

Treatment of Burn Scars using Laser Surgery

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DESCRIPTION

Restoration is performed when burn injury remains challenging; however, laser and pulsed light technologies currently provide hope for patients with hypertrophic scars, which can be related to persistent hyperaemia, chronic inflammation, intense pruritis, and neuropathic pain. Additionally to impairing body image, these scars might limit functional recovery, and compromise activities of daily living. X demonstrates that laser- and light-based therapies may be combined with one another safely to yield superior results, typically at a lower price, by reducing the necessity for reconstructive surgery. Modulating the burn scar, through minimally invasive modalities, might replace conventional strategies of a burn scar excision.

Restoration of form and function when burn injury remains difficult, however traditional and emerging laser- and light-based technologies might provide new hope for patients with burn scars. In addition to serving as a reminder of the burn injury and compromising vanity and self-image, burn scars turn out functional morbidity, together with contractures, hypertrophic changes, and keloid formation. Burn scars typically lead to persistent hyperaemia, chronic inflammation, intense and unrelenting pruritis, and neuropathic pain [1]. The loss of sweat glands, hair follicles, and melanocytes compromises the flexibility of the skin, the body's largest organ, to supply thermoregulation, resist mechanical trauma, and guard against Ultraviolet radiation. The stigmata of burn scars are plainly visible; however, the injury to the patient is common and quite a skin deep.

Depending upon the constellation of patient symptoms and functional deficits, treatment of the burn scar involves a variety of modalities, which involves massage and moisturizing agents, topical and intralesional steroids, and experimental therapies like antiviral drugs. Surgical incision or excision of the burn scar could also be necessary, and defects are reconstructed with skin substitutes, split- and full-thickness skin grafts, tissue transplantation, tissue-expanded or flaps, and even free tissue transfer. Keloids might even need perioperative radiotherapy to reduce the incidence of repetition.

Completely 3 different laser- and light-based technologies are currently poised to dramatically alter our constructive algorithmic rule and make a significant paradigm shift within the management of burn scars (i)Vascular-specific Pulsed Dye Laser (PDL) therapy to reduce hyperaemia and hypertrophic scar formation (ii)Ablative fractional carbon dioxide laser resurfacing to assist correct the abnormal texture, thickness, and stiffness of the burn scar (iii)Intense Pulsed Light (IPL) medical care to boost burn scar dyschromia and alleviate chronic inflammation.

The vascular-specific, flashlamp-pumped 585 and 595 nm pulsed dye lasers became the quality of care for the treatment of port stains, capillary malformations, and a few hemangiomas. This laser by selection targets haemoglobin and coagulates microvasculature within the papillary and reticular dermis, up to a depth of 1.2 mm. Hypertrophic burn scars are characterized by excessive inflammation, prolonged time to reepithelialization, overabundant scleroprotein production, abnormal extracellular matrix remodeling, and inhibition of remodeling, all of that result from or are associated with pathologic neovascularization [2,3]. The PDL causes selective photothermolysis that induces coagulation necrosis of capillaries. Once applied to burn scars, the PDL serves to extinguish this hypervascular response.

One element that is significant to all stakeholders, patients, providers, and third-party payers, is that laser therapy for hypertrophic burn scars has the potential to dramatically reduce the price of care. The surgical approach to the management of burn scars will vary from simple laser treatments to very complex free flap reconstructions, relying upon the degree of contraction, the pliability of the wound, and the presence of such mitigating factors as ulceration and inflammation. The laser cases take one hour, together with anesthesia induction/emergence, surgical treatment, transport time, and room turnover. Of course, patients with neck contractures might not be adequately treated with laser therapy alone.

However, 1-2 laser sessions might preclude the necessity for any invasive surgery in patients with delicate to moderate contractures and will allow less aggressive, and less costly, procedures, like tissue transplantation or skin graft, to be used in patients with moderate to severe contractures. For patients who are suffering from severe pruritis, draining paresthesias, and

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chronic pain, laser treatment of hypertrophic burn scars nearly always decrease medicine necessities and permits some patients to discontinue several or all of their medications, like narcotics, anxiolytics, antihistamines, and antidepressants. Patients who will wean off of those advanced regimens quicker need less clinic follow-up and are more successful with rehabilitative efforts [4]. Many ancient and rising technologies might considerably change how clinicians manage burn scars. Laser- and light-based therapies may be combined with one another to yield superior results, typically at a lower price, by reducing the necessity for operation. Modulating the burn scar, through noninvasive and minimally invasive modalities might replace typical strategies of a burn scar excision.

REFERENCES

1. Alster Serris A, Danion F, Lanternier F. Disease entities in mucormycosis. *J Fungi*. 2019; 5(1): 23.
2. Spellberg B, Edwards J, Ibrahim A. Novel perspectives on mucormycosis: Pathophysiology, presentation and management. *Clin Microbiol Rev*. 2005; 18(3): 556-569.
3. Jeong W, Keighley C, Wolfe R, Lee WL, Slavin MA, Kong DCM, et al. The epidemiology and clinical manifestations of mucormycosis: A systematic review and meta-analysis of case reports. *Clin Microbiol Infect*. 2019; 25(1):26-34.
4. Chamilos G, Lewis RE, Kontoyiannis DP. Delaying amphotericin B-based frontline therapy significantly increases mortality among patients with hematologic malignancy who have zygomycosis. *Clin Infect Dis*. 2008; 47:503-509.