

Comparative Study of Dermal Regeneration Template Made by Bovine Collagen with and without Silicone Layer in the Treatment of Post-Burn Contracture

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Abstract : The advent of dermal regenerate templates has fostered major advances in the treatment of acute burns and their sequelae, in the last two decades. Both data on morphological aspects of the newly-formed tissue, and clinical trials comparing different templates, are still lacking. The goal of this study was to prospectively analyze the outcome of patients treated with two of the existing templates, followed by thin skin autograft. They are both made of bovine collagen, one includes a superficial silicone layer. Surgery was performed on patients with impaired mobility resulting from burn sequelae (n = 12 per template). Negative pressure therapy was applied post-surgically; patients were monitored for 12 months. Data on scar skin quality (Vancouver and POSAS evaluation scales), rate of joint mobility recovery, and graft contraction were recorded. Improvement in mobility and skin quality were demonstrated along with graft contraction, in all patients. The silicone-coupled template showed the best performance in all aspects.

Keywords : dermal regeneration template, artificial skin, skin quality, scar contracture

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