

Nonincisional Blepharoplasty Using the Debulking Method

Young-Joon Lee, M.D.,¹ Rong-Min Baek, M.D.,² and Woo-Jin Chung, M.D.²

^{1,2}Seoul, Korea

Abstract. As more women work outside home, a growing number of women who want to have a natural-looking double eyelid choose the method with a short healing time and less pain. Thus blepharoplasty by the nonincisional method is performed frequently. This technique uses 7-0 nylon for simple triple ring-shaped or center doubled triple ring-shaped suture, with removal of subcutaneous fat, pretarsal muscle, and orbital septum through small incisions. This prevents the possibility that the folds will be loosened. By creation of a scar adhesion between the wider portion of the dermis and the tarsal plate after debulking of the soft tissue, the nonincisional method can be applied to a very thin eyelid without any difficulty. A retrospective review of the data for 327 patients who underwent nonincisional blepharoplasty using the debulking method from November 24, 2000 through March 9, 2003 is presented. Except for four cases, the procedures were successful. Two complications of conjunctivitis occurred, requiring removal of the buried suture, and two patients reported a mild scar.

Key words: Loosening—Scar-adhesion—Debulking

The desire for cosmetic plastic surgery has been increased by an growing interest in aesthetics. Blepharoplasty has been one of the most popular and common procedures among Korean people. As more women work outside home, a growing number of women who want to have a natural-looking double eyelid choose the method with a short healing time and less pain. Thus blepharoplasty by the nonincisional method is performed frequently. This nonincisional method, however, can loosen the folds afterward, making it difficult to apply in cases of

thick or very thin upper eyelids and risking the possibility of asymmetric folds. We therefore suggest nonincisional blepharoplasty using the debulking method.

Materials and Methods

Between October 2000 and March 2003, 327 patients underwent nonincisional blepharoplasty using the debulking method at the Lee Young-Joon Aesthetic Clinic. The mean age of the patients was 22 years (range, 18–47 years). All the patients were women,

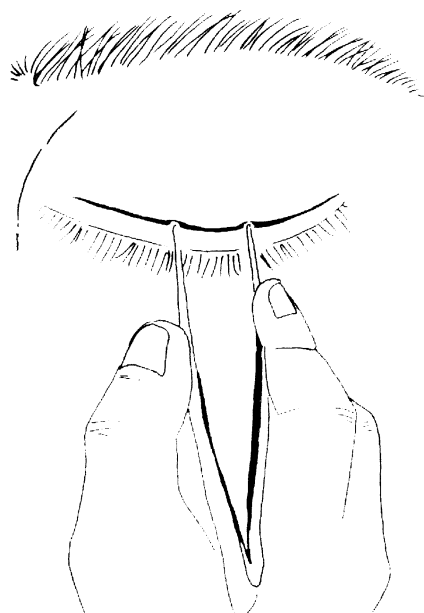


Fig. 1. The two-forceps test. Two or three points of entry are determined by making the desired fold using a fine forceps.

Correspondence to Woo-Jin Chung, M.D., Department of Plastic and Reconstructive Surgery, Inje University Medical Center, 85 2-Ga Jeo-dong, Jung-Gu, Seoul, Korea 100-032; email: wjchung@chungbuk.md



Fig. 2. The technique of debulking pretarsal soft tissues (muscle, preseptal fat, and septum) with small scissors and fine-tipped bipolar electrocautery to create a scar adhesion between the dermis and the tarsal plate.

Fig. 3. Instruments for debulking soft tissue. Small scissors (above) and fine-tipped bipolar electrocautery (below).

