

Algorithm of Periorbital Area Rejuvenation

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Submitted: 12 Apr 2017; Accepted: 19 Apr 2017; Published: 30 June 2017

Abstract

Purpose: Representing the algorithm of periorbital area rejuvenation

Materials: As part of the research, 1216 eyes of 608 patients were included. According to patients' complaints and evaluating their situation, treatments were carried out as medical and surgical. Treatment was not applied to 75 patients that their request and the cure were not compromise. Patients were followed approximately 11,3 months (1-32 months). The study is evaluated according to patients' reason of request, their general characteristics and the treatments that are applied.

Findings: Age average of 608 patients who are applied to my clinic with the intent of periorbital area rejuvenation and enhancing eyelid deformity between the dates of March 2014-January 2017 is 38. 81,25% patients were female and 18,75% was male. 538 patients (88,5%) were applied medical treatment. 260 patients (42,8%) got surgical treatment and to 31,3% patients, combined treatment was applied. The treatment that I applied and the complaints of 89% patients harmonized with each other. 11% of patients were not treated since their complaints and their treatment request were not corresponded to each other.

Result: The most important phase is pre-treatment to become successful in the treatment. First thing to do is listening and understanding the patient carefully, because the problem we observe and patient's complaint may not be the same. In this case, no matter how successful the treatment is, we can not satisfy the patient. Sometimes, patient has unrealistic expectations. When such a patient like this is encountered, it must be kept away from him or her and the treatment should not be applied.

Keyword: Periorbital Area, Rejuvenation, Surgical, Medical Aesthetics, Eyelid Blepharoplasty.

Introduction

Periorbital area is the most frequently-consulted and watched over area in bilateral relations so it has gained much more importance in recent years. It is possible to be looked healthier and younger with lots of practice applied around eye. With this reason, more and more patients apply to clinics to look better everyday. As an ophthalmologist, I would like to mention about the treatments that I provide to make my patients look better, younger and healthier.

Most people want to look better with the improvement of technology, increase of using social media and importance of visual quality. With this aim in their minds, patients consult health institutions. In my clinic, consultation request is generally for periorbital area. The mistreatments in the periorbital area which has an important function as seeing cause vision loss. This situation could arise from unrealistic expectations of the patient or insufficiency in the health experience of health center. Also, the misunderstanding between the patient and the doctor may cause this problem [1].

I think that ophthalmologists should actively participate in the treatments of periorbital area.

After examining the patient in detail, the treatment should be explained loud and clear. It can be repeated until he or she understands the approach clearly. While the treatment is thought as surgical and medical, it can be also combined. It should be decided according to the request of patient and its satisfying outcome. In the patient who complains about upper droopy eyelid, contexts of the eyelid and whether they include additional pathology or not should be examined. Eyelid, eyebrow and eyelash ptosis should be evaluated. Whether excised area includes fat package or not without skin and orbicularis should be reviewed.

In the patient with the request of low eyelid blepharoplasty, the trace of entropion and ectropion should be looked. With the snap back test, the laxity of low eyelid should be examined. In this part, the existence of scleral show helps us. Additionally, cheek looseness and laxity in the malar pad should be evaluated [2].

In the patient, medical treatment can be thought not surgical or in addition to that surgery, medical treatment can be planned. In this part, the treatments that help us are botox in eyebrow lid and

goose foot area and fillers in hollows under eye and under eye bags. In the widespread discolouration treatments, serum therapy or mesotherapy and PRP applications can be planned with the aim of skin hydration [3].

Findings

608 patients who were applied to the clinic on the purpose of enhancing eyelid deformity and periorbital area rejuvenation between the dates of March 2014-January 2017 are included to the study. Age average of the patients is 38. 18,75% of the patients are male and 81,25% of them are female. 95,4% patients who are applied to the clinic and treated are from nearby cities and 4,6% are from abroad.

Additional diseases existed in 28,4% of 608 patient. (Table 1) It is found out that 13,6% patients are using medicine routinely.

