ORIGINAL ARTICLE

Comparison of Two Dressing Protocols for Split-Thickness Skin Graft Donor Sites: A Randomized Pilot Trial

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Abstract

Background: The optimal approach to donor-site dressings after split-thickness skin grafting remains debated, and evidence from routine clinical practice is limited.
Objective: To compare time to complete re-epithelialization between the silicone foam group and the paraffin gauze group.
Methods: This study included 60 adults undergoing split-thickness skin grafting treated at two fictional teaching hospitals. The primary outcome was time to complete re-epithelialization. Groups were compared using appropriate parametric and non-parametric tests.
Results: Time to healing (days) was 11.2 ± 2.1 in the silicone foam group and 13.9 ± 2.8 in the paraffin gauze group (p <0.001). Pain score on day 3 (0–10) also differed between groups (2.6 ± 1.1 vs. 4.4 ± 1.6).
Conclusion: In this sample, silicone foam was associated with favourable results. Prospective studies are needed to confirm these findings. *(All data in this article are fictional and for template demonstration only.)*
Keywords: skin graft; donor site; wound dressing; randomized trial; pain

Introduction

Donor-site dressings after split-thickness skin grafting is a common clinical question in daily practice1,2. Variation between centres is considerable, and published series often include small numbers of patients3.

Previous reports suggest that outcomes may depend on patient selection, perioperative care and follow-up protocols4,5. The aim of this study was to compare time to complete re-epithelialization between the silicone foam group and the paraffin gauze group.

Materials and Methods

We reviewed 60 adults undergoing split-thickness skin grafting between January 2022 and December 2024. Patients were divided into two groups: silicone foam (n = 30) and paraffin gauze (n = 30). The study was approved by the institutional review board (fictional approval no. EX-2025-001).

The primary outcome was time to complete re-epithelialization. Secondary outcomes are listed in Table 1. Continuous variables are presented as mean ± standard deviation and compared with Student's t-test; categorical variables were compared with the chi-square or Fisher's exact test. A p value below 0.05 was considered significant.

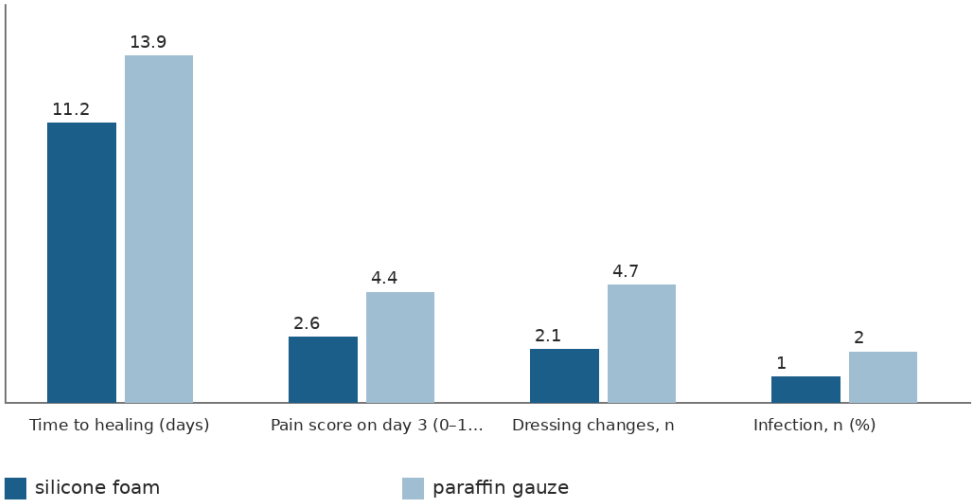
Results

Baseline characteristics were comparable between groups. Time to healing (days) was 11.2 ± 2.1 in the silicone foam group and 13.9 ± 2.8 in the paraffin gauze group (p <0.001; Table 1, Figure 1).

Table 1. Outcomes by group

Figure 1

Fictional data



Discussion

In this cohort, the silicone foam group showed better results for several outcomes. These findings are in line with earlier reports5,6, although differences in definitions make direct comparison difficult7.

This study has limitations. It was retrospective, performed at two centres, and unmeasured confounders may have influenced the results. Larger prospective studies are warranted.

Conclusion

Silicone foam was associated with improved time to complete re-epithelialization in this fictional sample. The approach appears safe and may be considered in routine practice8.

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