Dermatological Health, 2023, Volume 1, Issue 2
http://ojs.bbwpublisher.com/index.php/DH

Research on the Application of Mini Facelift in Facial Plastic Surgery

Huanla Yang*

Beijing Yixing Medical Beauty Hospital, Beijing 100000, China

***Corresponding author:** Huanla Yang, xiyue1214@sina.com

Abstract: *Objective:* This paper aims to study the clinical effect of mini facelift in patients undergoing facial plastic surgery. *Methods:* The study period was from January 2021 to January 2023. One hundred cases were selected from patients with facial plastic surgery at our hospital. They were divided according to the two-color ball method into control group and study group. 50 cases in the control group underwent routine major facelift and skin flap surgery, while 50 patients in the study group underwent mini facelift surgery. The items to be compared between the two groups were clinical effects, psychological conditions, and satisfaction. *Results:* Based on the results, it was determined that the study group had shorter operation time and swelling period than the control group, and the difference between the groups was significant, $P < 0.05$. By comparing the Hamilton Anxiety Scale (HAM-A) score and the Hamilton Depression Scale (HAM-D) score, no preoperative symptoms were found in the two groups ($P > 0.05$). After surgery, the two scores in the study group decreased, and the difference between the study group and the control group can be expressed by $P < 0.05$. Moreover, it was determined that the study group had higher satisfaction than the control group, and there is a significant difference between them, $P < 0.05$. *Conclusion:* The application of mini facelift in facial plastic surgery can shorten the operation time and swelling period, improve satisfaction, and relieve negative emotions, hence it is suitable for comprehensive clinical application.

Keywords: Plastic surgery; Face; Mini facelift

Online publication: September 26, 2023

1. Introduction

Plastic and cosmetic surgery in clinical settings specifically refers to departments that repair and reshape the patient's appearance and the shape of different human body parts through medical devices or drug surgery. In addition, surgeons using surgical skills or other medical technology to achieve the above purposes are also included in this discipline. After plastic surgery, the external beauty of the human body can be enhanced, and its distinctive feature lies in its strong artistic, technical, and scientific quality [1]. In recent years, with the introduction and application of mini facelift surgery, the development of plastic surgery has been further promoted. This article selected 100 cases of facial plastic surgery patients in our hospital from January 2021 to January 2023 for research.

2. Materials and methods

2.1. General information

From January 2021 to January 2023, 100 cases of patients with facial plastic and cosmetic surgery in our hospital were selected. The patients were divided into the control group and the study group by two-color ball method, each with 50 cases. The control group had 18 male patients (36.00%) and 32 female patients (64.00%), the age range was 20–70 years old, with a mean age of 38.5±5.7 years old. The study group had 17 male patients (34.00 %) and 33 female patients (66.00%), the age range was 21–69 years old, with a mean age of 38.3±5.6 years old. After statistical comparison, there is no significant difference between the two groups in the general information, indicated by $P > 0.05$, which is fair and comparable.

The inclusion criteria included patients consistent with the indications for facial plastic surgery, patients over 18 years old and under 70 years old, and patients who voluntarily participate in this research and sign the informed consent.

The exclusion criteria were patients with severe systemic diseases who are not suitable for facial plastic surgery, patients suffering from blood infectious diseases, patients with cognitive or mental disorders, and women who are pregnant or breastfeeding.

2.2. Methods

Preoperative preparations for the two groups of patients are as follows. It is necessary to determine whether the patients have underlying diseases such as hyperglycemia and hypertension through a comprehensive examination and to carry out appropriate control. Female patients are required to undergo surgery during non-menstruation period. If patients need to take anticoagulant drugs, such as aspirin, they should stop taking it within 7 to 10 days before the operation to prevent intraoperative bleeding or postoperative hematoma.

The mini facelift surgery was performed on patients in the study group. The detailed operation content is as follows. The incision must be designed before the operation. The length of the minimally invasive small incision made within the temporal hairline needs to comply with the 2cm standard and the specific range of lacunar separation requirements. It is defined from four aspects including upper, medial, lower, and lateral. The upper edge of the temporalis muscle is the upper range standard, the outer edge of the orbital bone is the medial range standard, and the upper edge of the zygomatic bone and zygomatic arch is the lower range standard. After the incision, the standard of the outer range is about 1cm from the edge. The method of implanting absorbable threads was used to lift the distal subcutaneous tissue, skin, and superficial musculoaponeurotic system (SMAS) fascia layer in the cavity at three points, and knotting and fixation was performed in the cavity. At the hairline edge (three points), imported polydioxanone (PDS) absorbable sutures can be used to fix the points, precisely the lowest point of the hairline, the upper edge of the zygomatic arch, and the outer edge of the orbital bone. After the galea aponeurosis layer at the posterior edge of the distal incision was fixed and sutured, the hairline can be lifted again. The scalp tissue with a width of about 2cm needs to be removed inside the incision, and the skin is locked again.

