



New Treatment Option for Acute Traumatic Wounds Resulted in Reduced Pain, Length of Stay, and Frequency of Dressing Changes: A Case Study From a Ukrainian Combat Hospital

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INTRODUCTION

Combat injuries inflict substantial pain and debilitation, often prolonging return to duty. Ukrainian health facilities are overwhelmed with a staggering influx of seriously wounded soldiers on a daily basis. With over 30,000 new injuries per month and over 500,000 casualties to date, the demand for effective wound management is urgent¹.

This study evaluates the efficacy of a commercially available, shelf-stable, extended-wear transforming powder dressing (TPD*), that was recently initiated at a Ukrainian combat hospital for treatment of traumatic wounds. We present the first case treated with TPD, involving a Ukrainian soldier injured by shrapnel.

METHODS

A 34-year-old male with no significant medical history, except daily chewing tobacco, sustained a combat injury from a shrapnel embedded deep into the upper anterior thigh near the groin. He was transferred to a Role 2 field hospital for stabilization. Hospital course was complicated by hematoma and necrotic tissue, which was excised on day 2 post injury resulting in a 5 x 2 x 2 cm contaminated wound. Oral antibiotics were prescribed and TPD treatment was initiated.

TPD aggregates upon hydration with fluids to form an extended wear (up to 30 days) moist, oxygen-permeable barrier that helps to cover and protect the wound from contamination while facilitating the flow of excess exudate through vapor transpiration. TPD can be topped off (added) as required and secured with simple secondary dressings such as gauze in areas of high exudation or friction. As the wound heals, TPD dries and flakes off.

References: (1) <https://abcnews.go.com/International/hospital-sees-30-rise-wounded-ukrainian-soldiers-doctor/story?id=106197525>.

Acknowledgements: This poster was created in collaboration with Altrazeal Life Sciences Inc. All clinical cases and analyses were performed independently by the authors and no compensation was paid. For application instructions and risks of this device please refer to Altrazeal Instructions for Use. | EDU-0150

*Altrazeal Transforming Powder Dressing, USA

RESULTS

The soldier's pain score dropped from 3/10 (visual analogue scale [VAS]) to 0/10 post TPD application. He returned to duty within one week, 50% sooner than the anticipated 15-days, without any pain medications or topical analgesics. The wound healed in 24 days with no primary dressing changes. TPD was self-administered by the soldier post discharge and topped-off / added twice, or once every 8 days on average. Comparatively, standard of care therapies such as topical antimicrobials with gauze would involve twice daily or daily cleansing, packing and dressing changes.



SHRAPNEL REMOVED FROM WOUND



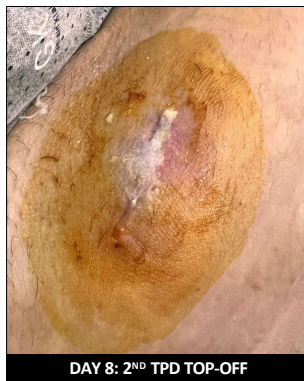
DAY 1: PRE TPD (5 x 2 x 2 cm)



DAY 1: INITIAL TPD APPLICATION



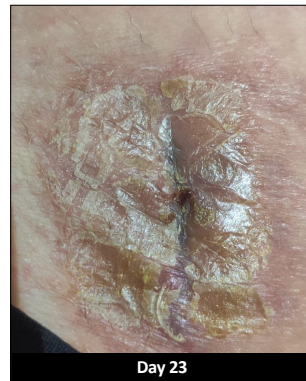
DAY 2: 1ST TPD TOP-OFF



DAY 8: 2ND TPD TOP-OFF



DAY 15



Day 23



Day 24: WOUND HEALED

Implementation of TPD led to a significant decrease in pain, expected LOS and dressing changes frequency for this traumatic injury, enabling faster return to duty.