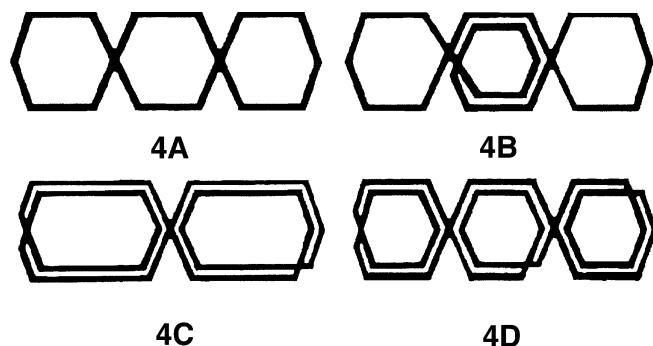


Fig. 4. Various methods of continuous buried suture ligation. (A) Simple triple ring-shaped ligation method. (B) Center doubled triple ring-shaped ligation method. (C) Doubled twin ring ligation method. (D) Double triple ring-shaped ligation method.

and the purpose for the surgery was cosmetic in all cases. The choice of whether the incision or nonincisional method would be used was based on the age of the patient, the amount of subcutaneous fat, and the desire of the patient.

Technique for Surgery

The height of the fold was determined according to the desire of the patient, as expressed in an interview with the physician. In general, the chosen height of the fold was 4 to 8 mm. If necessary, intravenous midazolam was administered for sedation, and local anesthesia was achieved by infiltrating 2% lidocaine with epinephrine solution into the incisional region of the upper eyelids. Depending on the results of the two-point forceps test (Fig. 1), only two small incisions (<3 mm) were made before surgery on the skin of the upper eyelids when the double eyelids formed the line more naturally. Three to four small incisions were made when there was difficulty in forming the inner or outer line with a no.11 blade.

To make the scar adhesion, pretarsal soft tissues (muscle, preseptal fat, and septum) were debulked with fine-tipped bipolar electrocautery and small scissors (Figs. 2 and 3). The lid then was everted, and a 7-0 nylon suture was inserted through the conjunctiva, entering and exiting at opposite points by the use of simple triple ring-shaped or center doubled triple ring-shaped continuous buried suture ligation methods (Fig. 4). The two ends of the suture were tied, and the knot was placed deep in the orbicularis oculi muscle. A single 7-0 black silk was used to close the small incisions. Open dressing was used with

application of antibiotic ointment. The skin sutures were removed 3 days after surgery (Fig. 5).

Result

A total of 327 patients underwent nonincisional blepharoplasty using the debulking method, and the patients were satisfied with the result except in four cases. In two of these cases, the buried suture should have been removed because of conjunctivitis. In the other two cases, the patients reported a mild scar. There were no revisional operations to correct loosening of a double fold or asymmetry. Fortunately, there also were no conventional complications such as corneal injury or cyst formation. The follow-up periods ranged from 2 months to 2 years (mean, 13 months) (Figs. 6 and 7).

Discussion

Blepharoplasty, used to make a double fold, is the most common cosmetic procedure performed on young oriental adults [21]. Statistically, only 30% to 60% of Asian people are born with double eye folds [2,3,5,6,8]. The methods of blepharoplasty can be classified as incisional or nonincisional. According to Shirakabe et al. [7], the nonincisional technique was first announced by Mikamo of Japan in 1896. These authors reported that the three-stitch technique with silk thread created a double eyelid margin that was 6 to 8 mm from the cilia. The depth was determined when the stitches were removed 2 to 6 days postoperatively. Since their first report, there have been



Fig. 5. Photographs of the operative procedure. (A) Preoperative design. (B) Debulking procedure. (C and D) Simple triple ring-shaped ligation procedure. (E) Immediate postoperative view. (F) A single 7-0 black silk stitch is used to close each stab incision.

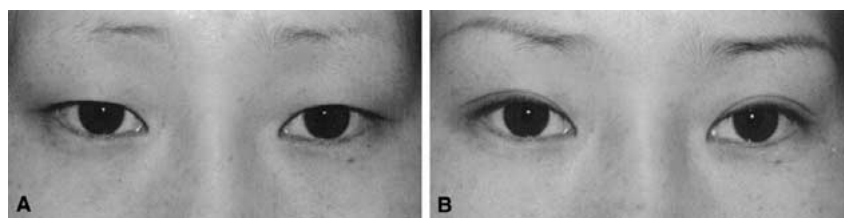


Fig. 6. Preoperative photograph and postoperative photograph 3 months after a 28-year-old patient underwent surgery using the debulking method.

numerous reports on the nonincisional blepharoplasty.

