

Observation of Clinical Treatment Effect of Plastic Surgery of Asymmetric Double Eyelids

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Abstract: *Objective:* To explore the clinical efficacy of plastic surgery of asymmetric double eyelid. *Methods:* The clinical data of 70 patients with asymmetrical double eyelid who underwent plastic surgery in our hospital from April 2018 to December 2019 were retrospectively analyzed. The patients were divided into different groups based on different plastic surgery procedures. The control group ($n=35$ cases) were the patients who underwent double eyelid incision method, and the patients who used embedding double eyelid method were included in the observation group ($n=35$ cases). The operation time, intraoperative blood loss, incision size, healing time of incision, satisfaction of plastic surgery and occurrence of complications were compared between the two groups. *Results:* The operation time and incision healing time of the observation group were shorter than those of the control group. The intraoperative blood loss and incision were less than those of the control group, and the satisfaction was higher than that of the control group. The difference was statistically significant ($P<0.05$). The incidence of complications in the observation group was slightly lower than the control group, but the difference was not statistically significant ($P>0.05$). *Conclusion:* For asymmetric double eyelid, it should undergo embedding double eyelid plastic surgery, because the operation time and incision healing time are shorter. And intraoperative blood loss and incision size are smaller, which can improve patient satisfaction and reduce the incidence of complications.

Keywords: Asymmetric double eyelid; Plastic surgery; Double eyelid incision method; Embedding double eyelid method; Satisfaction; Complication

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Eyes are visual organs of human, as well as important facial expression organs. They have the function of conveying emotional information. And they are an important symbol of a person's external beauty. Double eyelid means that the upper eyelid skin has a shallow groove above the eyelid margin. The skin below this furrow moves upwards, while the skin above this furrow relaxes and hangs down at the furrow of the double eyelids^[1]. With the development of society, women's pursuit of beauty has gradually deepened, and plastic surgery has also become a common cosmetic method. Patients with plastic surgery of asymmetric double eyelids, only need to design the plastic surgery of double eyelids according to the other ideal side. It can correct the asymmetry of the double eyelids to make the eyes bigger, and the overall facial features are more beautiful^[2]. That said, this study analyzes the clinical effects of plastic surgery of asymmetric double eyelid as follows.

1 Materials and methods

1.1 General data

Retrospective analysis was conducted of the clinical data of 70 patients with asymmetric double eyelid who underwent plastic surgery in our hospital from April 2018 to December 2019. They were divided into different groups according to the different types of plastic surgery. Patients who underwent double eyelids incision method were included in the control group ($n=35$ cases), and patients using

the embedding double eyelid method were included in the observation group ($n=35$ cases). The control group is consisted of 1 male and 34 females; aged 20-45 years, with an average age of (29.57 ± 3.28) years. In the observation group, there were 2 males and 33 females; aged 21-45 years, with an average age of (29.53 ± 3.31) years. Comparing the general data of the two groups of patients, the difference was not statistically significant ($P>0.05$) and was comparable.

1.2 Inclusion criteria

(1) Selection criteria: None contraindications to surgery; No history of drug allergy; No abnormal coagulation function. (2) Exclusion criteria: Mentally ill patients; Severely impaired communication and cognition; Incomplete clinical data; Combined with abnormalities of other important organs.

1.3 Method

1.3.1 Control group

Double eyelids incision: after partial anesthesia, an appropriate position is chosen between the upper eyelid skin and the tarsal plate or the levator tendon aponeurosis, and the loose upper eyelid skin and part of the orbicularis muscle and excessive Fat were removed. Then the skin incision was sutured to the levator tendon aponeurosis of the upper edge of the tarsal plate so that it forms a crack-like scar adhesion, and the suture is removed 5 to 7 days after surgery.

1.3.2 Observation group

Embedding double eyelid method: After partial anesthesia, the skin and orbicularis oculi muscle were excised. Ophthalmic forceps was used to extend into the incision and clamp a little orbicularis oculi muscle. It was cut out after pulling it out of the incision. The double eyelids were embed properly. And this point was moved up, down, left, and right to find the best position for forming the double eyelid, then use methyl violet to make a small mark here, and finally mark line of incision was drawn which was $1/3$ in the middle and 2.5 mm long. Then toothed forceps was used to deepen the incision and to find the fat of the orbital septum. The left finger pressed on the eyelid skin and open the orbital septum after finding it, then cut the orbital septum and excide the fat carefully. Complete hemostasis was conducted,

and the thread was embed at three or two points. Bandaging was stopped until the operation was complete. After surgery, the incisions in both groups should not be wetted with water until stiches were removed to keep the wound clean and prevent infection. Sterile cotton swabs were applied with erythromycin eye ointment once per day, with ice packs cold compress within 48 hours after operation, and pressure was lightly added for 48 hours before the hot compress. The pressure should not be large, so as not to damage the eyes. Wear sunglasses when going out to avoid the sun stimulating the wound and prevent scar hyperplasia.

