



STRUCTURAL RHINOPLASTY IN THE CORRECTION OF SECONDARY NASAL DEFORMITY IN CLEFT LIP PATIENTS

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ABSTRACT

Structural rhinoplasty is an effective method for correcting secondary nasal deformity in patients with cleft lip. The technique allows the restoration of nasal shape, symmetry, and functional integrity by reinforcing and stabilizing the cartilaginous framework. This study evaluated the outcomes of applying this technique in patients with post-cleft nasal deformities. A significant improvement in aesthetic parameters and nasal breathing function was observed, confirming the effectiveness of structural rhinoplasty as a reliable reconstructive method

Relevance. Tissue distortion and malposition of facial structures often contribute to the formation of clefts in stillborn fetuses. Congenital cleft lip and nose result from impaired embryonic fusion of mesenchymal primordia, leading to persistent anatomical defects of the soft tissues, cartilage, and bones of the midface. As the child grows, the initial deformity not only persists but becomes more complex: asymmetric growth of nasal cartilages, underdevelopment of the alveolar process, septal deviation, and scar changes after early surgical interventions all contribute to a pronounced secondary nasal deformity. During the period of active facial skeletal growth, the congenital anomaly transforms into a fully developed secondary deformity characterized by tip projection abnormalities, asymmetry of the alar base, columellar deformity, and functional impairment of nasal breathing. These changes become more evident by adolescence, making secondary rhinoplasty not only an aesthetic, but also a functionally significant reconstructive procedure.

Objective: To assess the effectiveness of various secondary rhinoplasty techniques in nasal deformities associated with cleft lip by comparing outcomes in patients with and without prior primary correction.

Materials and Methods. A prospective study was carried out at IBATOV'S CLINIC between 2023 and 2025. The study included 20 patients with secondary nasal deformities caused by cleft lip. Among them were 13 males and 7 females aged 20 to 35 years. All participants underwent secondary rhinoplasty using various surgical techniques.

Results and Discussion. Significant differences were observed between the two groups regarding changes in hemicolumella length and nasal tip height before and after surgery. Group A demonstrated statistically significant improvements between preoperative and postoperative parameters. Postoperative alar width also differed substantially between the groups. Furthermore, the third aesthetic criterion revealed meaningful intergroup differences. Group A showed a marked improvement in aesthetic satisfaction, based both on patient self-assessment and evaluations from family members and close acquaintances.

Conclusions. Performing additional reconstructive rhinoplasty effectively strengthens the alar rim, prevents its subsequent descent, and ensures adequate structural support in the cleft region. In patients with deformities of the lower lateral cartilage, this procedure acts as an important preventive measure, reducing the risk of postoperative retraction and providing a more stable long-term outcome.

References:

- 1.Salyer KE. Cleft lip–nose reconstruction. *Plast Reconstr Surg.* 2003;112(1):1–14.
- 2.Mulliken JB, Martínez-Pérez D. The principle of rotation advancement for unilateral complete cleft lip repair. *Plast Reconstr Surg.* 1999;104(5):1247–1257.
- 3.Cutting CB, Grayson BH. The planning and execution of primary nasal correction in the unilateral cleft lip. *Clin Plast Surg.* 2004;31(2):203–209.
- 4.McComb H. Treatment of unilateral cleft lip nasal deformity: Primary and secondary treatment. *Clin Plast Surg.* 1985;12(4):685–696.
- 5.Fisher DM, Sommerlad BC. Cleft lip, cleft palate, and velopharyngeal insufficiency. *Plast Reconstr Surg.* 2011;128(4):342e–360e.
- 6.Рахимбердиева, З. А., & Артикова, Д. М. (2020). Шагазатова Барно Хабибуллаевна. *EDITOR COORDINATOR*, 468.
- 7.Нажмутдинова, Д. К., Рахимбердиева, З. А., & Максудова, Д. Р. (2017). Relationship of autoimmune thyroids with violations of reproductive function in women of childbearing age. *Евразийский Союз Ученых*, (2 (35)), 31-34