

# Unique Treatment for Painful Brown Recluse Spider Bite Injuries: Transforming Powder Dressing

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 WOCNext 2023 Meeting, Las Vegas, NV | June 4-7, 2023

## BACKGROUND

Brown recluse spider envenomation can result in dermonecrotic arachnidism, a local tissue injury causing necrosis in approximately 40% of cases.<sup>1,2</sup> However, published data to guide proper therapy is limited.<sup>2</sup> Treatment goals include minimization of tissue necrosis, prevention of superinfection, pain management<sup>4</sup> and local wound care and debridement.<sup>3</sup> This case demonstrates how a novel wound management strategy can positively impact patient quality of life (QoL) and wound healing, while reducing the burden of care related to dressing changes.

## CASE OVERVIEW

Fifty-two-year-old female with common variable immunodeficiency was bitten by a brown recluse spider on her buttock, necessitating hospitalization and surgical debridement. Post-operatively, the wound was managed with negative pressure wound therapy (NPWT). Patient pain scores were 4-5/10, increasing to 10/10 during dressing changes which were repeated 3x/week. Narcotics were required to manage pain.

## CURRENT CLINICAL APPROACH

As the wound was refractory to treatment and pain continued to persist, NPWT was discontinued after 1-month, and wound care was converted to a weekly application of a novel transforming powder dressing (TPD), an extended wear dressing made of polymers similar to those in contact lenses. TPD covers and protects the wound while releasing excess exudate through vapor transpiration.

## PATIENT OUTCOMES

Wound measured 34.1 cm<sup>3</sup> (6.5 x 6.0 x 1.0cm with a 2.5cm tunnel) when TPD was initiated. Patient reported a 90% reduction in pain (1/10) immediately post application and narcotics were discontinued. By Day 22, some epithelialization was observed. Patient resumed ADLs, returned to work and was able to resume care for her family. Home health visits were reduced from 3x/week to 1x/week during the treatment and no complications were identified. She was discharged from home health, TPD was discontinued, and the wound healed 38 days after discharge from home health (healing slowed down after transition from TPD).



## REFERENCES AND ACKNOWLEDGEMENTS

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## CONCLUSION

The implementation of a novel wound management approach resulted in improved wound healing and QoL. Pain reduction and narcotic discontinuation were recorded. Nursing visits were reduced by 66% per week. We conclude that TPD should be considered as a potential alternative to current SOC in treatment of recluse spider bites.