

МЕДИЦИНСКИЕ НАУКИ

FREQUENCY AND RISK FACTORS AFFECTING THE BIRTH RATE OF CHILDREN WITH CONGENITAL CLEFT LIP AND PALATE IN THE SOUTHERN REGION OF KYRGYZSTAN.

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Abstract. The aim of the study is to examine the incidence and factors of congenital cleft lip and palate in the southern region of the Kyrgyz Republic, according to the form of clefts and according to the classification of MMDI, as well as their rehabilitation. We studied in detail the case histories of 2116 patients treated in the maxillofacial surgery department of Osh Interregional United Clinical Hospital according to the age and sex, as well as the form of congenital cleft lip and palate. Moreover, a questionnaire was administered to parents of children with CCLP for risk factors during pregnancy. A retrospective study of medical history revealed, among congenital anomalies, clefts of the soft, hard palate, alveolar process and upper lip prevailed - (combined) 891 (42,3%) Congenital cleft of soft, hard palate - 586 (27,7%), then isolated congenital cleft of the maxilla - 415 (19,6%), congenital cleft of the soft palate only 10,5% - 224 children were followed. The results of the questionnaire revealed that the parents of children born with CCLP were influenced by various unfavorable factors in the period of formation of the facial section of the fetus. The survey revealed that the relatives had CCLP, which accounted for 12.9% of all newborns, indicating a rather high role of hereditary predisposition. In addition to the hereditary genetic factor, an important role is played by infectious diseases suffered during the first trimester. It is noted that 12.8% of the children born with CCLP had infectious diseases. The mothers independently took drugs during pregnancy (antibiotics, salicylates, sulfonamides without a doctor's prescription), 17.6% of women were anemic during pregnancy, and 16.3% had severe toxemia. Along with this, it was found that the smallest number of women suffered mental trauma in the first trimester of pregnancy 0.4% of the mothers of children born with CCLP. Further, we registered patients with CCLP in the special software ONYX CEPH-3 from 01.01.2015 to the present, where we enter detailed information about patients with CCLP pathology. It creates convenience for parents both informationally and economically, as well as directly for the doctor in terms of dynamic observation of the functional and aesthetic condition and development of the child. In order to further develop programs to prevent the prevalence of congenital pathology, improve the quality of comprehensive treatment method, as well as medical and social rehabilitation of such patients and work with families of children with CCLP, we have developed a single program ONYX CEPH3 providing dispensary and rehabilitation of children.

Key words: cleft lip and palate, risk factors, program ONYX CEPH3

Children's health is the future of the state and the potential for the development of society. However, despite the successes in strengthening and protecting children's health, congenital anomalies still occupy a leading position in the structure of child morbidity, disability and mortality. The frequency of congenital facial malformations in children has a special place in the pathology of the maxillofacial region - cleft lip and/or palate: this pathology is considered to be one of the most common and severe among congenital anomalies and takes 3-4 places in their structure. For example, congenital malformations of the maxillofacial region account for 13 to 30% of all congenital anomalies and are accompanied by anatomical and functional disorders of the dentoalveolar system. It should be noted that the isolated form of this pathology occurs in 7.6-41.4% of cases, while as part of the

symptom complexes (together with heart defects and other congenital anomalies) that are caused by various mutations, chromosomal abnormalities (e.g., deletion of chromosome 22) cleft lip and/or palate are described in 21.1-61.2% [1].

Congenital malformations cause not only medical but also social problems: along with severe functional impairments of the affected organs and systems, patients have difficulties in adapting to society. In the future, they face the problem of getting a profession and employment (35.2% of patients point out that with congenital cleft lip and palate it is almost impossible to find a job), which determines the medical and social significance of the problem and the relevance of research in this direction. Besides, many patients with congenital malformations of the maxillofacial area have a disability group caused by difficulties in

restoring the disturbed vital functions - nutrition, breathing, speech. And given that congenital cleft lip and palate account for 18% of all cases of congenital anomalies, the problems of anatomical reconstruction of the upper lip, nose and upper jaw in childhood lead to disability in every fifth child [2, 3, 5, 6].

The World Health Organization (WHO) identifies the system of quality assessment of rehabilitation in comprehensive medical, psychological, pedagogical and social rehabilitation of patients with congenital cleft lip and palate (CCLP) as a strategic task [4, 7].

The aim of the study is to examine the incidence and factors of congenital cleft lip and palate in the southern region of the Kyrgyz Republic, according to the form of clefts and according to the classification of MMDI, as well as their rehabilitation.

