Randomised controlled trial of three different dressings for partial thickness burns in children

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INTRODUCTION
Silver-impregnated fabric and foam dressings are the gold standard for paediatric burn care in Australasia (Cuttle et al., 2007). A large range of these dressings are available on the market, but very few high level trials have been conducted comparing them (Wasiak, Oelend & Campbell, 2013).

AIM
To compare the effects of Acticoat™ (Smith & Nephew), Acticoat™ combined with Mepitel™ (Mölndlycke Healthcare) and Mepilex Ag™ (Mölndlycke Healthcare) on acute, partial thickness burn injuries in children.

HYPOTHESIS
Silver fabric and foam dressings with a silicone interface, compared to no silicone interface, will decrease the time to wound re-epithelialisation and pain and distress experienced during dressing changes for children with partial thickness burn injuries.

Inclusion criteria
- 0-15 yrs
- Presenting to RCH ≤72hrs post-injury
- Partial thickness burn ≤10%TBSA
- Have not received a silver dressing

METHODOLOGY

Exclusion criteria
- Inappropriate 1st aid (e.g. dirty water)
- Chemical and friction burns
- Known sensitivity to silver

Demographic data
- D.O.B
- Date of burn injury
- Anatomical area of burn
- TBSA (%)
- Mechanism of injury
- Burn depth

Recruitment
1. Department of Emergency
2. Stuart Pegg Paediatric Burns Centre

Primary Outcome Measures
- Days to re-epithelialisation
  - Visitrak™ (Smith & Nephew)
  - 3D LifeViz™ System (Quantificare)
  - Blinded review by panel

Secondary Outcome Measures
- Pain and distress
  - Faces-R
  - VAS-P
  - FLACC
  - Pulse and respiratory rate
- Acute phase
  - Infection
  - Grafting
  - Dressing cost-effectiveness and ease of use
  - Physical function
- Skin/scar outcome
  - Ultrasound scan
  - POSAS
  - Photograph
  - Scar mx resources

RESULTS
The results of this study will provide data on whether one dressing is superior to others in regards to wound re-epithelialisation time and pain and distress during dressing changes in children with partial thickness burn injuries.

TAKE AWAY MESSAGE
This study will aim to add to the literature in regards to silver-impregnated fabric and foam dressings and facilitate further evidence-based practice in this area.

CONCLUSION:

Data collection time points
- Dressing change every 3-4 days until re-epithelialisation

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