CONDITION OF THE EXTERNAL NOSE, NASAL CAVITY AND PARANASAL SINUSES IN CHILDREN WITH CONGENITAL CLEFT LIP AND PALATE

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Annotation: Studying this problem, we found out that patients with congenital rhinorrhea quite often have pathology of the nasal cavity and paranasal sinuses. According to data from 1966, deformation of the external nose was detected in 77% of cases, curvature of the nasal septum in 40% of cases, hypertrophy of the inferior turbinates in 60% of subjects, polyps in the nasal cavity were found in 2% of cases, obstruction of the nasal passages was present in 31% of patients, in 90% of cases there was a violation of nasal breathing of varying degrees of severity, olfactory function suffered in 80% of cases. According to the results of the work carried out in the Lipetsk region, curvature of the nasal septum was diagnosed in 82% of cases in children with this congenital pathology. According to research in recent years, problems with the nasal cavity in children with cleft lip and palate were in second place after maxillofacial and dental pathology.

Key words: congenital, cleft, deformation, hypertrophy, asymmetry

Children with cleft lip and palate almost always have a deformity of the nose: flattening of the wing of the nose on the side of the cleft, displacement of its base outward and downward, deformation of the tip of the nose and its displacement towards the cleft, curvature of the nasal septum. With through clefts, there is non-fusion of all tissues of the upper lip from the red border to the bottom of the nasal cavity, in this case there is deformation of the skin-cartilaginous and bone parts of the nose. According to foreign authors, with this form of cleft, pronounced deformation of the nose occurs in almost all cases. With bilateral clefts, the tip of the nose is usually flattened, bifurcated, the wings of the nose are flattened on both sides. Due to the high position of the palatine plates, there is a significant narrowing of the nasal cavity.

In children with cleft lip and palate, a curvature of the nasal septum is also diagnosed. The literature describes that the nasal septum is almost always curved towards the healthy side, that is, towards the side opposite to the cleft. Moreover, the curvature in the overwhelming majority of cases is localized in the lower sections of the nasal septum, often the curved fragment of the nasal septum comes into contact with the palatine process of the healthy side. An S-shaped curvature is noted: in the lower sections towards the healthy side, in the upper sections towards the cleft. According to foreign and domestic literature, curvature of the nasal septum occurs only in patients with a unilateral cleft of the upper lip and palate towards the side opposite to the cleft, while in children with a bilateral cleft, pathology on the side of the nasal septum was not detected. A pattern was revealed that the greater the degree of cleft palate, the more pronounced the deformation of the nasal septum. The issue of the condition of the nasal septum in children with bilateral clefts is not fully covered; there are only a few works in which the information is of a stating nature. Some authors write that the nasal septum in this type of cleft is not involved in the pathological process, while others claim the opposite.

A study has been described in foreign literature in which a group of scientists performed an autopsy on 6 stillborn children with a unilateral cleft lip and palate. The object of their

interest was the nasal cartilages. The results of the autopsy showed that in all cases there was asymmetry of the cartilages of the wings of the nose, the deformation was noted on the side of the cleft, and all children had a displacement of the nasal septum to the healthy side. In addition to comparing the shape and size of the cartilages of the two halves of the nose, they assessed and compared the weight of the alar cartilages. No reliable data were obtained for the difference in the weight of the cartilages of the alar nasal cartilage on the healthy side and on the side of the cleft, which served as the basis for asserting that the asymmetry of the wings of the nose in children with cleft lip and palate is the result of deformation of the cartilages, and not their hypoplasia. The curvature of the nasal septum, constant ingress of food during feeding into the nasal cavity through the defect of the palate cannot but affect the condition of the mucous membrane of the nasal cavity. In children with cleft lip and palate, hypertrophy of the inferior turbinates is noted. With a unilateral cleft palate, the process is unilateral. The degree of hypertrophy directly depends on the degree of cleft palate, so in children with a partial cleft palate, hypertrophy of only the posterior ends of the inferior turbinates is noted. According to the literature, with this congenital pathology, changes in the motor and respiratory function of the ciliated epithelium of the mucous membrane of the nasal cavity are noted. After surgical treatment and separation of the nasal cavity and oral cavity, the condition of the mucous membrane of the nasal cavity does not always improve. All this is explained by the fact that before the operation, the mucous membrane suffers as a result of mixed nasal breathing, irritation of the mucous membrane by food and the tongue, and after surgical treatment and elimination of the defect of the palate - as a result of the narrowness of the nasal passages. Narrow nasal passages occur due to cicatricial narrowing of the nasal vestibule after primary cheilorhinoplasty, curvature of the nasal septum and hypertrophy of the inferior turbinates.

According to the literature, it was noted that late surgical treatment has a negative effect on the condition of the nasal cavity structures. Performing septoplasty during primary cheilorhinoplasty has a beneficial effect on the condition of the nasal septum; in such children, the degree of curvature of the nasal septum in the long term is much less than in children who underwent septoplasty at a later date.

The above-mentioned pathological changes in the nasal cavity are the reason that children with cleft lip and palate are more often diagnosed with acute and chronic rhinitis, hypertrophy of the inferior turbinates, and chronicity occurs earlier in children who were operated on for the underlying disease at a later date.

Despite the optimization of surgical treatment of congenital defects and the choice of optimal treatment periods leading to the best cosmetic and functional results, up to 80% of patients still require conservative or surgical treatment of hypertrophic processes of the upper respiratory tract after uranoplasty. The operation of choice for these children is most often vasotomy of the inferior turbinates followed by lateroconchopexy.

Studies of previous years indicate that some patients have a decrease in olfactory function up to complete anosmia.

Changes in the nasal cavity cannot but affect the condition of the paranasal sinuses. There are isolated studies that examine the maxillary sinuses in children with VRVGIN. In these studies, the authors compared the volume of the sinuses on the healthy side and on the side of the cleft and the timing of their pneumatization compared to the maxillary sinuses of healthy children. It was found that the development of the maxillary sinuses in children with cleft lip and palate does not lag behind the development of the maxillary sinuses in healthy children. During radiographic examination of children (radiography, computed tomography of the paranasal sinuses), asymmetry of the maxillary sinuses was found in some of the patients examined. In children with a unilateral through cleft lip and palate, the volume of the sinus was greater on the affected side. The asymmetry of the maxillary sinuses in this case was

explained by a violation of the pneumatization of the sinuses as a result of inflammation of the mucous membrane of the nasal cavity and curvature of the nasal septum, preventing adequate ventilation of the sinuses.

Conclusion. There are references to the fact that children with cleft lip and palate suffer from sinusitis more often than healthy children, and the inflammatory process most often occurs in the developing sinuses in children under 10 years of age.

It is obvious that the problem of the maxillary sinus condition in children with cleft lip and palate remains not fully understood. Impaired nasal breathing from the moment of birth in this group of children causes chronic hypoxia. In this regard, anemia and hypotrophy are more often detected in children.

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