Materials and methods of research

We studied in detail the case histories of 2116 patients treated in the maxillofacial surgery department of Osh Interregional United Clinical Hospital. During the study of case histories, we paid special attention to age and sex, as well as the form of congenital cleft lip and palate. Currently, there are a number of classifications of congenital cleft lip and palate. The classification we used, which was developed at the Department of Pediatric Dentistry of MMDI, is simple and convenient for the practitioner.

Classification of congenital cleft lip:

I. Concealed congenital cleft of the upper lip (unilateral, bilateral);

II. Congenital incomplete cleft of the upper lip

a) without deformation of the dermal-cartilaginous part of the nose (unilateral, bilateral)

b) with dermal-cartilaginous nasal deformity (unilateral, bilateral);

III. Congenital complete cleft of the upper lip (unilateral, bilateral).

Classification of congenital clefts of the soft and hard palate

I. Congenital cleft of the soft palate: a) latent, b) incomplete, c) complete;

II. Congenital cleft of soft, hard palate: a) latent, b) incomplete (unilateral, bilateral), c) total;

III. Congenital cleft of the soft and hard palate and the alveolar process: a) unilateral, b) bilateral;

Risk factors of congenital cleft lip and palate were studied. Monitoring of organochlorine pesticides in the breast milk of women in the southern region of Kyrgyzstan was conducted. A questionnaire was administered to parents of children with CCLP for risk factors during pregnancy.

Results of the study and their discussion

Congenital cleft lip and palate in newborns is an urgent problem for health care systems of the Kyrgyz Republic, therefore it represents a priority task for implementation of comprehensive rehabilitation of such patients. The World Health Organization notes a high rate of birth of children with congenital cleft lip and palate in the world - 0.6-1.6 cases per 1000 live births. In the Kyrgyz Republic, the incidence ranges from 1.6 to 2.0 cases per 1000 newborns. In Kyrgyzstan the incidence is particularly high in the Southern region, with 2.0 cases per 1,000 live births. We have

conducted a retrospective study of case histories from 2013 to 2018, treatment and follow-up of 2116 patients with CCLP of whom 1158 (54.7%) boys 958 (45.3%) girls were found, as well as the analysis of the form of congenital cleft of the upper lip and palate by MMDI classification. In total, 415 children had isolated congenital clefts of the upper lip and accounted for 19.6% of the total number of hospitalized children. Distribution according to the form of cleft lip: 18 children (4.3%) had latent unilateral cleft lip, congenital incomplete cleft - 120 (28.9%) of them without dermal-cartilaginous nasal deformation - 78 (18.7%) children, with deformation of dermal-cartilaginous nasal region - 42 (10.1%). Congenital complete cleft of the upper lip was unilateral - 196 (47.2%), bilateral - 81 (19.5%) children. Apparently, there were more unilateral clefts of the upper lip - 80.4%, bilateral - 19.6%, and among the unilateral clefts left-sided clefts of the upper lip (59.7%) prevailed over right-sided clefts - 40.3%.

Children with congenital cleft of soft palate were operated on - 24 (10.5%) from them complete 124 (55.3%), incomplete 86 (38.3%), latent - 14 (6.4%) forms. The congenital cleft of soft and hard palate was operated on - 586 (27.6%) of them complete - 469 (80%), incomplete - 110 (18.7%), latent - 7 (1.3%). Unilateral pathology occurred in 79.8% of cases and bilateral in 20.2%. Congenital clefts of the soft palate, hard palate and alveolar process predominate most of all - 891 (42.1%) of them unilateral - 716 (80.3%), bilateral - 175 (19.7%).

Thus, a retrospective study of medical history revealed, among congenital anomalies, clefts of the soft, hard palate, alveolar process and upper lip prevailed - (combined) 891 (42.3%) Congenital cleft of soft, hard palate - 586 (27.7%), then isolated congenital cleft of the maxilla - 415 (19.6%), congenital cleft of the soft palate only 10.5% - 224 children were followed.

