

787 **Two Year Follow Up of Microblading in Patients with a Facial Burn Injury**

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Introduction: Recovery from a facial burn injury can be challenging. Excessive reconstructive interventions and the emotional devastation can be taxing. Microblading, semi-permanent eyebrow tattooing, is a potential non-invasive alternative treatment. Little research exists on microblading's longevity and durability over burn scar or its impact on self-esteem. A single case study showed positive impact on patient perceived body image and maintenance of shape and color. Two years post microblading new data supports its efficacy as a potential treatment for patients with a facial burn.

Methods: Single case study two years post microblading of a 22-year-old female who sustained a 30% total body surface area burn injury to bilateral upper extremities, hands and face at age one. Based on referral from her plastic surgeon, she underwent first microblading treatment March 2019 with a standard touch up session May 2019. Patient has not undergone any additional sessions since. Photos obtained two years post treatment were compared to before/after photos immediately following microblading to assess longevity and durability on scar tissue. Self-reported patient outcomes obtained two years after microblading assessed impact on self-esteem and body image.

Results: Photos were taken pre/post microblading, at nine months, and 2.5 years post. Comparison of photos over time showed some expected fading but maintenance of overall shape. Patient self-reports using an eyebrow pencil to darken when she desires brows that are more vibrant and trims hair as needed to maintain shape. Patient reports positive impact to her self-esteem post-microblading. "I most definitely did notice some changes in my self-esteem." She notes feeling happier and more confident, especially in social situations with peers. Comparison of responses immediately post-microblading with 2.5 years later show focus on improved self-esteem versus satisfaction with appearance of the eyebrow.

Conclusions: Comparison of follow up photos obtained 2.5 years after initial microblading shows maintenance of eyebrow shape with some fading of color. Further research is needed to determine if color fading is as expected or more pronounced in patients with scarred skin. Also important is the impact of characteristic dryness of scars on fading rate. To maintain adequate color, additional treatments would be recommended. Better understanding of factors affecting fading would help determine frequency and timing of maintenance sessions. Patient report indicates increasingly improved self-esteem over time as evidenced by focus on confidence versus appearance. Despite some fading, data supports microblading as an effective non-surgical treatment in establishing eyebrow appearance and function over burn scar.

788 **Upper Extremity and Lower Extremity Net Devices for Use after Application of Cultured Epidermal Autograft**

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Introduction: Early positioning of the burn patient to prevent scar contracture is a fundamental aspect of the therapy treatment plan¹. Positioning is complicated by different types of grafting including cultured epidermal autograft (CEA). Use of CEA requires a period of airing out and therefore positioning devices must allow adequate air flow to the posterior aspect of the grafted limb while immobilizing the extremity. Previous lower extremity net devices have been presented for use²⁻³, however this design increases hip flexion which can promote contracture. Additionally, there is no similar net device presented for use for the upper extremity.

Methods: Both the upper extremity and lower extremity net device designs are made using 1" PVC pipe. A mix of Tee, 90° and 45° couplers are used to link together the PVC pipe. A PVC cutter is needed to cut the pieces. Once the pieces have been fit together and are aligned, the pieces are secured with a bonding PVC adhesive. The devices are then sanitized for patient use. A double layer of burn netting is used over the device to support the extremity while not allowing too much slack. The following graphics provide a basic template for an average adult adjusting lengths and width as needed. For the lower extremity, a measurement from the fold of the buttocks to the heel is needed to determine overall length of the device. The average cost for 1 lifter is \$15-20. Additional custom plantar foot plates can be added to the lower extremity device to prevent ankle dorsiflexion as demonstrated by the poster presentation by Dean et. al.³ For the upper extremity, an armboard or use of bedside table can be used to support the device. These particular designs are an outline for adult patients, although could be modified for pediatrics.

Results: Net devices for the upper and lower extremity allow good positioning of limb while providing adequate air flow and off-loading during the required air out periods using CEA. These designs provide a template for burn therapists to utilize as a baseline. This particular lower extremity device decreases hip flexion as compared to other existing devices. The upper extremity template provides an option that has not previously been articulated.

Conclusions: Positioning the upper and lower extremity after CEA application can be achieved using custom net devices. Net devices provide a cost-effective, quick and simple solution that allow adequate ventilation to the posterior aspect of the limb while maintaining a good position during immobilization.