Should Biobrane® be used for primary treatment of all partial thickness burns?

Sepehr S. Lajevardi[1], Peter K.M. Maitz[2]

1 Burns Unit, Concord Repatriation General Hospital, Concord, NSW, 2137, sepehrlaj@gmail.com
2 Burns Unit, Concord Repatriation General Hospital, Concord, NSW, 2137, peter.maitz@sydney.edu.au

Biobrane (Smith&Nephew, USA) is a biosynthetic xenograft composite skin substitute and its use has become widespread for the management burns. It is constructed of a silicone film bonded to a nylon fabric cross-linked with porcine dermal collagen peptides. Its functions include providing a physical barrier against wound contamination and preventing fluid loss from the surface. There is evidence that it reduces overall pain associated with treatment for partial-thickness burns. In is applied to the burn wound on presentation after debridement of the wound and will not require repeat application until wound healing. If Biobrane does not adhere to the wound in the first few days this is a strong indication of a deeper burn and potential requirement for debridement and skin grafting.

There has been six appropriately designed randomised control trials (RCTs) on the use of Biobrane with SSD. Four show a statistically significant reduction time to healing compared to other burns dressings. One shows reduction in need for surgery. Two report reduced incidence of wound infection. A 2013 cochrane review also concluded Biobrane is associated with less pain in the overall treatment. Unfortuanately there has been no recent RCTs comparing Biobrane with more modern dressings such as Acticoat (Smith&Nephew, USA), Aquacel Ag (ConvaTec, USA) and Mepilex Ag (Monlycke, Sweden). In Australia in 2013 the average cost of Biobrane was \$45.25 per 100 cm^2 compared to \$18.22 for Acticoat 3®, \$20.00 for Aquacel Ag® and \$14.00 for Mepilex Ag®. The overall cost of treatment may be similar keeping in mind the Biobrane is applied only once.

Overall the evidence if favourable for the use of Biobrane in management of partial-thickness burns, although good quality RCTs comparing it with modern dressings is required.

Key Words

Biobrane, partial thickness burns

Nominated Stream for Oral Presentations

[x] Medical
[ ] Nursing
[ ] Allied Health
[ ] Scientific

Nominated Stream for Poster Presentations

[x] Care
[ ] Prevention
[ ] Research