

STAYS PUT AND SURVIVES THE PEEL: TWO COMPLEMENTARY VOLUNTEER STUDIES OF A NEW 5-LAYER SILICONE FOAM DRESSING

Adam Tompkin (1), Sophie Berry (1), Michael Howarth (2), Jon Minton (3)

1. Global Clinical Strategy, Smith+Nephew, UK.; 2. Global Clinical Research Operations, Smith+Nephew, UK. 3. Global Biostatistics, Smith+Nephew, UK.

Introduction

Foam dressings used within Pressure Injury Prevention (PIP) protocols must stay in place and tolerate repeated lifting for routine skin inspection [1]. These complementary healthy-volunteer studies were designed to holistically evaluate a new 5-layer silicone foam dressing for both sustained wear and inspection-relevant manipulation, in comparison to two marketed 5-layer foam dressings.

Methods

A new 5-layer silicone foam dressing (Dressing 1*) and two marketed comparators (Dressings 2† and 3‡) were assessed for key PIP performance indicators in two volunteer studies:

Study 1: Randomised 7-Day Wear Assessment

A single-centre, open-label, prospective, randomised volunteer trial evaluated the three 5-layer silicone foam dressings over 7 days. Dressings were applied to thighs and shins (two applications of Dressing 1* per participant; one each of Dressings 2† and 3‡). The primary outcome measure was Acceptable Dressing Presence (ADP), defined as presence with no border lift, pad exposure, or tears, at day 7. Secondary outcome measures included dressing presence, and participant reported pain on dressing removal.

Study 2: Peel-and-Peek Model

A single-centre, prospective, comparative study evaluated silicone adhesive border strips (1.5 × 8.0 cm) from each of the three dressings (Dressings 1*, 2† and 3‡). Each volunteer received nine strips (three per product) randomized across their backs. Adhesive strip presence (<50% lift) was assessed after twice-daily lift-and-re-adhere procedures over 5 days.

Results

Study 1: ADP at day 7 was 72.9%, 83.3%, and 65.0% for Dressings 1*, 2†, and 3‡ respectively; dressing presence was 95.0%, 94.5%, and 90.9%. Pain on removal was "None" or "Mild" for all dressings.

Study 2: After 3 days, ≥95% of all strips remained in place; after 5 days, ≥90% remained in place. Each of the evaluated strips demonstrated a median presence of ≥4 days with similar tolerance to repeated lifting.

Conclusions

Across two complementary models, the new 5-layer silicone foam dressing demonstrated strong performance during sustained wear and repeated lifting, supporting its suitability for pressure injury prevention strategies involving prophylactic dressings requiring both secure adhesion and the ability to lift and reapply.

Conflict of Interest

Research funded by Smith+Nephew. All authors are employees of Smith+Nephew.

References

1. Sillmon, K., Moran, C., Shook, L., Lawson, C., & Burfield, A. H. (2021). The use of prophylactic foam dressings for prevention of hospital-acquired pressure injuries: a systematic review. *Journal of Wound Ostomy & Continence Nursing*, 48(3), 211-218.

*ALLEVYN® COMPLETE CARE Foam Dressing (10x10cm; Smith+Nephew); †ALLEVYN® LIFE Foam Dressing (12.9x12.9cm; Smith+Nephew); ‡Mepilex™ Border Flex dressing (10x10cm; Mölnlycke Healthcare)

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