

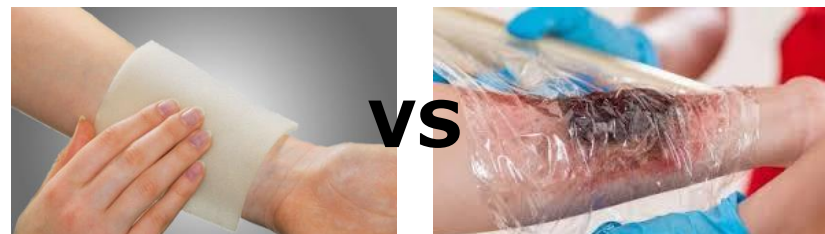
Hydrogel dressing versus plasticised polyvinylchloride film for acute paediatric burn injuries

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BACKGROUND

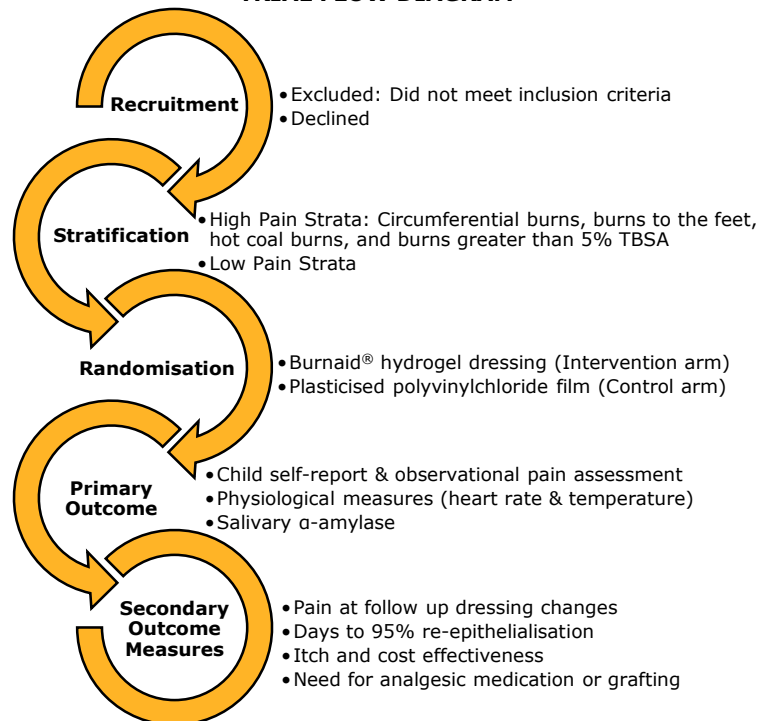
- Hydrogel burn dressings have gained widespread use in the pre-hospital setting – with anecdotes to suggest these dressings provide additional analgesia via an evaporative cooling effect
- Empirical evidence is lacking on the analgesic properties of Burnaid® hydrogel dressings for the treatment of acute burns, and no studies have been conducted in a paediatric burn population
- This trial aimed to assess the effectiveness of Burnaid® hydrogel dressing as an analgesic adjunct to first aid for the treatment of acute paediatric thermal burn injuries in comparison to plasticised polyvinylchloride film – current standard care in the Emergency Department (ED) at the Queensland Children's Hospital



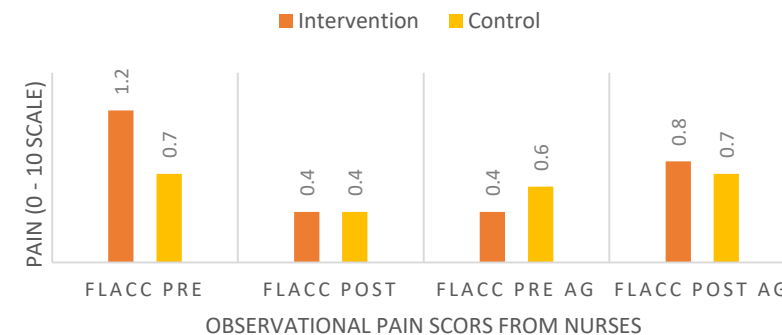
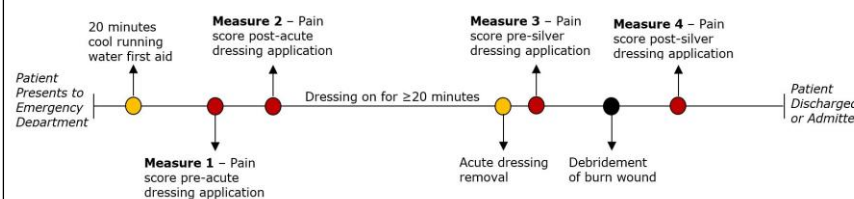
METHODS

- Paediatric patients presenting to The Queensland Children's Hospital, Brisbane, Australia, with an acute thermal burn were approached for participation in the trial from September 2017 – September 2018
- Patients were randomised to receive either (1) Burnaid® hydrogel dressing or (2) Plasticised polyvinylchloride film as an acute burn dressing following 20 minutes cold running water
- Pain was assessed pre and post application of the randomised dressing and pre and post silver (Ag) dressing application in the ED. Repeated measures of pain, stress, and re-epithelialisation were collected at each burn dressing change until 95% wound re-epithelialisation occurred

TRIAL FLOW DIAGRAM



PAIN ASSESSMENT IN THE ED



RESULTS

- Seventy-two paediatric burn patients were randomised and included for analysis ($n = 37$ Intervention; $n = 35$ Control). No significant difference in pain scores were found between children who received Burnaid® and those who received plasticised polyvinylchloride film as an acute burn dressing in the ED
- No significant difference in observational pain scores from nursing staff or parents/caregivers were found between the two groups ($p = 0.72$ and $p = 0.78$, respectively)
- Child self-report pain scores (FPS-R and VAS) showed no significant group differences pre and post application of the randomised dressings ($p = 0.78$ and $p = 0.22$, respectively)
- No significant group differences in heart rate ($p = 0.41$), temperature ($p = 0.53$), re-epithelialisation ($p = 0.26$), or salivary alpha-amylase ($p = 0.21$) were found between the intervention and control arms

CONCLUSION

A clear benefit of Burnaid® hydrogel dressing as an analgesic adjunct to first aid was not identified in this analysis.

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