

Scar outcome of children with partial thickness burns: a 3 and 6 month follow up

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Introduction: In children with partial thickness burns re-epithelialising in ≤ 2 weeks, a normal skin appearance is expected within 6 months, but there is a paucity of research to verify these assumptions. The aim of this study was to assess the long-term skin appearance of children with partial thickness burns and to determine if silver dressings used acutely could impact the outcome.

Method: Children aged 0 to 15 years with an acute partial thickness burn, $\leq 10\%$ TBSA were included. Children were originally recruited for an RCT investigating three dressings for partial thickness burns. Children were assessed at 3 and 6 months post re-epithelialization. 3D photographs were taken of the burn site, POSAS was completed and an ultrasound was taken to measure skin thickness.

Results: Forty-three children returned for 3 and 6 month follow-ups or returned a photo. Days to re-epithelialisation was a significant predictor of skin/scar quality at 3 and 6 months ($p < 0.01$). Patient-rated colour and observer-rated vascularity and pigmentation POSAS scores were comparable at 3 months (colour vs. vascularity 0.88, $p < 0.001$; colour vs. pigmentation 0.64, $p < 0.001$), but patients scored higher than the observer at 6 months (colour vs. vascularity: 0.57, $p < 0.05$; colour vs. pigmentation: 0.15, $p = 0.60$). Burn depth was significantly correlated with skin thickness ($r = 0.51$, $p < 0.01$). Hypopigmentation of the burn site was present in 25.8% of children who re-epithelialised in ≤ 2 weeks.

Conclusion: This study has provided information on long-term outcomes for children with partial thickness burns and highlighted a need for further education of this population.

Key Words

Children, partial thickness burn injury, scar outcome

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