

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

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Introduction

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

Materials and Methods

A retrospective case series was conducted for a convenience sample of 20 patients with 21 non healing Stage II, Stage III and Stage IV pressure injuries that were not responding to SOC. All patients had been treated with SOC (including negative pressure wound therapy, hydrocolloids, alginates, collagen, topicals etc) for several weeks or months without healing.

All patients were converted to treatment with a novel methacrylate-based transforming powder dressing (TPD*), which transforms in-situ to a shape-retentive wound matrix once in contact with moisture. Dressing change frequency and time to wound closure were evaluated.

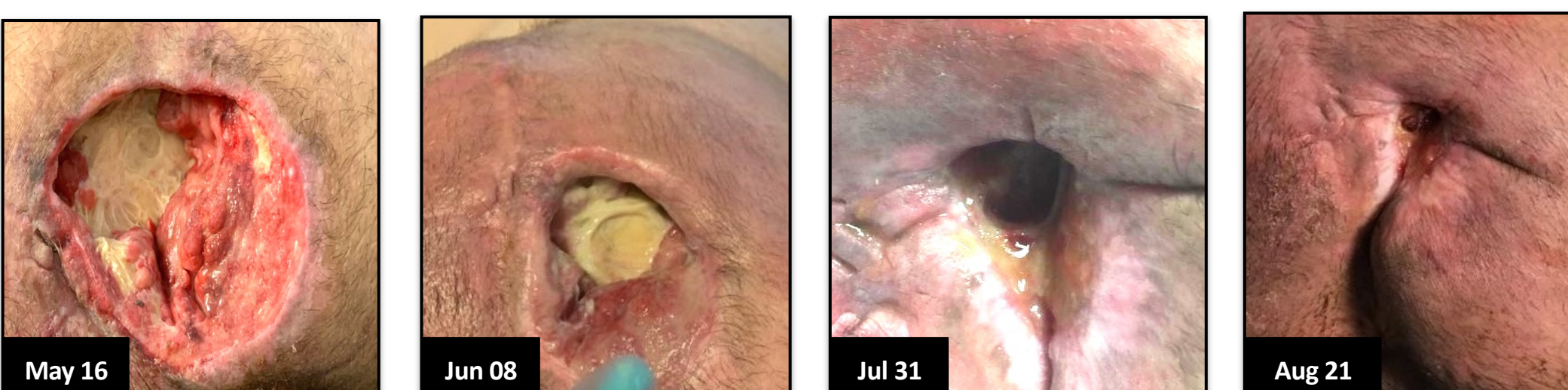
Results



74-year-old male with a non-healing, sacrococcygeal, Stage IV Prl 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 Prls 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 Prl 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: Once converted to TPD, all patients experienced successful and expedited wound closure. On average, Stage IV Prls closed on in 87 days with six dressing changes, Stage III Prls closed in 41 days with four dressing changes, and Stage II Prls 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 pressure injuries, significantly reducing time to healing, patient pain and number of dressing changes.

References

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