

Comparative study between skin micro grafting (Meek technique) and meshed skin grafts in paediatric burns

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Globally, burn injuries are the 3rd principal cause of death due to injury among children aged 1–9 years. Yet, the management of paediatric burns is always challenging; due to limited donor sites and the cosmetic appearance that will affect the child later in life, either at the donor or the recipient site. Skin grafts may need to be expanded to minimise donor skin size or in patients with limited donor sites. Multiple techniques were described for graft expansion. A prospective comparative randomised study was done on 40 paediatric burn patients with deep dermal and full-thickness burns. Patients were divided into two groups. The skin graft take, epithelialization time, total time of the surgery and the aesthetic outcomes (using the Patient and observer scar assessment scale) in each group were evaluated at three months postoperatively.

The percentage of take in the Meek group (84.25%) was significantly better than the meshed group (71.5%) ($P=0.006$). Epithelialization time was better for the Meek group (27.11 days) compared to the meshed group (33.5 days) ($P=0.176$). In addition, infection rates were lower in the Meek group (25%) than in the meshed group (40%) ($P=0.311$). Subjectively POSAS scar assessment scale exhibited better results for the Meek group, with a mean score of 3.17 & for the meshed group, was 4.2 ($P=0.048$). The observer's overall score was as well better for the Meek group, with a mean overall opinion score of 2.89 & for the meshed group was 4.1 ($P=0.003$). The operative time was longer with the Meek technique than with the traditional mesher ($P<0.001$).

The Meek technique for expanding the skin grafts is useful in covering burn wounds with a greater expansion rate, more accessible application, better graft take & a better scar appearance than the traditional mesher.

Biography

Marwan Noureldin, MD, is a member of the Royal College of Surgeons in England and obtained his MD degree in plastic and reconstructive surgery in 2021 from Cairo University. He is a plastic and hair transplant surgeon at Nour Clinic and Lecturer at Newgiza University–Surgery department, both in Cairo, Egypt.

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