Laser Treatment of Medial Epicanthoplasty Scars

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Medial epicanthoplasty is a commonly performed aesthetic surgery, in addition to a double-eyelid surgery. Epicanthoplasty, compared with double-eyelid surgery, may cause scarring comparably in numbers and seriousness. Various treatments have been attempted; however, to date, there have not been any reported methods better than revision surgeries. Hence, herein, we present successful cases using laser treatment after scarring due to medial epicanthoplasty.

Key words

Epicanthoplasty; Laser and light sources; Surgery

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INTRODUCTION

Medial epicanthoplasty is a commonly performed aesthetic surgery along with double-eyelid surgery.¹ Epicanthoplasty causes scarring that is not less than in numbers and seriousness compared to double-eyelid surgery. Various treatments have been attempted;² however, no significantly better method has been reported other than revision surgery. Hence, herein, we present cases successfully treated with laser after scarring due to medial epicanthoplasty.

CASE REPORT

A 20-year-old woman presented with asymptomatic, linear scarring on both inner canthi of the eyelids that had developed 2 years ago. The patient was otherwise healthy

Fig. 1. Linear white depressed scar on the inner canthus of the upper eyelid, (A) before and (B) two months after two sessions of laser treatment.

and had no history of trauma other than her past history of medial epicanthoplasty. Physical examination revealed linear, white, depressed scar on the inner canthi of the upper eyelids (Fig. 1A). The second patient, a 26-year-old woman, presented with asymptomatic, linear scarring on her right lower eyelid that had developed 6 months ago. The patient was otherwise healthy and had no other history of trauma except for the medial epicanthoplasty. Physical examination revealed linear, elevated scar on the right lower eyelid (Fig. 2A). For the patients, a 10,600-nm CO₂ laser (Ultrapulse Encore; Lumenis, Santa Clara, CA, USA) was used. The Deep FX mode of 20 mJ, density 1 (5%) was performed. Topical application of EMLA cream (AstraZeneca AB, Södertälje, Sweden) was used for local anesthesia one hour prior to the procedure. Two to three sessions of ablative fractional CO₂ laser and Starlux 1540-nm nonablative fractional laser (Palomar, Westford, MA, USA) at 30-50 mJ using a 10 mm spot in intervals of four to eight weeks were performed. A combination of ablative and nonablative fractional laser was used to maximize the efficacy and lower potential side effects. The scars were softened, flattened with improved texture in both patients at the two months and four months follow-up, respectively (Figs. 1B and 2B). Post-therapy transient erythema and crusting spontaneously resolved along with clinical improvements.

DISCUSSION

Epicanthus is a vertical fold of skin on either side of the nose from the medial canthus. In Asians, it presents as a normal characteristic. However, because it covers the inner canthus, in some cases it may seem like telecanthus. As a result, medial epicanthoplasty has become very common for aesthetic purposes. Furthermore, if medial epicanthoplasty is performed with double-eyelid surgery,

Fig. 2. Linear elevated scar on the right lower eyelid, (A) before and (B) four months after three sessions of laser treatment.

the double eyelids may be able to have more of a natural appearance.¹ Therefore, medial epicanthoplasty along with double-eyelid surgery are likely to be operated simultaneously to achieve larger and clearer eyes. In spite of the anticipation of having better aesthetic results with the combined surgery, scarring is a major concern.² The possibility of leaving scar with medial epicanthoplasty outweighs that of double-eyelid surgery. Various modalities have been attempted to reduce the chance of scarring.^{1,2} However, the outcomes of different treatment methods have not been as satisfactory as revision surgery until now. Fractional lasers are well-known for its use in treating and improving the texture and appearance of scars.^{3,4} Fractional lasers may have potential advantages in such cases because of their ability to penetrate into the deep dermis.³ CO₂ lasers used in a fractional pattern ablate abnormal scars and allow formation of neocollagen and rapid reepithelialization of the skin surface.⁴⁻⁶ With no other treatments as successful as revision surgery in cases of scarring after medial epicanthoplasty, fractional laser treatment may be a safe and effective treatment modality with almost no downtime.

We report two cases of medial epicanthoplasty scarring successfully treated with fractional laser. Therefore, in our experience, fractional lasers can be an effective ther-

apeutic option for the treatment of medial epicanthoplasty scars.

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