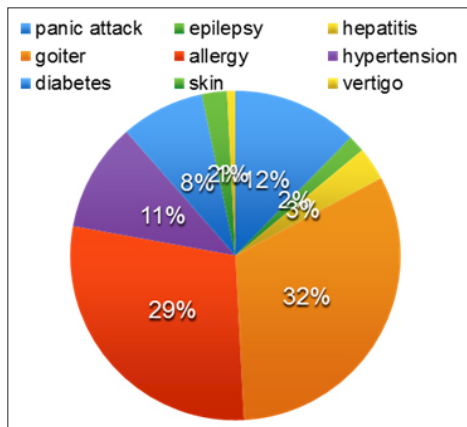


Table 1: Additional diseases in patients.

When their earlier esthetics interventions were asked, it is revealed that 20,5% of the patients had an operation and 10,1% of them procure medical treatments. (Table 2) 5,7% patients have the history of eye disease.

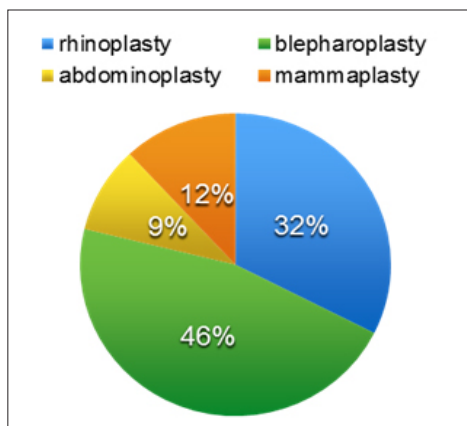


Table 2: Additional earlier aesthetic interventions in patients.

89% of patients were cured. 75 patients were not treated since their complaint and the treatment they want did not sort together. Averagely, patients were followed 11,3 months. 538 patients (88,5%) were applied medical treatment. 260 patients (42,8%) got surgical treatment and to 31,3% patients, combined treatment was applied.

Only upper eyelid blepharoplasty was applied to 188 patients (31%). The number of the patients who were performed simple upper eyelid blepharoplasty is 106 (17,4%).

There is no ptosis in simple upper eyelid blepharoplasty. The causes of the problem are orbicularis muscle and skin. In some patients, nasal fat excision is required. As far as possible, central fat pad excision should not be done. I performed nasal fat excision in 37% of patients and applied medial fat pad excision in 4% of patients.

Skin excision border was drawn and defined before local anesthesia in every patient (Figure 1). As a principle, skin excision border was intentionally defined 10 mm in women and 7 mm in men. The skin tissue that was stayed in mid-pupillary line was aimed to become 20mm so that eyelids could be closed easily and sanitary. There can be less skin tissue which is left in medial and lateral area. In operations, the rate of radiofrequency cautery usage for skin excision was 93% and the usage of scalpel was 7%. Radiofrequency cautery not only makes a good cut but also stops the haemorrhage. In this way, surgery lasts shorter and bruise is too little.



Figure 1 : Image of skin excision border.

To 14 patients (%2,3), only ptosis reposition, to 30 patients (5%), ptosis and upper eyelid blepharoplasty were applied.

In the event of ptosis, firstly levator function must be examined. With the right approach to the appropriate patient, ptosis reposition must be performed. In addition to that, blepharoplasty can be implemented. The treatment that will be applied either levator muscle folding or levator resection. Instead of levator muscle folding, I generally perform resection during the surgery.

Almond eye surgery was applied to 9,6% patients. Almond eye surgery can be defined as the situation when the lateral canthus is higher and more acute angled according to medial. This procedure was carried out from outer canthal region with 1cm incision without separating the canthus. With canthopexy, eyelid was moved to the interior part of orbital tubercule which is in higher area.

Internal browpexy is eyebrow lift procedure during the upper eyelid surgery. There is no need for extra cut which is an advantage. However its effect can be limited since the incision line is narrow. 16 of the patients was applied both upper eyelid blepharoplasty and internal browpexy. Internal browpexy surgery for eyebrow ptosis was added to 16 patient (8,5%) from 188 patients who were applied upper eyelid blepharoplasty.

Four patients were operated based on the complaint of lash ptosis.

