



A Retrospective Evaluation of Transforming Powder Dressings in the Treatment of Chronic Stage II-IV Pressure Injuries

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Introduction

Pressure Injuries (PrIs) are difficult to heal wounds that afflict millions worldwide. On average, less than 50% of Stage III and IV pressure injuries heal by the sixth month. The resulting physical, mental, social, and financial impairments cause significant suffering, negatively impacting patient quality of life. PrI wound treatment is highly variable depending on a patient's comorbidities, demographics, and wound features and there is no established standard of care.

Transforming powder dressing (TPD) forms a non-occlusive barrier on the wound bed that helps optimize wound moisture to promote healing. Extended wear time reduces dressing changes, infection risk and complications, presenting a promising new wound treatment modality

Materials and Methods

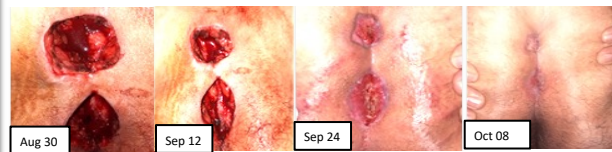
We used a novel methacrylate-based transforming powder dressing, which transforms in-situ to a shape-retentive wound matrix once in contact with moisture. (Altrazeal® TPD, ULURU Inc.).

A retrospective case series was conducted for 20 patients with 21 non-healing, Stage II-IV PrIs following standard of care treatment. Dressing change frequency and time wound closure were evaluated.

Results



74-year-old male with a non-healing, sacrococcygeal, Stage IV PrI for two months. After three dressing changes his pain score decreased from 9/10 to 1/10. Nine dressing changes were made over 18 weeks (every 15 days on average).



56-year-old female with two Stage III sacrococcygeal PrIs for five months. Pain reduced from 9/10 to 1/10 by the second dressing change. Three dressing changes were required to close the wound in 39 days, with an average time of 13 days between changes over the five-week period.



24-year-old male with paraplegia and Stage IV PrI for five months. Seven dressing changes were made over 14 weeks (every 15 days on average).

Stage of Ulcer	Cases Analyzed	Average Days to Healing	Average Dressing Changes	Average Days Between Dressing Changes
All	21	52.2	4.1	13.9
Stage 4	7	87.4	6.3	17.7
Stage 3	11	40.6	3.5	12.3
Stage 2	3	12.7	1.3	10.8

Summary: All patients experienced successful and expedited wound closure. On average, Stage IV PrIs closed on in 87 days with six dressing changes, Stage III PrIs closed in 41 days with four dressing changes, and Stage II PrIs closed in 13 days with one dressing change. Patients with painful wounds experienced significant pain reduction. Pain scores decreased from from 8/10 or 9/10 to 1/10 or 2/10.

Conclusion

TPD presented a safe and effective modality for treatment of non-healing PrIs; significantly reducing the duration of healing, patient pain and number of dressing changes.

References

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