

# THE FUNCTIONAL STATE OF PLATELETS IN CHILDREN WITH CONGENITAL CLEFT PALATE WITH CHRONIC FOCI OF INFECTION IN THE NASOPHARYNX AND LUNGS

Shamsiev R.A.<sup>1</sup>, Rizaev Zh.A.<sup>2</sup> (Republic of Uzbekistan)  
558Email: Shamsiev@scientifictext.ru

<sup>1</sup>Shamsiev Ravshan Azamatovich - Aspirant,  
DEPARTMENT OF DENTISTRY № 2,

SAMARKAND STATE MEDICAL INSTITUTE, SAMARKAND;

<sup>2</sup>Rizayev Zhasur Alimdzhonovich - Rector, Doctor of Medical Sciences, Professor,  
DENTISTRY DEPARTMENT,  
TASHKENT STATE DENTAL INSTITUTE, TASHKENT,  
REPUBLIC OF UZBEKISTAN

**Abstract:** to solve this problem, we studied the aggregation properties of platelets in 97 patients with congenital cleft lip and palate. All patients were hospitalized in the clinic of pediatric maxillofacial surgery of the Tashkent State Dental Institute in 2016-2017. for the operation uranoplasty. The results of our research show that 73.8% of children in uranoplasty were performed at the age of 4 years and above. From a survey of parents and as a result of a pediatrician consultation, it was found that surgery in 43 (41.7%) of them was postponed due to the recurrence of colds, pneumonia. Analyzing the history, the status of children with congenital cleft palate, suffering from a combined pulmonary pathology of bacterial etiology, we found that the course of the underlying disease was aggravated.

**Keywords:** children, congenital cleft lip and palate, nasopharynx, lungs, platelets, survey.

## ФУНКЦИОНАЛЬНОЕ СОСТОЯНИЕ ТРОМБОЦИТОВ У ДЕТЕЙ С ВРОЖДЕННОЙ РАСЩЕЛИНОЙ НЁБА ПРИ ХРОНИЧЕСКИХ ОЧАГОВ ИНФЕКЦИИ В НОСОГЛОТКЕ И ЛЕГКИХ

Шамсиев Р.А.<sup>1</sup>, Ризаев Ж.А.<sup>2</sup> (Республика Узбекистан)

<sup>1</sup>Шамсиев Рашиан Азаматович – соискатель,  
кафедра стоматологии № 2,

Самаркандский государственный медицинский институт, г. Самарканд;

<sup>2</sup>Ризаев Жасур Алимджанович – ректор, доктор медицинских наук, профессор,  
кафедра стоматологии,

Ташкентский государственный стоматологический институт, г. Ташкент,  
Республика Узбекистан

**Аннотация:** для решения данной проблемы нами изучены агрегационные свойства тромбоцитов у 97 больных с врожденной расщелиной губы и неба. Все больные находились на стационарном лечении в клинике детской челюстно-лицевой хирургии Ташкентского государственного стоматологического института в 2016-2017 гг. для проведения операции уранопластики. Результаты наших исследований показывают, что 73,8% детей уранопластика проведена в возрасте 4 года и выше. Из опроса родителей и по результатам консультации педиатра установлено, что операция у 43 (41,7%) из них откладывалась из-за рецидива простудных заболеваний, пневмонии. Анализируя анамнез, статус детей с врожденной расщелиной неба, страдающих сочетанной легочной патологией бактериальной этиологии, мы установили, что течение основного заболевания было отягощено. Повышение агрегационного потенциала тромбоцитов способствует повышению активности внутрисосудистого свертывания крови и развитию синдрома ДВС крови.

**Ключевые слова:** дети, врожденная расщелина губы и неба, носоглотка, легкие, тромбоциты, опрос.

**Relevance.** Congenital cleft lip and palate are found in the population of all countries and still remain one of the most important problems of genetics, pediatrics, dentistry and medicine in general. Treatment and rehabilitation activities in persons with congenital malformations of the maxillofacial area is a complex interdisciplinary problem requiring the involvement of doctors, various psychologists and teachers. In addition to therapeutic measures, an important task remains the psychological rehabilitation of such patients. Statistics indicate that the incidence of congenital cleft lip and palate ranges from 1: 1000 to 5.38: 1000. In our country, the birth rate of children with congenital clefts of the upper lip and palate remains high: 1 case per 745 newborns [2, 5].

The presence of a defect between the oral and nasal cavities contributes to the formation of auto flora of the oronazopharyngeal region, with the prevalence of opportunistic strains that cause symbiosis. As a result of nasal-

oral respiration, evaporation of the oral fluid occurs, its viscosity increases and the enamel dries. As a result, there is an increased deposition of plaque and a worsening cariogenic situation in the oral cavity [1, 4]. In addition to the above, in children with congenital clefts there is a violation of the process of formation, mineralization and maturation of hard dental tissues [3]. A high percentage of caries prevalence and poor oral hygiene in this group of patients is associated with a lack of understanding by parents of the importance of hygiene and proper diet to prevent tooth decay [6].

Thus, the hygienic condition of the oral cavity in children with congenital cleft lip and palate is very unsatisfactory.