72 of 260 patients whom I applied surgical treatment were performed lower eyelid operation. In simple lower eyelid blepharoplasty, skin, orbicularis muscle and fat excision can be done. According to patient's request and the doctor's decision, surgery must be planned internal or external. The most frequent approach that I applied was external with 89%. To over 35 years old patients, lateral canthopexy procedure was applied.

Only skin and orbicularis muscle excision was enough for 30 patients. In those lower eyelid blepharoplasty surgeries, fat excision was not performed. Fat excision was applied 58% of patients. In 74% of them, skin and orbicularis muscle excision was applied. Lateral canthopexy procedure was practiced 71% of patients.

Another treatment that can be added to lower eyelid blepharoplasty is mid-face lifting procedure. The cheekbone tissues that sag with gravity can be elevated. With the diagnosis of cheek sags, mid-face lifting operation was added to lower eyelid blepharoplasty in 12 patients (17%). Upper and lower eyelid surgery was performed to 45 patients (17,3%). In table 3, it is seen the percentage of blepharoplasty surgeries.

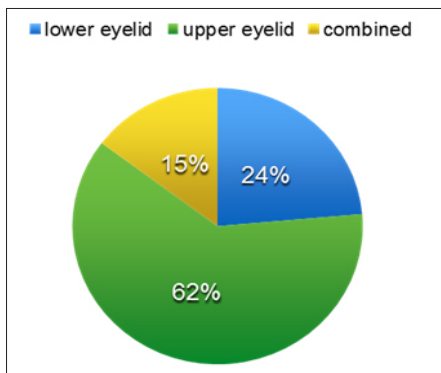


Table 3: The percentage of blepharoplasty surgeries.

While performing the lower eyelid blepharoplasty, it should be paid attention that if there is an additional pathology or not. The trace of entropion and ectropion should be looked. By the reason of the existence of entropion and ectropion, additional therapy was applied to 4 patients.

The approach in lower eyelid blepharoplasty needs extra care and attention. It can be performed with local anesthesia. The most important situation is the control of intraorbital hemorrhage. Uncontrolled bleeding and retrobulber hematoma can cause optic atrophy and blindness. The other important thing is the protection of inferior oblique muscle which is between nasal and medial fat pad.

All of the surgical operation was carried out by only one ophthalmologist. All of the patients were operated under local anesthesia. Only 5 patients requested sedation. Topical antibiotic cream was given all patients after the surgery. Only 89% of patients used the cream because of its allergenic context. Oral antibiotic was recommended after the operation. Only 5% of patients did not want the antibiotic treatment. In the patients who were applied suture, sutures were taken in the first week after surgery. Patient's first, second and sixth months and one year controls was followed.

Other applications that can be free or additional to the surgical treatments are medical treatments. Foremost among them is botulinum toxin and botulinum toxin type A is the most frequent one. It has been used approximately twenty five years. Type B can be used to the patients whom Type A can not affect. However its influence is much shorter. Botox treatment was applied to 220 (41%) of 538 patients who was performed medical therapy. It was confirmed that 40% of patients have regularly botox done.

When dry flacon included 100U botox is diluted with 2.5 cc saline, it contains 4U in 0,1 ml. It is injected in specially calculated proper doses to application areas. Unite that is injected to patient's face should not exceed fifty. Botulinum toxin is a cold chain product. It should be kept in the freezer of the fridge. After diluted, it must be protected in +4 degree. Bottle should not be shaken definitely.

Early on the application, areas that the botox will be applied should be defined and marked. According to applying area, botox unite is defined as 1-4 U. Botox can be applied under the brow to orbicularis muscle to eye brow lifting in addition to glabella, forehead and goose foot's areas. In goose foot area, application points are defined as being away from lateral cantus approximately one centimetre. (Figure 2).



Figure 2: Botox application points of goose foot's area.

36% of patients are applied filler treatment. As the periorbital area, under eye is the most frequent area in which filler is applied. Here, the important thing is using custom-engineered special fillers for under eye area. Cannula must be used.

Cheek filler application was applied additionally to 20% of the patients.

