
- History of rheumatoid arthritis, venous insufficiency, diabetes mellitus, non-compliance, taking 5 mg of prednisone daily.

Wound Description

- Failed silver dressings and porcine small intestinal submucosa product prior to treatment.
- Wound present for 12 weeks prior to application of cellular repair matrix.

Treatment and Outcome

- Patient received 2 applications of the repair matrix.
- Wound closure achieved in 2 weeks.

Case 4

Patient Information and Medical History

78-year old female.
- History of rheumatoid arthritis, venous insufficiency, tobacco use, taking 7.5 mg of prednisone daily.

Wound Description

- Failed dressing and pressure ulcer management prior to diagnosis.
- Wound present for 16 weeks prior to application of cellular repair matrix.

Treatment and Outcome

- Patient received 2 applications of the repair matrix.
- Wound closure achieved in 2 weeks.

*Grafix®

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References