

Impact of hypothermia on the care outcome of burns patients

Sepehr S. Lajevardi¹, Peter Kennedy², Peter K.M. Maitz³

1 Burns Unit, Concord Repatriation General Hospital, Concord, NSW, 2137, sepehrlaj@gmail.com

2 Burns Unit, Concord Repatriation General Hospital, Concord, NSW, 2137, pkennedy@lexicon.net

3 Burns Unit, Concord Repatriation General Hospital, Concord, NSW, 2137, peter.maitz@sydney.edu.au

Introduction: A significant burn injury will compromise the body's thermo-regulatory system and the patient may lose body heat rapidly and become hypothermic. Although prevention of hypothermia is advised for early management of burns patients, there is a lack of clinical evidence reviewing the impact of hypothermia on outcome of care for burns patients.

Methods: Review of a prospectively gathered database of outcomes of patients transferred to Concord Repatriation General Hospital from 2009 to 2013. Patients who had a body temperature of ≤ 35 degrees C on arrival to the burns unit were defined as hypothermic.

Results: From the 268 patients identified, 41(15%) were hypothermic on arrival. Patients with larger TBSA were more likely and those with adequate first aid were less likely to be hypothermic. There was a relationship with hypothermia and poorer outcomes of increased rate of mortality 14.6% vs 3.5% ($p=0.11$) and higher incidence of sepsis 9.8% vs 2.6% ($p=0.22$). However hypothermia appears to improve other outcomes in lower requirement for grafting: 36.6% vs 51.1% ($p=0.01$) and shorter length of hospital stay 26.57 vs 35.71 days ($p=0.09$).

Discussion and Conclusions: This review shows that patients with larger TBSA were more likely and those with adequate first aid were less likely to be hypothermic. Hypothermia may lead to improved wound related outcomes of lower requirement for skin grafting and shorter hospital stay but worse for systemic disease related outcomes of sepsis and in-hospital mortality. Further study is required to assess the impact of hypothermia on outcome of burns patients.

Key Words

Hypothermia, Burn outcome

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