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METHOD OF RECONSTRUCTIVE OPERATION FOR PATIENTS WITH NASAL DEFORMATION AFTER PRIMARY CHEILOPLASTY

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Annotation: This scientific article highlights a new, improved version of rhinoplasty to eliminate deformation of the external nose in patients with congenital cleft lip after primary cheiloplasty. Using this technique, from 2021 to 2023, 68 patients with deformation of the external nose were operated on after primary cheilorhinoplasty. In the postoperative period, patients were monitored and the results of the operation were compared with the initial data.3 months after corrective rhinoplasty surgery, anthropometric measurements of the size of the external nose were carried out on a control plaster model. The height of the skin part of the nasal septum on the intact and affected sides is the same. Deviations of the skin of the septum and dorsum of the nose from the center line are not visually determined. The angle between the base of the nose and its wings on the right and left is symmetrical.

Key words: rhinoplasty, primary cheiloplasty, deformation of the external nose.

One of the difficult problems in plastic surgery of the maxillofacial region and rhinology is the development of the most rational methods for restoring deformities of the external nose that occur after primary cheilorhinoplasty in patients with congenital cleft lip and palate.

Anatomical and cosmetic deficiencies inherent in deformations of the external nose cause not only a violation of such a vital function as breathing, but also negatively affect the appearance and psycho-emotional state of the patient. Therefore, the anatomical and aesthetic results of corrective operations should be considered not only as restoration of the anatomical shape of the external nose, but also as a means of social rehabilitation of patients with deformities of the external nose and upper lip of various origins.

Literature data indicate that modern methods of reconstructive rhinoplasty do not allow to completely restore the natural shape and function of the nose in patients with congenital cleft lip and

palate after primary cheilorhinoplasty. Of the large number of operations proposed to eliminate deformities of the external nose after primary cheilorhinoplasty, only a few developed methods have stood the test of time.

The dissatisfaction of operating surgeons, many patients and their relatives with treatment outcomes has led to the search for more effective methods of surgical treatment of patients with deformities of the external nose after primary cheilorhinoplasty.

In order to improve the anatomical and functional results of surgical treatment of patients with deformities of the external nose after primary cheilorhinoplasty, we have developed a method of reconstructive rhinoplasty.

Material and methods

The development of a new method of rhinoplasty was based on the results of an anthropometric study of plaster models of the midface (external nose and upper lip), as well as surgical techniques that make it possible to rationally use the tissues of the external nose, while creating optimal conditions for eliminating existing anatomical and functional disorders.

When comparing the average sizes of different parts of the external nose, we found significant differences in size and shape between the healthy and affected sides. Thus, in patients with deformation of the external nose after primary cheilorhinoplasty on the affected side, the level of the arch of the nostril and the tip of the nose is significantly lower compared to the healthy side. The severity of the deformation of the external nose depends on the degree of drooping of the nasal tip. Simultaneously with the drooping of the tip and arch of the nostril on the affected side, shortening of the skin part of the nasal septum is observed. Changes in the position of individual parts of the external nose, in turn, lead to changes in other components of the nose, i.e. flattening of the wing and widening of the base of the nostril.

When determining the lines of upcoming incisions and cutting out a triangular flap on the deformed half of the nose in patients with deformities of the tip and wing after primary cheilorhinoplasty, one should focus on the degree of drooping of the tip and apex of the nostril vault. In this case, the difference between the drooping tip and the top of the arch of the nostril on the affected and healthy sides should correspond to the size of the base of the triangular flap being cut out on the deformed half.

Taking into account the above, we have proposed a new surgical technique that gives a good cosmetic and functional result. First, the highest point of the vault of the nostril on the healthy side is determined, then the apex of the vault of the nasal opening is determined on the affected side. The difference between these points is the size of the base of the triangle, cut out from the skin part of the septum and the tip of the deformed side of the nose.

Then the intended incision line is marked on the skin of the tip of the nose and the arches of the nasal openings. The first stage of the operation is to make an incision on the upper half of the nostril along the edge of the roof of the nasal opening of the affected side. Next, the incision continues in the form of a “swallow” on the intact half of the tip of the nose. Then a triangular flap is cut out on the deformed half of the nose with the base at the upper part of the skin of the septum and the tip of the nose.

In this case, 2/3 of the base of the triangular flap is the skin part of the septum, and 1/3 is the tip of the nose. After that, the entire alar cartilage is separated on the deformed half on both sides of the medial pedicle of the alar cartilage and partially on the healthy side. Then, on the deformed side, an

incision is made in the mucous membrane on the medial side of the arch of the nasal opening along the nasal septum with a size corresponding to the length of the cut triangular flap.

The separated alar cartilage on the deformed half is mobilized medially upward and fixed with non-absorbable sutures to the arch of the medial pedicle of the healthy side. The triangular flap is placed in the created bed and sutured with marilon. A forming tube is inserted into the nasal opening. In this case, the level of the nasal opening on the affected side rises and shifts medially, which leads to the expansion of the lumen of the nostril, and this achieves its symmetry, as well as restoring the shape of other anatomical formations of the external nose (tip, wings). results

Using this technique, from 2021 to 2023, 68 patients with deformation of the external nose were operated on after primary cheilorhinoplasty. Of these, 18 people are aged 16 – 20 years, 40 people are 20 – 30 years old, 10 people are 31 to 40 years old. Women – 39, men – 29. The average age of patients is 20 – 30 years.In the pre- and postoperative periods, a plaster model of the external nose was cast and the height and angle of deviation of the skin part of the nasal septum were measured using the model.

Before surgery, the height of the skin part of the nasal septum in patients on the intact side was 16.3±0.05 mm, and on the affected side – 9.8±0.04 mm.

In the postoperative period, patients were monitored and the results of the operation were compared with the initial data. 3 months after corrective rhinoplasty, the anthropometric dimensions of the external nose were determined on a control plaster model.

The height of the skin part of the nasal septum in patients operated on according to the proposed method after surgery on the intact side was 16.3±0.05 mm, and on the affected side – 16.1±0.04 mm, i.e. on the intact and affected sides the height was almost the same.

In patients operated on in the traditional way (10 people), the difference between the intact and affected sides after surgery remains and is 16.3±0.05 mm on the intact side; on the affected one – 12.5±0.04 mm.

Before surgery, the angle of deviation of the skin part of the nasal septum from the central line in patients with deformation of the external nose after primary cheiloplasty and rhinoplasty ranged from 8 to 25°.

After reconstructive rhinoplasty using the proposed method, the angle of deviation of the skin part of the nasal septum in patients was less than 3°, i.e. the deviation was not visually determined. Whereas in patients operated on with the traditional method of rhinoplasty, after surgery the deviation of the skin part of the nasal septum remains unchanged and amounts to 5-10°.

If the triangular flap and its bed are incorrectly designed on the nasal mucosa, in the postoperative period, eversion of the nasal mucosa and outward displacement may be observed. Therefore, the shape and dimensions of the triangular flap and the bed for it must correspond exactly to each other.

Conclusion. Thus, the proposed variant of reconstructive rhinoplasty in terms of functional and cosmetic indicators is the method of choice when correcting secondary deformation of the external nose after cheilorhinoplasty.

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