

Assessment of outcomes of upper blepharoplasty in middle-aged women

Le Diep Linh, Le Thi Thu Hai

108 Military Central Hospital

Summary

Objective: To do statistics on some factors which lead to morphological changes of upper eyelid and surgical methods used to improve upper eyelid status in women over 40 years old. **Subject and method:** A prospective, descriptive study was conducted on 155 patients who were treated surgically at 108 Military Central Hospital from June 2022 to June 2023. **Result:** Patients had 89% of excess skin, 52.2% of muscle prolapse, 19.4% of fat hernia and fat atrophy. Patients were divided into 5 groups based on their characteristics of upper eyelid changes and skin properties (thick or thin) to apply surgical methods. Group 1 included patients who had excess skin, thin skin and multiple eyelid folds; and received surgical removal of excess skin along the eyelid folds and eyelid fold reconstruction. Group 2 included patients who had excess skin, thin skin and 1 clear eyelid fold; and received surgical removal of excess skin along the eyebrow curve. Group 3 included patients who had excess skin, thick skin, muscle prolapse and eyelid folds; and received surgical removal of excess skin along the eyebrow curve and browplasty. Group 4 included patients who had excess skin, thick skin, muscle prolapse, no eyelid folds or uneven eyelid folds; and received surgical removal of excess skin along the eyebrow curve, browplasty and correction of eyelid folds. Group 5 included patients who had thick skin, fat hernia and not much excess skin; and received surgical removal of fat and correction of eyelid folds. **Conclusion:** Through study, assessment and analysis of the outcomes of upper blepharoplasty for 155 female patients who are 40 years old or older, we conclude that if we identify correctly prolapse and deformity for each case, we can choose suitable solutions which have short postoperative recovery, good reconstructive outcomes and high patient satisfaction.

Keywords: Upper blepharoplasty, upper eyelid, middle-aged women.

1. Background

The eyes and eyelids are central characteristics of the face which are seen by the patient or others when they communicate or look at mirrors. Women who reach middle age often develop deformities and eyelid prolapses that cause vision function impairment, eye strain and poor aesthetics. Upper eyelid prolapses can result from the skin, a combination of the skin and orbicularis oculi muscle, fat hernia of upper eyelid, and sometimes all of

these components. Upper blepharoplasty, whether performed for aesthetic or functional improvement, is one of the most frequently performed facial reconstructive surgery and should ensure both rehabilitation and aesthetics. Upper blepharoplasty in middle-aged women will include surgical removal of excess skin, reconstruction of upper eyelids, orbital septum and orbicularis oculi muscle, treatment of excess or deficiency in orbital fat. In middle-aged women, this procedure can be performed for aesthetic or vision improvement, but usually for both [3, 4].

Therefore, this study was conducted to clearly identify the factors that cause upper eyelid deformity and prolapse, from which suitable solutions would be chosen for each case.

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Correspondence to: Le Diep Linh - The Craniofacial and Plastic Surgery Center, 108 Military Central Hospital

Email: ledieplinh@yahoo.com

2. Subject and method

2.1. Subject

We conducted a study about upper blepharoplasty on 155 female patients with age from 40 to 70 years old who underwent upper blepharoplasty at 108 Military Central Hospital. Inclusion criteria were: 1) Female patients aged 40 years old or older; 2) Patients who needed to receive upper blepharoplasty; 3) Patients who voluntarily participated in and were ensured for confidentiality. Exclusion criteria were: 1) Patients who had eyelid ptosis, eyelid deformity, or had received eyelid surgery in the past; 2) Patients with infectious diseases in the upper eyelids; 3) Patients with chronic or systemic diseases such as tuberculosis, organ failure and cardiovascular diseases; 4) Patients who did not cooperate during the study course.

2.2. Method

Prospective study with cross-sectional description and longitudinal follow-up.

Time and location

This study was conducted at 108 Military Central Hospital from June 2022 to June 2023.

Steps to conduct the study

Patients were asked about general information to record on data collection forms. This information included name, age, address, phone number, occupation, ophthalmology history to detect diseases that were excluded from surgery. Next, they were clinically examined, advised on surgical methods and received classification of upper eyelid

deformity components that needed improvement. In this study, patients were divided into 5 groups based on prolapses and deformities, from which we provided advice on solutions of upper blepharoplasty, which could need 1 or more surgeries. In particular, our study had 5 groups of patients, corresponding to 5 surgical solutions as follows:

Group 1 included patients who had excess skin, thin skin and multiple eyelid folds; and received surgical removal of excess skin along the eyelid folds and eyelid fold reconstruction.

