

The Aesthetic Reconstruction of Post-Burn Eyebrow Alopecia with Bilateral Superficial Temporal Artery Island Scalp Flap

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Abstract : Introduction: Burns to the face account for between one-fourth and one-third of all burns. The loss of an eyebrow due to a burn or infection can have negative physical and psychological consequences for patients because eyebrows have a critical functional and aesthetic role on the face. Plastic surgeons face unique challenges in reconstructing eyebrows due to their complex anatomy and variations within genders. As a general rule, there are three techniques for reconstructing the eyebrow: superficial temporal artery island flap, a composite graft from the scalp, and mini or micro follicular grafts from the scalp. In situations where a sufficient amount of subcutaneous tissue is not available and the defect is big such as the case of burns, flaps like the superficial temporal artery scalp flap remain reliable options. In 2018, a 17-year-old female patient presented to the department of Burns Plastic and reconstructive Surgery of Guru Teg Bahadur Hospital, Delhi, India. A scald-burn injury to the face occurred two years before admission, resulting in bilateral eyebrow loss. We reconstructed the bilateral eyebrows using bilateral scalp island flaps based on the posterior branch of the superficial temporal artery. The reconstructed eyebrows successfully assumed a desirable shape and exhibited a natural appearance, which was consistent with preoperative expectations and the patient stated that she was more comfortable with her social relationships. Among the current treatment procedures, the superficial temporal artery island flap continues to be a versatile option for reconstructing the eyebrows after alopecia, especially in cases of burns. Results: During the 30 days follow-up period, the scalp island flap remained vascularised with normal hair growth, without complications. The reconstructed eyebrows successfully assumed a desirable shape and exhibited a natural appearance; the patient stated that she was more comfortable with her social relationships. Conclusion: In this case report, we demonstrated how scalp island flaps pedicled by the superficial temporal artery could be performed very safely and reliably to create new eyebrows.

Keywords : alopecia, burns, eyebrow, flap, superficial temporal artery

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