Journal of Cranio-Maxillo-Facial Surgery 44 (2016) 958–963

Contents lists available at ScienceDirect

Journal of Cranio-Maxillo-Facial Surgery

journal homepage: www.jcmfs.com

Brow reduction, reshaping and suspension by a 20-degree beveled brow incision technique

Dominik L. Feinendegen [a, *], Mihai A. Constantinescu [b], Daniel A. Knutti [c], J. Camilo Roldán [d, e, f, **]

[a] Institute of Plastic, Reconstructive and Aesthetic Surgery, Dufourstrasse 38, 8702 Zürich-Zollikon, Switzerland
[b] Department of Plastic and Hand Surgery (Chair: Prof. M.A. Constantinescu, MD), University Berne, Inselspital, 3010 Berne, Switzerland
[c] Clinic for Aesthetic Surgery, Bahnhofstrasse 39, 2502 Biel/Bienne, Switzerland
[d] Department of Cranio-Maxillofacial Plastic Surgery, University of Regensburg, Franz-Josef-Strauß-Allee 11, 93053 Regensburg, Germany
[e] Adult Aesthetic and Reconstructive Surgery of the Face at Aneasthesia Center Hamburg at UKE, Hamburg, Germany
[f] Pediatric Facial Plastic Surgery and Craniofacial Anomalies at the Catholic Children's Hospital Wilhelmstift, Hamburg, Germany

ARTICLE INFO

Article history:
Paper received 28 March 2016
Accepted 17 May 2016
Available online 24 May 2016

Keywords:
Brow reduction
Brow reshaping
Brow symmetry
Brow lift
Dermal wound healing

ABSTRACT

Background: A huge number of procedures for forehead and brow rejuvenation have been described. Nevertheless, the surgical approach of brow aesthetics in terms of correction of brow fullness and symmetry has not been systematically evaluated in the literature. We recently proposed a 20-degree beveled brow incision technique for direct brow lifting. The aim of the present study is to evaluate the 20-degree beveled brow incision technique for brow reduction, reshaping and correction of brow symmetry.

Materials and methods: Eighteen patients underwent brow reshaping by using the 20-degree beveled brow incision technique combined or not with other lifting procedure (brow lift, blepharoplasty, face lift). The surgical outcome was evaluated by photographic documentation and a questionnaire on patient satisfaction. Follow-up was at least 6 months.

Results: The surgical outcome in terms of brow symmetry, fullness and scaring was very good in 14 of 18 patients, good in 2 patients and poor in 2 patients. The last two patients were smokers. Motor or sensibility disorders were not observed.

Conclusion: The 20-degree beveled brow incision technique seems to be saved and effective as surgical procedure to improve brow aesthetics in terms of symmetry and fullness while a supplement lifting maneuver is easily to perform.

© 2016 European Association for Cranio-Maxillo-Facial Surgery. Published by Elsevier Ltd. All rights reserved.

1. Introduction

Brow and forehead rejuvenation surgery focus on tissue laxity but not on brow fullness. Recently, a systematic review on contemporary techniques for brow and forehead rejuvenation revealed no superior outcome by performing either an endoscopic brow lifting or an open coronal approach (pretrichial or trichial hairline incision). Dysesthesia and lesion of the frontal nerve were mentioned as possible complication (Graham et al., 2011). The major concern about *direct brow lift* is the potential unpleasant scaring. Lewis improved scaring in *direct brow lift* by modifying the classical vertical brow incision (90°) in a beveled 45° incision (Lewis, 1983). We recently proposed a beveled incision at 20° for *direct brow lifting* in 38 patients producing imperceptible scars. The versatility of the *direct brow lift* lies in the effective management of tissue laxity but also in the management of brow fullness (Feinendegen, 2012). Moreover, the lesion of the supraorbital nerve or the frontal nerve is excluded when performing a direct brow procedure due to the flap preparation in the subcutaneous plane.

* Corresponding author. Tel.: +41 44 3831565; fax: +41 44 3921565.
** Corresponding author. Division of Pediatric Facial Plastic Surgery and Craniofacial Anomalies, Catholic Children's Hospital Wilhelmstift, Liliencronstrasse 130, 22149 Hamburg, Germany. Tel.: +49 40 67377 400, +49 941 9440; fax: +49 40 67377 445.
E-mail addresses: dr.feinendegen@feinendegen.ch (D.L. Feinendegen), mihai.constantinescu@insel.ch (M.A. Constantinescu), dknutti@bluewin.ch (D.A. Knutti), jcamilo.roldan@yahoo.com, jc.roldan@kkh-wilhelmstift.de (J.C. Roldán).
URL: http://www.kkh-wilhelmstift.de

http://dx.doi.org/10.1016/j.jcms.2016.05.017
1010-5182/© 2016 European Association for Cranio-Maxillo-Facial Surgery. Published by Elsevier Ltd. All rights reserved.

Brow fullness has not been routinely addressed surgically, but is maybe a widespread concern for women. Brow has a masculine appearance in females especially in presence of a marked hair surplus in the medial or central third of the brow, or because of a general increase of the brow hair rows, which leads to an increased vertical diameter. Furthermore brows are often asymmetric, producing "*step-like*" deformities.

The aim of the present study is to evaluate the *20-degree beveled brow incision* for direct brow reshaping in order to improve brow fullness and symmetry.

2. Material and methods

The present prospective descriptive cohort study was performed at the *Institute for Reconstructive Aesthetic Surgery* in Zurich from 2010 until 2012. Patients presented for brow fullness and symmetry correction. Patients with a follow-up of at least 6 months were included in the study. In selected patients a supplementary aesthetic enhancement procedure (face lift, brow lift, blepharoplasty) was performed.