Patients in the control group underwent conventional major facelift and skin flap surgery. Detailed operation content is as follows. The patient was given local anesthesia, and an incision was made about 1–2mm below the eyelashes of the lower eyelid. After reaching the lateral canthus, incision was done along the crow's feet. A 5mm extension operation was performed, the skin, subcutaneous tissue, and orbicularis oculi muscle were incised in sequence, the potential gap between the orbicularis oculi muscle and the orbital septum fascia was separated, and the orbicularis oculi muscle was cut to the infraorbital rim. Incision of the medial separation is specifically the orbital subperiosteal and superficial periosteal surface, with the standard of 0.5cm, the lateral

separation is specifically the prezygomatic space, to the starting point of the zygomatic major muscle, Wang's ligament, and the orbicularis oculi limiting ligament. For adequate release, the wound must be fully hemostatic, and the lower edge of the orbital septum must be opened to release the orbital fat and moved downward until it reaches the lowest position of the tear trough and palpebral groove deformity. 5-0 absorbable sutures were used to sew the lower part of the orbital septum and the deep orbital fat, and it was fixed at the periosteum of the orbital rim. Appropriate trimming is required if the patient has a thick orbicularis oculi muscle. The myocutaneous flap was stretched upward and it was observed whether the nasolabial fold has been improved and lifted. The myocutaneous flap was fixed on the periosteum of the lateral canthus through No. 1 silk thread. The patient was asked to look at his head with his eyes open and the occurrence of lower eyelid ectropion was judged, the excess skin was removed, and the skin was sutured using a 7-0 cosmetic thread. Within 24 hours after surgery, the lower eyelids and cheekbones must be kept under pressure bandage, the surgical site must be kept clean, and a series of essential treatments such as swelling and hemostasis should be given. Spicy and irritating food must be prohibited, and the suture removal time is 5–7 days after operation.

2.3. Observation indicators

The indicators below were observed in the two groups.

(1) The operation time and swelling period of the two groups of patients are recorded.

(2) Hamilton Anxiety Scale (HAM-A) and the Hamilton Depression Scale (HAM-D) are used to evaluate the changes in the psychological status of the two groups of patients at two different periods before and after surgery. The higher the score is, the more it indicates that the patient's mental condition is poor [2].

(3) A self-made satisfaction questionnaire is used to evaluate the satisfaction of the two groups of patients. The total score is 100 points. A score of 80–100 proves that the standard is very satisfactory. A score of 60–79 proves that the standard is relatively satisfactory. A score below 60 points prove unsatisfactory.

2.4. Statistical analysis

The statistical software SPSS22.0 was used to process the two data sets in the study. The counting data were described as percentages (%), and the χ^2 test was used for comparison. The measurement data were described as mean ± standard deviation (SD), and the *t*-test was used for comparison. When $P < 0.05$, the data are statistically different.

3. Results

3.1. Clinical comparison of operation time and the swelling period

The operation time and swelling period were compared between the groups, and there were statistically significant differences in the data, that is $P < 0.05$, as shown in **Table 1**.

Table 1. Clinical comparison of operation time and swelling period between two groups of patients (mean ± SD)

Group	Operation time (minutes)	Swelling period (days)
Control group (n = 50)	184.38±56.31	7.55±2.46
Study group (n = 50)	42.20±12.37	2.63±1.40
t	17.4383	12.2911
P	0.0000	0.0000

3.2. Clinical comparison of the improvement of mental status

When comparing the HAM-A score and the HAM-D score between the groups before surgery, the difference was insignificant, $P > 0.05$. In the comparison of the two scores after surgery, the study group was lower than the control group, and there was a significant statistical difference, $P < 0.05$, as presented in **Table 2**.