Group 2 included patients who had excess skin, thin skin and 1 clear eyelid fold; and received surgical removal of excess skin along the eyebrow curve.

Group 3 included patients who had excess skin, thick skin, muscle prolapse and eyelid folds; and received surgical removal of excess skin along the eyebrow curve and browplasty.

Group 4 included patients who had excess skin, thick skin, muscle prolapse, no eyelid folds or uneven eyelid folds; and received surgical removal of excess skin along the eyebrow curve, browplasty and correction of eyelid folds.

Group 5 included patients who had thick skin, fat hernia and not much excess skin; and received surgical removal of fat and correction of eyelid folds.

Immediately after surgery, patients' upper eyelids were given a cold compress. Then, they were monitored, cared for, detected complications and promptly treated if any, changed bandages every other day, and removed surgical sutures after 1 week. They were re-examined 3 months and 6 months after surgery.

3. Result

Table 1. General information

Deformities \ Years old	40-50	51-60	61 or older	Total	
	Quantity	Quantity	Quantity	Quantity	Percentage
Excess skin	17	28	12	57	36.8%
Excess skin + Muscle prolapse	7	27	34	68	43.8%
Excess skin + Muscle prolapse + Fat hernia or atrophy	0	11	2	13	8.4%
Fat hernia	17	0	0	17	11%
Percentage	26.5%	42.5%	31%		100%

Table 1 shows that excess skin was the most common symptom in our study, accounting for 89%. It could occur with or without muscle prolapse. The next was muscle prolapse, accounting for 52.2%. It often appeared in the group with patients who were 61 years old or older.

Table 2. Postoperative complications

Outcomes Characteristics		7 days after surgery		3 months after surgery		6 months after surgery	
Swelling	51	32.9%	8	5.1%	0	0%	
Hematoma	11	7%	0		0		
Unclear eyelid folds	23	14.8%	0		0		

Table 2 shows that swelling was the most common post-operative complication. Clear swelling which was seen on clinical examination and persists 7 days after surgery accounts for 32% but almost completely reduces in size after 3 months and disappears 6 months after surgery. Unclear eyelid folds often occurred in patients who had large swelling after surgery accompanied by hematoma, and could be performed in one technique.

Illustration images for studied groups.

Group 1 included patients who had excess skin, thin skin and multiple eyelid folds; and received surgical removal of excess skin along the eyelid folds and eyelid fold reconstruction.



Before surgery- immediately after surgery
- after 7 days surgery

Before surgery - after removal of surgical sutures

Group 2 included patients who had excess skin, thin skin and 1 clear eyelid fold; and received surgical removal of excess skin along the eyebrow curve.



Before surgery and 7 days after surgery

6 months after surgery

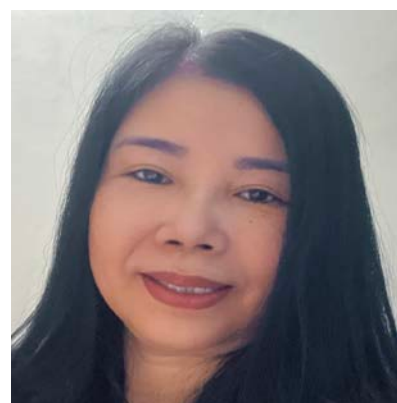
Group 3 included patients who had excess skin, thick skin, muscle prolapse and eyelid folds; and received surgical removal of excess skin along the eyebrow curve and browplasty.



Before surgery and 7 days after surgery



Before surgery- immediately after surgery



9 months after surgery

Group 4 included patients who had excess skin, thick skin, muscle prolapse, no eyelid folds or uneven eyelid folds; and received surgical removal of excess skin along the eyebrow curve, browplasty and correction of eyelid folds.



Before surgery- immediately after surgery, 7 days after surgery



Before surgery and 7 days after surgery

Group 5 included patients who had thick skin, fat hernia and not much excess skin; and received surgical removal of fat and correction of eyelid folds.