**Purpose of the study.** study of platelet aggregation properties in children with congenital cleft palate .

**Material and methods.** To solve this problem, we studied the aggregation properties of platelets in 97 patients with congenital cleft lip and palate. All patients were hospitalized in the clinic of pediatric maxillofacial surgery of the Tashkent State Dental Institute in 2016-2017. for the operation uranoplasty. Patients, depending on the severity of the pathology, were divided into 3 groups: group 1 (n=45) was represented by children with congenital isolated congenital cleft palate, group 2 (n=34) included children with congenital unilateral cleft of the upper lip and palate (1), in group 3 (n=18) children with congenital 2-sided cleft of the upper lip and palate were included. Patients of the 2nd and 3rd groups have a condition after cheiloplasty. The functional properties of platelets were judged by studying the following tests: hemolysate aggregation test according to Z.S. Barkaganu (1989), activated recalcification time. The content of diene conjugates was determined in the platelet membranes (B.I. Gavrilov, 1983). The activity of antioxidant protection was judged by the activity of superoxide dismutase on the inhibition of reduced NST by superoxide, catalase on inhibition of molybdate oxidation by hydrogen peroxide (S. Chevari, 1991). Endogenous intoxication was studied according to the method of Gabrielyan, the circulation of immune complexes of polyethylene glycol. The obtained results were subjected to mathematical processing by the method of variation statistics using the package of applied programs for statistical processing of information. The activity of antioxidant protection was judged by the activity of superoxide dismutase on the inhibition of reduced NST by superoxide, catalase on inhibition of molybdate oxidation by hydrogen peroxide (S. Chevari, 1991). Endogenous intoxication was studied according to the method of Gabrielyan, the circulation of immune complexes of polyethylene glycol. The obtained results were subjected to mathematical processing by the method of variation statistics using the package of applied programs for statistical processing of information. The activity of antioxidant protection was judged by the activity of superoxide dismutase on the inhibition of reduced NST by superoxide, catalase on inhibition of molybdate oxidation by hydrogen peroxide (S. Chevari, 1991). Endogenous intoxication was studied according to the method of Gabrielyan, the circulation of immune complexes of polyethylene glycol. The obtained results were subjected to mathematical processing by the method of variation statistics using the package of applied programs for statistical processing of information.

**Results and discussion.** The results of our research show that 73.8% of children in uranoplasty were performed at the age of 4 years and above. From a survey of parents and as a result of a pediatrician consultation, it was found that surgery in 43 (41.7%) of them was postponed due to the recurrence of colds, pneumonia. Analyzing the history, the status of children with congenital cleft palate, suffering from a combined pulmonary pathology of bacterial etiology, we found that the course of the underlying disease was aggravated. This is apparently due to severe intoxication of the body, which are reflected in the white blood formulas. Our studies have revealed a clear dependence of the sowing of etiologically significant flora on the time of admission of children to the hospital, i.e. age At the same time, the regularity of the increase in the role of gram-negative flora by 3 times was noted, Candida fungi in 8 times with increasing age of the patient. The latter, apparently, is due to ongoing antibacterial therapy before admission to hospital, as well as low immune resistance of the organism. In children, previously treated with any antibacterial drugs, the titer of gram-negative flora and fungi of the genus Candida was expressed in high numbers. When analyzing the index of humoral immunity, high values of class G immunoglobulin in the blood were most often determined. The latter is probably due to the high values of endogenous intoxication and the level of circulation of immune complexes. The results of our research show that in children with congenital cleft palate there is a significant decrease in the absolute number of blood platelets. At the same time, an increase in ADP-induced aggregation of blood cells was observed in comparison with indicators of healthy individuals. In children with congenital cleft lip and palate, platelet aggregation and platelet membrane lipid peroxidation processes have unidirectional disorders. An increase in lipid peroxidation products, in particular diene conjugates, which, at low values of superoxide dismutase and catalase, attacks the phospholipids of platelet cell membranes (lipid peroxidation products) and causes its damage, is proportional to the degree of activity of lipid peroxidation. In children with congenital cleft lip and palate, platelet aggregation and platelet membrane lipid peroxidation processes have unidirectional disorders. An increase in lipid peroxidation products, in particular diene conjugates, which, at low values of superoxide dismutase and catalase, attacks the phospholipids of platelet cell membranes (lipid peroxidation products) and causes its damage, is proportional to the degree of activity of lipid peroxidation. In children with congenital cleft lip and palate, platelet aggregation and platelet membrane lipid peroxidation processes have unidirectional disorders. An

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**Conclusions.** Thus, structural and functional changes in membranes are the cause of the expression of tissue thromboplastin (the phenomenon of "flip-flop"), as a result of which phospholipids are transferred to the plasma membrane, characteristic of the internal component of the lipid bilayer. This increases the coagulation activity of blood cells and vascular endothelium cells. Changes in the lipid layer of the membrane when lipid peroxidation is activated accelerates the synthesis of Thromboxane A<sub>2</sub>, which causes hypercoagulation. Increased platelet aggregation potential contributes to increased activity inside the vascular coagulation and the development of the syndrome of DIC blood.

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