Author response to: Comment on: “Randomized clinical trial of negative pressure wound therapy as an adjunctive treatment for small-area thermal burns in children” by Frear et al.

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Dear Editor

We thank Agarwal and Sharma for their interest in our paper 1. We wish to submit the following points for their consideration:

1) In partial-thickness burn management, the risk of progressive injury and protracted re-epithelialisation cannot be dismissed, particularly for deep dermal partial-thickness burns, which constituted one-third of our sample. The well-known relationship between time to re-epithelialisation and hypertrophic scarring highlights the critical importance of facilitating prompt epithelial closure in the treatment of all burns.

2) We concur that collagen dressings hold promise. However, randomised trials demonstrating their efficacy are lacking, and there is evidence they might be inferior to silver-impregnated dressings.

3) The potential value of NPWT has been shown in several acute, chronic, and post-operative settings, including burn care. Aware of its possible practical challenges, we assessed the intervention’s effects on ease of management and movement. Given the substantial treatment burden observed among younger children, we encourage clinicians to explore less cumbersome, ultraportable NPWT systems.

4) As noted in the published protocol, collection of data to inform an economic evaluation was integrated into the trial. This evaluation is currently undergoing peer review and suggests the costs of NPWT are reasonable in relation to the identified benefits.

5) Our study showed statistically significant reductions in time to re-epithelialisation, dressing change requirements, and referrals to scar management. Scar assessments were conducted at both 3- and 6-months post-injury. These measures revealed a significant difference in relative scar thickness at 3 months. The 6-month assessments were constrained by high rates of attrition.

6) This trial provides the first high-quality evidence of the intervention’s efficacy as an adjunct to silver-impregnated dressings when applied within one week of injury and set to a continuous subatmospheric pressure of 80 mmHg. We agree that further research is necessary to define the optimal NPWT regimen.

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