1.4 Evaluation index

(1) The operation of the two groups were compared, including operation time, intraoperative blood loss, incision size and incision healing time. (2) To compare the satisfaction of patients with orthopedic prosthesis in two groups, and use the self-made nursing satisfaction questionnaire to investigate the satisfaction of patients with orthopedic prosthesis. The questionnaire Kronbach coefficient α is 0.830, and the retest validity is 0.814, and the full score is 100 Points; >90 points are very satisfied; 80-90 points are satisfied; <80 points are not satisfied, satisfaction = very satisfied + satisfied. (3) The occurrence of complications compared between the two groups, including conjunctivitis, ecchymosis, mild valgus valgus, and blepharitis.

1.5 Statistical methods

SPSS22.0 software was used for data processing. represents measurement data. Independent sample t test was used between groups. Paired sample t test was used within group. Count data was expressed as a percentage. χ^2 test was used, and $P<0.05$ was considered as a statistically significant difference.

2 Results

2.1 Surgery situation

The operation time and incision healing time of the observation group were shorter than those of the control group, and the intraoperative blood loss and incision were less than those of the control group. The difference was statistically significant ($P<0.05$).

Table 1. Comparison of plastic surgery between two groups

Group	Operation time (min)	Intraoperative blood loss(mL)	Incision size (mm)	Incision healing time (d)
Control group (n=35)	37.26±5.14	26.13±5.07	9.27±0.91	11.06±2.94
Observation group (n=35)	23.69±3.84	20.14±4.06	2.35±0.74	7.03±2.51
<i>t</i>	12.513	5.456	34.904	6.168
<i>P</i>	0.000	0.000	0.000	0.000

2.2 Satisfaction

The satisfaction of observation group was higher

than that of the control group. The difference is statistically significant($P<0.05$). See Table 2.

Table 2. Comparison of satisfaction between the two groups of patients

Group	Very satisfied	Satisfied	Dissatisfied	Degree of Satisfaction
Control group (n=35)	11(31.43)	16(45.71)	8(22.86)	27(77.14)
Observation group (n=35)	23(65.71)	11(31.43)	1(2.86)	34(97.14)
Z/χ^2		$Z=3.179$		$\chi^2=4.590$
<i>P</i>		0.002		0.032

2.3 Complications

The occurrence of complications of the observation group was slightly lower than that of the control

group. But the difference is not statistically significant ($P>0.05$).See Table 3.

Table 3. Comparison of incidence of complications between two groups (%)

Group	Conjunctivitis	Ecchymosis	Mild ectropion of lid	Blepharitis	Total incidence
Control group (n=35)	1(2.86)	2(5.71)	1(2.86)	1(2.86)	5(14.29)
Observation group (n=35)	0(0.00)	1(2.86)	0(0.00)	0(0.00)	1(2.86)
χ^2	-	-	-	-	1.641
<i>P</i>	-	-	-	-	0.200

3 Discussion

Plastic surgery of double eyelids, also known as double eyelid plasty, is one of the most common procedures in plastic surgery. The surgical methods include the following: double eyelid embedding, double eyelid incision, double eyelid suture/no eyelash lifting of double eyelids method, and skin grafting of double eyelid method, etc., The most commonly used methods are embedding thread and incision^[3]. Compared with the single eyelid, the skin of the double eyelids and the orbicularis oculi muscle are thinner, and the resistance to the levator muscle of the upper eyelid is smaller, which makes the movement of the upper eyelid flexible^[4].

The results of this study shows that the operation time and incision healing time of the observation group were shorter than those of the control group, and the intraoperative blood loss and incision were both less than those of the control group. The satisfaction rate was higher than that of the control group, and the incidence of complications in the observation group was slightly lower than that of

the control group. The asymmetric double eyelid underwent embedding double eyelid plastic surgery, the operation time and incision healing time are shorter, intraoperative blood loss and incision size are smaller, which can improve patient satisfaction and reduce the incidence of complications. The incision method is to cut the upper eyelid part by surgery, and then artificially create double eyelids. This method has a long-lasting surgical effect. After the double eyelid is formed, it is stable and durable, and it has a strong three-dimensional sense. It can be removed while achieving the double eyelid effect. Excess skin and fat can lift the corners of the eyes to rejuvenate the upper eyelid skin, but this method requires cutting the skin. The wound is slightly larger, and the swelling time is longer, and the wound will leave a linear scar^[5]. The method of embedding thread is to embed suture in the eyelid without cutting the eyelid skin. The postoperative swelling is fast to go down. The double eyelid line is natural and there is no scar. It will only be accompanied by slight swelling and blood stasis. After two weeks to one month, it can be restored to normal. After operation, the double eyelid will not leave traces, and it is natural

and generous. Due to the embedding method, the double eyelid increases the contact area between the skin and the tarsal plate tissue, and at the same time, only a deep knot is buried under the skin, so the operation is guaranteed and the success rate of surgery is improved^[6]. This surgical method combines continuous embedding and intermittent embedding, which is more physiological. It does not suppress the Miller muscle, and reduces the interference to the local tissue of the meibomian^[7]. The tightening force of the thread knot is more easily controlled than that of continuous embedding. The loosening of any thread knot has little effect on the final effect, and there is no chance of corneal damage without piercing the meibomian^[8].

In summary, asymmetric double eyelid should undergo plastic surgery of embedding double eyelid. It is because the operation time and incision healing time are shorter, and intraoperative blood loss and incision are smaller, which can improve patient satisfaction and reduce the incidence of complications. It is worthy of clinical promotion.

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