

COMPARING BIOBRANE® DRESSILK® AND POLYMEM® DRESSINGS ON PARTIAL-THICKNESS SKIN GRAFT DONOR SITES - PRELIMINARY RESULTS IN SUPERFICIAL BURNING WOUNDS OF HANDS AND FACES (145)

Schulz A.¹, Demir E.¹, Fuchs P. C.¹, *Schiefer J.¹

¹ Cologne-Merheim Medical Center , Plastic Surgery, Hand Surgery, Burn Center, Cologne, Germany

Question: Skin graft donor regions or partial thickness burn injuries usually require wound dressings to address three principal functions, such as comfort, metabolic and protective aspects. An ever-increasing number of commercially available synthetic dressings and bioengineered products have been applied to cover the donor site so far. We tried to narrow the selection range in the search for a suitable wound dressing for these wounds.

Methods: In a prospective within-subject design we compared PolyMem®, Dressilk® and Biobrane® as a single bound donor site wound dressing in 28 burn patients receiving surgical treatment with split-thickness skin grafting. Following a standardized case report form, we monitored several parameters such as pain, transparency of the dressing, active bleeding, exudation and inflammation by using the Verbal Rating Scale 1-10. In the long term, we evaluated scar quality objectively by the diagnostic tools Mexameter, Cutometer and Tewameter. Furthermore, scar appearance was assessed by VSS (Vancouver Scar Scale) and POSAS (Patient and observer scar assessment scale).

Results: With regard to re-epithelialization, pain and acute bleeding all three dressings were equivalent. Dressilk® and Biobrane® presented clearly superior to PolyMem® in both wound assessment and in the reduction of mild inflammation and exudation. High subjective satisfaction rates were reported with Dressilk® and Biobrane® dressings in regard to comfort and mobility. During the continuous monitoring period, Biobrane® outperformed Dressilk® by providing higher wound transparency rates and offering a better level of wound control during the entire study period. Regarding their cost efficiency, PolyMem® and Dressilk® are clearly superior to Biobrane®.

Conclusion: The “ideal” wound dressing maximizes patients’ comfort while reducing pain and the risk of pulling off migrating epidermal cells from the wound surface. In addition, reliable wound status evaluation (minimizing complications), an increase of treatment cost value efficacy and reduced hospitalization rates should be provided. Dressilk® and Biobrane® were favored by patients and surgeons for providing an effective and safe healing environment, showing low overall complication rates with respect to infection and exudation. Long-term results in functional and aesthetic outcome and QoL were at least equivalent. Therefore, we started to treat first patient groups with superficial burning in hands and face with Dressilk® and Biobrane® in a prospective within-subject design with special attention regarding aesthetic outcome.