2.1. Surgical planning

Operation planning was performed with the patient in a sitting position. A supraorbital frame 2.5 cm in relation to the orbital rim was drawn on the forehead. Medial third of the brow and midline (glabella) were used as landmarks for placement of a vertical line perpendicular to the supraorbital frame (Fig. 1). The desired brow shape, including the amount of skin resection and brow thinning, was marked into the frame, matching the symmetry (Fig. 1). Patients were asked to look into the mirror and to communicate their wishes. In patients who underwent concomitant lifting of the middle third of the brow overcorrection of 1–2 mm of was planed.

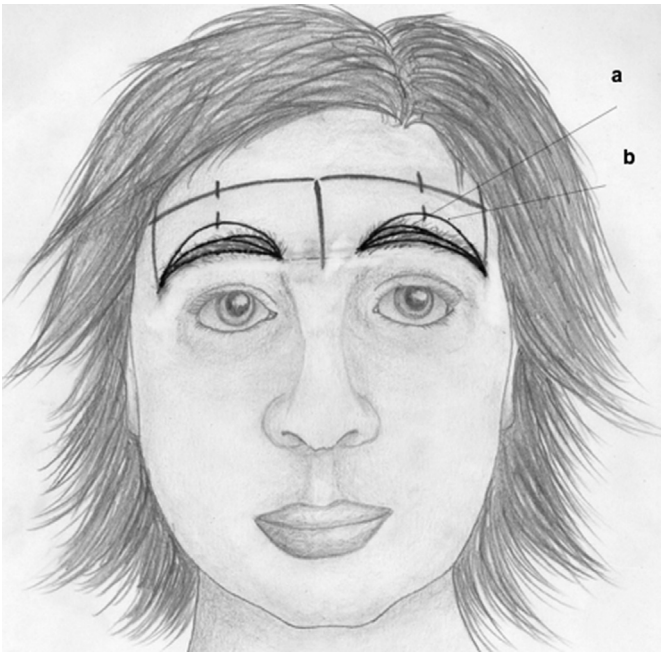

Fig. 1. Brow symmetry assessment and reshaping is accomplished by marking a supraorbital frame on the forehead 2.5 cm in relation the orbital rim. (a) Marking for brow reduction/reshaping. (b) Marking for supplementary brow lift. The caudal brow incision should be planed considering that on average 2 rows of brow hair will grow back through the scar. The resulted brow width should be composed of 3–5 rows of hair.

2.2. Surgical procedure

The procedure was performed in local anesthesia and intravenous sedation. Brow fullness and symmetry was corrected through the *20-degree beveled brow incision technique* as described earlier (Feinendegen, 2012) (Fig. 2). Briefly, brow thinning is accomplished by fusiform excision. Skin–brow incision is beveled at 20° in cranial direction (Figs. 2 and 3). The caudal brow incision should be planed considering that in average 2 rows of brow hair will grow back through the thin dermal layer of the scar. The resulted brow width should be composed by 3–5 rows of hair. In case of simultaneous brow elevation, the cranial incisions are planned on the forehead skin depending on the amount of the requested lifting (Fig. 1). The beveled fusiform flaps are raised in a subcutaneous plane with an undermining of about 1–2 cm in order to allow tension free side-to-side advancement. Care has to be taken not to damage the overlying hair follicles, which have to be spared for the later regrowth through the scar. After meticulous hemostasis, wound closure is performed by using 1–3 subcutaneous long-term monofilament synthetic absorbable suture 5-0 (Maxon®, Polyglyconate, Covodien, Medtronic, MN, USA) grasping the periost. Final skin adaption is performed with a cutaneous running monofilament suture (Prolene 7-0, Ethicon, Norderstedt, Germany). Hereby, a precise adaptation of the epidermal layer without any irregularity is a must. The wound is cleaned and taped with 12 mm adhesive strips (Steri-Strips®, 3M, MN, USA). On top of the adhesive strips a cotton wool dressing is applied to ensure suction of any secretion during the first day.

The outer dressing is removed on postop day 1 and the skin suture on the postop day 3. Adhesive strips are applied for a further week until postop day 10.

2.3. Data collection and analysis

Photographic standard documentation before and after surgery was performed. Pupil distance and the inter-pupilar plane were considered for standardized analysis on symmetry. Patient satisfaction score was defined on a scale from one to three as very good, good and poor respectively. Risk of scar formation was scored according to Gold et al. (2001) as "high" and "low" risk of scaring based on experienced scaring in former operations. Complementary surgical procedures as well as complications were recorded. Sensibility of the supraorbital area was evaluated according the two-point-discrimination test. Motoric disturbances in relation to the frontal branch of the facial nerve were documented.

3. Results

Eighteen patients (17 female, 1 male) were included into the study (Table 1). The patient's age ranged from 32 to 68 years (mean age was 54.5 years). Ten patients of the total cohort ($n = 18$) had a skin quality that was categorized deemed to be high risk for the development of noticeable scars. The patients were followed-up during 6–15 months.

In four patients (4/18) a brow fullness correction thought brow reduction and brow reshaping was performed. More common was the need of correction of brow fullness and brow symmetry at one stage (9/18). In three patients of those cases (3/9) the symmetry was corrected by complementary brow lift. According to the asymmetry, brow lift was also performed just at the affected side (one side brow lift) (Fig. 4). In 8 patients (8/18) a brow reduction and reshaping was combined with a brow lift (Fig. 5). In 13 (13/18) patients a brow reshaping and supplementary blepharoplasty was performed (Figs. 6 and 7); in one case (1/13) a complementary facelift was performed.

Download English Version:

https://daneshyari.com/en/article/3142807

Download Persian Version:

https://daneshyari.com/article/3142807

Daneshyari.com