Before surgery and 4 months after surgery



Before surgery and 6 months after surgery

Table 3. Outcomes of upper blepharoplasty

Outcomes Characteristics		7 days after surgery		3 months after surgery		6 months after surgery	
		Quantity	Percentage	Quantity	Percentage	Quantity	Percentage
Group 1	Good	27	64%	41	97.6%	42	100%
	Average	15	36%	1	2.4%		
	Poor	0		0		0	
Group 2	Good	27	73%	36	97.3%	37	100%
	Average	10	27%	1	2.7%		
	Poor	0		0		0	
Group 3	Good	32	69.6%	41	89%	46	100%
	Average	14	30.4%	5	11%		
	Poor	0		0		0	
Group 4	Good	5	38.5%	12	92.5%	13	100%
	Average	8	61.5%	1	7.5%		
	Poor	0		0		0	
Group 5	Good	13	76.5%	17	100%	17	100%
	Average	4	23.5%	0		0	
	Poor	0		0		0	

Table 3 shows that the postoperative outcomes of 5 studied groups immediately after surgery did not reach high aesthetic rate, mainly due to swelling. But the outcomes improved significantly after 3 months and 6 months after surgery, all studied groups reached aesthetic rate as 100 percentage.

4. Discussion

After examination and follow-up of 155 patients who underwent upper blepharoplasty at 108 Military Central Hospital from June 2022 to June 2023, we give comments and discussions as follows: Upper eyelid deformities in middle-aged women are not simply sagging skin on the upper eyelids but are also accompanied by orbicularis oculi muscle prolapse, orbital fat hernia which lead to eyelid fold slippage or atrophy that cause multiple upper eyelid folds. Women who are older 40 years old usually have the needs of upper blepharoplasty to get eyes that both have aesthetic and vision improvements [1, 5].

Excess skin is the most common symptom which occurs in studied groups, accounting for 89%.

This is also consistent with result of Nguyen Thi Bao Thoa's study [1, 6]. The next is muscle prolapse, accounting for 52%. This symptom often appears in group with patients who are 61 years old or older. Therefore, in order to improve the appearance and function of the upper eyelid, we need to carefully advise about age-related changes for each patient to give suitable solutions. In addition, there are some accompanying but uncommon signs such as multiple eyelid folds, eye fat hernia or atrophy. These also need to be treated or consulted about consequences in case the patient does not want to intervene. Our comment is also consistent with that in Hoang Thi Phuong Lan and Tran Thiet Son's study, which states that when performing upper blepharoplasty for Vietnamese patients, preoperative consultation which helps them understand the surgical procedure as well as the postoperative process and outcomes has great importance in cosmetic and reconstructive surgery

Upper blepharoplasty is a surgical intervention, so it still has certain postoperative complications,

but these are not many and not severe. In our study, the most common complication is swelling which is clearly seen on clinical examination and persists 7 days after surgery, accounts for 32% but almost completely reduces in size after 3 months and disappears 6 months after surgery. Unclear eyelid folds often occur in patients who have large swelling after surgery accompanied by hematoma, and can be performed in one technique. In addition, there is no serious complications. Although these complications are common in surgery, but blepharoplasty requires high aesthetic outcomes, so they need to be monitored and treated actively, to avoid affecting the scar healing. Medications that prevent swelling are used, combined with compresses 1-2 days after surgery to minimize this condition, and surgical sites will be stabilized after 2 weeks. Beside, there is no cases of surgical site infection in this study, which is consistent with previous studies [5, 2, 6].

In this study, we carefully advise patients about upper eyelid deformities, applied methods as well as possible postoperative outcomes and symptoms. We find that postoperative aesthetic rates of all studied groups remain low. This is mainly due to swelling. But the outcomes improve significantly after 3 months and 6 months after surgery, all studied groups reach aesthetic rate as 100%. The results show that the majority of patients are satisfied with postoperative outcomes. This shows that preoperative examination and advice also have great importance, helping patients understand the current condition of their eyes and possible postoperative outcomes. This helps avoid disparity between patient expectations and possible postoperative outcomes, which can affect patient satisfaction.

5. Conclusion

Through study, assessment and analysis of the outcomes of upper blepharoplasty for 155 patients, we conclude that if we identify correctly prolapse and deformity for each case, we can choose suitable solutions which have short postoperative recovery, good reconstructive outcomes and high patient satisfaction.

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