Currently, patients prefer the nonincisional method because of its advantages such as noninvasiveness, less scar, shorter operating time, early return life activities, and the like. However, the nonincisional techniques still have some problems, although various suturing techniques are yielding good results. For example, the double fold may loosen over time. This usually results when the dermal insertions of the levator muscle disappear. That is, the degree of scar adhesion created for the artificial insertion of the levator muscle becomes small or nonexistent.

In 1962, Uchida et al. [8] claimed that it is very important to fix the tarsal plate to the skin of

the eyelid. In conventional nonincisional blepharoplasty, two or three points of scar adhesion are created or there is dependence on string force alone. With time, however, its whole area is too small to sustain its function as a dermal insertion. According to Homma et al. [4], approximately 1% of the patients who have undergone nonincisional blepharoplasty lose their double fold within 1 year after surgery, and about 3% of the patients lose it within 5 years.

Our technique uses 7-0 nylon for the simple triple ring-shaped or center doubled triple ring-shaped suture after removal of the pretarsal muscle, orbital septum, and subcutaneous fat through small incisions. The removal of the soft tissue prevents the



Fig. 7. Preoperative appearance and postoperative appearance 6 months after an 18-year-old patient underwent surgery using the debulking method.

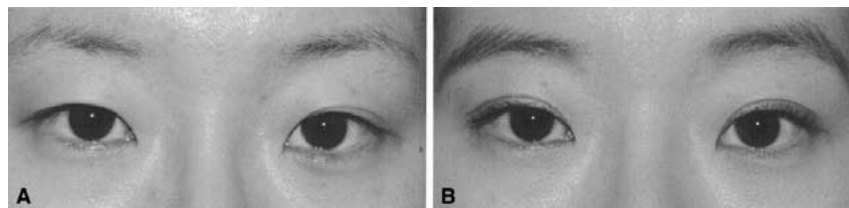


Fig. 8. Preoperative appearance and postoperative appearance 2 months after a 22-year-old patient with an asymmetric fold underwent surgery using the debulking method.

possible loosening of the folds after the nonincisional procedure by the creation of folds of scar adhesion between the wider portion of the dermis and the tarsal plate. Thus, this method can be applied to a thin eyelid without any difficulty. In addition, debulking of the soft tissue prevents jeopardization of the suturing effect by migration of excessive orbital fat to the area of fixation in the puffy eyelid. Post surgical assessment was based on the surgeon's assessment and patient's degree of satisfaction.

Oriental blepharoplasty requires careful preoperative consultation with each patient as well as thorough discussion of goals and anticipated results. Satisfactory results for most of our patients prompted us to report this method. We hope this debulking method can complement the existing nonincisional method.

Acknowledgments. We thank professor Se-Min Baek, M.D. who has advised and imported to us a profound and comprehensive knowledge of the aesthetic surgery.

References

1. Boo-chai K: Some aspects of plastic surgery in orientals. *Br J Plast Surg* **22**:60–69, 1969
2. Fernandez L: Double eyelid operation in the oriental in Hawaii. *Plast Reconstr Surg* **25**:257–264, 1960
3. Hiraga Y: The double eyelid operation and augmentation rhinoplasty in the oriental patient. *Clin Plast Surg* **7**:553–587, 1980
4. Homma K, Mutou Y, Mutou H, Hideo M, Kyori E, Tatsuya F: Intradermal stitch blepharoplasty for orientals: does it disappear? *Aesthet Plast Surg* **24**:289–291, 2000
5. Kim Y, Kwon J, Oh K: Blepharoplasty through three small incisions. *J Korean Soc Plast Reconstr Surg* **27**: 195–198, 2000
6. Onizuka T, Iwanami M: Blepharoplasty in Japan. *Aesthet Plast Surg* **8**:97–100, 1984
7. Shirakabe Y, Kinugasa T, Kawata M, Kishimoto T, Shirakabe T: The double eyelid operation in Japan: its evolution as related to cultural change. *Ann Plast Surg* **15**:224–241, 1985
8. Uchida J: A surgical procedure for blepharoptosis vera and for pseudoblepharoptosis orientalis. *Br J Plast Surg* **15**:271–276, 1962