

# **Impact of timing of application of Biobrane® on outcome in partial-thickness burns**

**Sepehr S. Lajevardi<sup>1</sup>, Peter K.M. Maitz<sup>2</sup>**

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 of partial-thickness burns. There is very limited literature on the impact of timing of application of Biobrane on the outcome of such burns.

Retrospective review of prospectively collected database of all burns patients treated with Biobrane at Concord Hospital Burns Unit outpatients department from 2009 to 2012.

Total of 100 patients were treated with Biobrane over the four year period. They had a mean total body surface area (TBSA) burn of 2.5% with 58% of burns mechanism from scalds and 30% from flame. From the 100 patients 11 had Biobrane applied within 12 hours of the burn injury, 57 from 12 to 24 hours, 23 from 24 to 48 hours, 7 from 48 to 72 hours and 2 patients had delay of longer than 72 hours. The groups had mean time to complete wound healing of 14.5, 14.1, 15.2, 15.4 and 19.5 days respectively with no statistically significant difference. 96 patients treated with Biobrane in the outpatient department achieved primary wound healing and 4 remaining patients subsequently required debridement and skin grafting. Two had Biobrane applied in 12 to 24 hours, one from 24-48 hours and one had delay of longer than 72 hours.

Of the 100 patient who have had Biobrane applied in our outpatient department, the majority had a delay of 12 to 48 hours from the time of burn to time of treatment. Although we have not been able to establish a relationship between time of application and outcome of wound healing, those who had Biobrane applied with delay of longer than 72 hours had a mean time to healing of 4 days longer.

## **Key Words**

Biobrane, Time delay

## **Nominated Stream for Oral Presentations**

- Medical
- Nursing
- Allied Health
- Scientific

## **Nominated Stream for Poster Presentations**

- Care
- Prevention
- Research