Table 2. Clinical comparison of the improvement of mental status between the two groups of patients (mean ± SD)

Group	HAM-A score		HAM-D score	
	Before surgery	After surgery	Before surgery	After surgery
Control group (n = 50)	24.24±3.50	19.97±2.34	26.03±3.68	21.45±2.16
Study group (n = 50)	24.17±3.47	11.53±1.71	25.97±3.70	10.82±1.94
t	0.1004	20.5919	0.0813	25.8896
P	0.9202	0.0000	0.9354	0.0000

3.3. Clinical comparison of patient satisfaction

The satisfaction rate of patients in the control group was 86.00% (43/50), of which 7 cases were unsatisfactory, 18 cases were relatively satisfactory, and 25 cases were very satisfactory. The satisfaction rate of patients in the study group was 98.00% (49/50), of which 1 case was unsatisfactory, 22 cases were relatively satisfactory, and 27 cases were very satisfactory. By comparing the satisfaction of the two groups of patients, it was found that the study group had higher satisfaction. The difference between the groups can be expressed by $P < 0.05$, which means it is statistically significant.

4. Discussion

As the name suggests, plastic surgery aims to help patients in need to achieve the goal of enhancing their external beauty. In recent years, with the continuous development of surgical technology, minimally invasive surgery has been widely used in plastic and cosmetic surgery, and the growth trend is pronounced. During diagnosis and treatment, whether patients can undergo correct and effective minimally invasive surgery application plays a vital role. If surgical techniques are misused, it will impact the patient's recovery, even worsen the condition, or cause severe complications.

Traditional cosmetic surgery mainly uses threads to pass through the lower layer of the skin. Then, the spinous processes on the threads hook onto the fat tissue, thereby lifting sagging skin. Although the lifting effect is average compared to surgery, it does not require a lengthy recovery period after surgery, thus it is clinically called a simple lifting surgery. The patients who are suitable for facelift surgery are those with loose neck, chin, and corners of the mouth, and those with nasolabial folds, face, and forehead wrinkles. Face lifting surgery mainly uses relatively advanced endoscopic technology to lift the sagging tissues of the nasolabial folds and cheeks, thereby quickly eliminating the nasolabial folds, effectively lifting the facial skin, tightening the skin and the pores, and finally restoring the skin to its original fairness, delicateness, elasticity, and luster as much as possible. The entire facelift surgery process will not cause significant trauma or severe edema.

The postoperative recovery can be rapid, and the overall effect is ideal. Facelift surgery will not impact their everyday work and life [3]. Mini facelift mainly combines traditional wrinkle removal surgery and thread carving. During the operation, the scope of the incision is significantly reduced through precise local operations, which reduces the degree of wound damage and drastically shortens the operation time to avoid surgical stress

trauma such as different kinds of nerve injury. Mini facelift surgery does not require suturing and removal, and there will be no permanent scars on the patient's cheeks. The blood supply to the hair follicles will not be affected and can be maintained for a long time. After the surgery, the skin will be shiny and elastic, and the face expression will be natural. The recovery speed is high, and patients can work and live normally [4]. In addition, mini face lifting surgery takes oriental facial aesthetic standards as one of the reference standards. It provides a comprehensive and detailed design plan based on the different conditions of each patient to ensure that the final solution is genuinely customized, it also ensures compliance with international aesthetic standards, and promotes the satisfaction of patients [5].

This study aimed to evaluate the effect of mini facelift in facial plastic surgery patients. The results showed that the study group had shorter operation time and swelling period than the control group ($P < 0.05$). The study group had lower HAM-A score and HAM-D score after surgery compared to the control group ($P < 0.05$). The study group had higher satisfaction than the control group ($P < 0.05$), which is enough to show that the application of mini facelift in facial plastic surgery can shorten the operation time and swelling period, improve satisfaction, and relieve negative emotions. This method is suitable for comprehensive clinical application.

Disclosure statement

The author declares no conflict of interest.

References

[1] Hong C, Zhang S, Yan H, et al., 2022, Application of Circumaural SMAS High Suspension Technology in the Middle and Lower Face Lifting Surgery. Journal of Hubei University of Medicine, 41(1): 47–51, Cover 3.

[2] Qin Y, Liu Z, Xiao Z, 2022, The Effect of Orbicularis Oculi-SMAS Flap on Periorbital Rejuvenation during High SMAS Facelift Surgery. Chinese Aesthetic Medicine, 31(9): 101–104.

[3] Li P, Chen X, 2022, Discussion on the Application and Clinical Effect of Mid-Face Lifting Surgery via Circumcision of Eye Bags. Big Health, 2022(22): 155–157.

[4] Ding F, 2021, Clinical Application Value and Safety Analysis of Autologous Fat Facial Filling. Maternal and Infant World, 2021(5): 74.

[5] Li J, Li D, Yu Y, et al., 2020, Clinical Application of Subcutaneous Implantation of PPDO Two-Way Zigzag Thread for Face Lifting. Chinese Aesthetic Medicine, 29(6): 56–58.