

Treatment of Non-Healing Radiation Injury Wound Using Extended-Wear Transforming Powder Dressing

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BACKGROUND

Over half of all cancer patients receive radiation therapy resulting in skin injuries in approximately 95% of those treated.¹ Further complications occur in up to 60% of treated patients and include compromised wound healing, chronic ulceration, pain, secondary infections, and psychological distress.^{2,3} Established strategies for treating radiation wounds primarily include utilization of standard of care (SOC) antimicrobial dressings that require frequent and painful dressing changes.

This case describes a 76-year-old female with metastatic cancer, s/p T8 laminectomy, tumor debulking, and radiation therapy who developed a non-healing radiation wound to the thoracic spine. The wound was refractory to standard of care (SOC) therapy for a period of three months.

METHODOLOGY

Multiple SOC agents were utilized, including silver and other antimicrobial dressings, without positive impact on wound healing. The **patient required palliative care and home health nurses conducted daily dressing changes.** As the wound was stagnating, wound care was changed to a novel transforming powder dressing (TPD*), an extended wear dressing which was applied and covered with a contact layer and gauze. **TPD was added (“topped off”) weekly three times and secondary dressings were changed prn.**

TPD is a commercially available dressing comprised primarily of biocompatible polymers similar to those used in contact lenses. When hydrated with saline, TPD aggregates to form a moist, oxygen-permeable barrier that conforms to the wound bed. It covers and protects the wound while releasing excess exudate through vapor transpiration. TPD may be left on the wound for up to 30 days without requiring primary dressing changes.

REFERENCES AND ACKNOWLEDGEMENTS

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*Altrazeal Transforming Powder Dressing, USA

RESULTS

Prior to conversion to TPD, the patient’s wound measured 2.5 x 2.0 x 0.2 cm. Treatment with TPD resulted in full wound healing in 33 days after three TPD applications. Patient reported significant psychological relief after the wound healed and was discharged from home health services.



DISCUSSION

Radiation wounds are highly challenging hard-to-heal wounds. This case demonstrates that a 3 month old refractory wound was fully healed in 33 days after conversion to TPD. No complications were observed, and nursing visits were reduced from daily to weekly post conversion to TPD. Based on this case, we conclude that patients with chronic radiation injuries may benefit psychologically as a result of improved wound healing when treated with TPD.