Mesotherapy and peeling treatments were preferred due to the patients' under eye dark circles' complaint to 29% of the patients. Mesotherapy can be used in the existence of skin with unhealthy periorbital area. To treat this situation, hyaluronic acid with uncrossed link and complex of vitamin-protein as intradermal were applied. In some patients, mesotherapy with dermapen was found suitable. PRP treatment was performed to 28 medical intervention patients (5%). PRP (platelet rich plasma) is stimulant stem cell therapy. It is obtained from blood. It can be injected to periorbital area with injection or dermapen. It contributes for getting much better periorbital skin tissues because of providing skin hydration.

I applied the serum which was prepared by taking 2 tube of blood from the patient in company with dermapen. I performed the procedure three sessions every one month. All of the

medical esthetics interventions were implemented by only one ophthalmologist. By taking note of the sterility, procedures were performed in office environment. Patients were evaluated after procedure's 15th day. (Table 4)

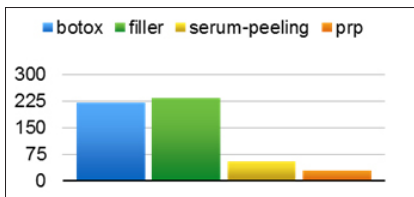


Table 4: Application of medical treatments' rates

It was requested from patients to grade their satisfaction to the application as good, average and bad. 569 patients graded as good, whereas 32 patients scored it as bad. (Table 5)

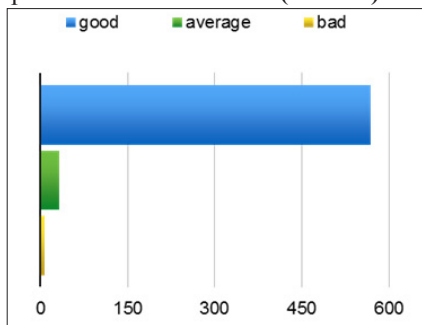


Table 5: Satisfaction rates in all patients

Discussion

In this study, it was examined that reviewing is necessary for every aspect of patients with esthetic anxiety. Since this study is carried out in ophthalmology clinic, I think that the results should be evaluated more far-reaching especially in our country that it was not a known thing that esthetics application can be performed by ophthalmologists. In the study that Kossler and colleagues made, a survey was shared that 36% of American Society of Ophthalmic Plastic and Reconstructive Surgery members attended [4]. This far-reaching and multi-centered study gave me an opportunity to compare my study and theirs. According to this survey, it is observed that the rates of upper and lower eyelid blepharoplasty surgery are really close to each other. Also, the rate of topical antibiotic application is 89% in American Society of Ophthalmic Plastic and Reconstructive Surgery Members' study, whereas the rate is 95% in my study. However their oral antibiotic rates are 14%, while I used it at the rate of 95%. Erickson and et al said that botulinum toxin became the most used cosmetic treatment in USA. Also, my study shows the same results as them [5]. Under eye filler applications are used frequently lately and give satisfying results [6]. The lower eyelid approach ratings that Hashem and et al were published show a great deal of similarities with my study. The main factor that they defend is the situation of lateral canthus and the situation of eye and cheek [7]. The approach to the lower eyelid must be evaluated according to the situation of skin and lateral canthus. In the study that Arad and fellow colleagues worked, blepharoplasty skin incisions that are performed with electrocautery were evaluated and compared with the ones that are made with scalpel [8]. They did not observe any difference between the two groups in terms of ecchymosis. However in my study, I observe distinct difference in the rates of ecchymosis with the patients who were used radiofrequency cautery in their

operations. In the study that Nakra and et al made, 38 eyes of 19 patients were applied only upper eyelid blepharoplasty and in the MRD1 measurement, significant difference was observed. This study shows that eyelids must be examined in detail. Also, it is a helpful study about eliminating false ptosis [9]. When the treatment is planned, patient should be looked as a whole. Also, I defend that it must be more careful while interfering the periorbital area.

It must be discussed completely which patient is going to be treated and which one should not be definitely treated [10-12]. The most important phase is pre-treatment to become successful in the treatment. First thing to do is listening and understanding the patient carefully, because the problem we observe and patient's complaint may not be the same. In this case, no matter how successful the treatment is, we can not satisfy the patient. Sometimes, patient has unrealistic expectations. When such a patient like this is encountered, it must be kept away from him or her and the treatment should not be applied.

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