

To Splint or Not to Splint? Reviewing a change in practice with paediatric palmar burns

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Historically... Most children who presented to the Stuart Pegg Paediatric Burns Centre (SPPBC) with palmar burns were splinted.

Now... After a review of the literature (2012) based on research with adult burn population and reported expert opinion, children are now only splinted for palmar burns that are deep partial or full thickness depth and where full AROM can't be achieved.



Method:

Retrospective chart review
N= 24 children / Mean age = 2.96 yrs
Palmar burns sustained between
August 2012 and March 2013.
Superficial Partial thickness depth

Average TBSA: <1%

Mechanism of Burn:

Contact 75% Flame 12.5%
Friction 8.3% Electrical 4.1%

Has this change in Occupational Therapy (OT) clinical practice contributed to any secondary complications (loss of AROM, loss of function, early reconstruction)?



Audit Outcomes:

16/24 (67%) were discharged with no splinting, follow up or reported complications with AROM or use of hand at healing.

2/24 (8%) presented with 'temporary' splints (up to 3 days post injury) from referring service. Splints were ceased and children discharged with no follow up or concerns with AROM at time of healing.

4/24 (17%) progressed to having a nocte splint (initiated D1-17 post burn) during acute healing phase. The decision to splint was made on concerns from OT when noticed skin blanching on stretch, loss of AROM, delayed healing or at the request of treating consultant (mechanism of burn - electrical). No scar management commenced. Splints ceased at or after time of healing, and no AROM/functional complications were reported at follow up appointments up to 12 months post burn.

2/24 (8%) presented with areas of deep partial thickness burn with no AROM restrictions during healing to indicate splinting (as per literature review), thus NOT splinted. Some skin thickening and scar banding was observed at ongoing reviews with nil loss of AROM. Now up to 11 months post burns with nil reported functional limitations.

Hand splinting is no longer routine:

Findings indicate that nil adverse outcomes have occurred from NOT splinting a child with superficial/partial thickness depth palmar burns.

The decision to splint is based upon concerns from the OT if a child has reduced AROM and a burn depth greater than superficial/partial thickness during the acute healing phase.

OT continues to encourage active use of the hand through meaningful and developmentally appropriate occupational roles including play and ADLs.

Future Considerations:

- Longer term prospective trial with aim to inform future practice and develop evidence for paediatric population (larger no. of participants, randomised selection).
- Follow up of children if concerns arose re: depth / not splinted – how will they present +12 months and post growth?
- Documentation - depth consistency, ROM reporting

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