According to different researchers, the risk factors for the development of congenital cleft lip and palate have considerable variability. Four groups of risk factors are distinguished: genetic factors, environment, lifestyle, organization of medical care [27]. We have studied and analyzed the birth rate of children with congenital abnormalities in Osh oblast and, in particular, in Osh city. According to the study results it was found out that during the period of 2010-2012 in Osh city a total of 30 598 babies were born, 47 of them with congenital pathologies which equals 1.53 babies per 1000 newborns. Total number of newborns in Osh province was 54726, including 71 babies with congenital pathology of maxillofacial region which represents 1.29 per 1000 newborns. If we distribute the number of born children by districts we get: in Alay district - 3,280 infants, of them with congenital pathology - 4 (1.2); in Aravan district - 7,559 babies were born, of them with pathology - 15 (1.98) children; in Nookat district - 16,756 children were born, of them - 25 newborns with congenital pathology (1-61); Karakuldja district - 2715 children of them - 3 (1,1) with IDD; Karasuysky district - 12342 children of them - 24 (1,94) with IDD; Chon-Alay district - 1970

children, in this district no children with congenital pathology were revealed. On the basis of the results of the study of birth rate of children with IDPs by regions, it can be stated that the highest birth rate of children with pathology is observed in such regions as Aravan district - 1.98, Karasuu district - 1.94 and Nookat district - 1.61.

This is explained by the fact that in these areas the population is mainly engaged in cotton growing, tobacco growing and cultivation of gourds, so they more often use pesticides to kill pests of industrial crops of cotton and tobacco. The greatest danger was detected in the south of Kyrgyzstan because there are still 183 former pesticide storehouses, 45 agro-aerial sites and 2 pesticide burial sites. Particularly intensive contamination is found in the soils of former cotton and tobacco plantations, where huge amounts of pesticides, including organochlorine pesticides, were used in the past. In this connection we examined the breast milk (BM) of 108 women, aged from 18 to 45 years, having children from 10 days to 11 months, living in different areas, at this time not having direct contact with pesticides. In Karasuu, Nookat, and Aravan districts women living near the destroyed agro-airport and warehouses functioning before 1989 were found to have organochlorine pesticides in their breast milk. And the lowest birth rate of children with congenital abnormalities was found in the Alai district - 1.2, Karakuldzha district - 1.1, and in Chon-Alai district no births with CCLP were registered at all during the 3-year study period, as in this district the population is mainly engaged in cattle breeding. Thus, based on the results of the study, the link between the birth rate of children with various congenital abnormalities and the impact of organochlorine pesticides on pregnant women or women of childbearing age has been proved.

And also according to the results of statistical data on birth rates for the years studied (2000-2016) in Aidarken and Kadamjay towns of Batken region 26385 newborns were born, of which 10 children were stillborn, and 488 babies were with congenital pathology of maxillofacial region, i.e. with CCLP. The rate of births of children with CCLP was 1.85 per 1,000 newborns. One of the factors influencing the birth rate of CCLP in Aidarken and Kadamzhai cities is the concentration of dust in the atmospheric air, MAC (maximum air concentration 0.02mg/m³), which is 7 times higher than the norm according to Kadamzhai district center for disease prevention and state sanitary and epidemiological supervision, conclusion from 17.07.2018 protocol of laboratory research No. 869. Possible risk factors include various endogenous and exogenous influences on the body of the child's parents.

Thus, the results of the questionnaire revealed that the parents of children born with CCLP were influenced by various unfavorable factors in the period of formation of the facial section of the fetus. The survey revealed that the relatives had CCLP, which accounted for 12.9% of all newborns, indicating a rather high role of hereditary predisposition. In addition to the hereditary genetic factor, an important role is played by infectious diseases suffered during the first trimester. It is noted that 12.8% of the children born

with CCLP had infectious diseases. The mothers independently took drugs during pregnancy (antibiotics, salicylates, sulfonamides without a doctor's prescription), 17.6% of women were anemic during pregnancy, and 16.3% had severe toxemia. Along with this, it was found that the smallest number of women suffered mental trauma in the first trimester of pregnancy 0.4% of the mothers of children born with CCLP.

Thus, the most common risk factors for the development of congenital cleft lip and palate are genetic predisposition, infectious diseases suffered during pregnancy, pronounced maternal toxemia, anemia during pregnancy and taking medications without a prescription, these factors together accounted for 60.0% of all causes of congenital pathology of the maxillofacial region.

Further, we registered patients with CCLP in the special software ONYX CEPH-3 from 01.01.2015 to the present, where we enter detailed information about patients with CCLP pathology (full name, date of birth, place of residence, contact phone numbers, diagnoses and treatment plans, full-face and profile photos, photos of the oral cavity). Up to the age of 6 months, we are informing the parents, that the treatment of children with congenital cleft lip and palate is staged: Stage I surgery (cheiloplasty), performed at 6 months of age; Stage II surgery (uranoplasty), at 1.6 years of age, with follow-up observation by a speech therapist; Stage III surgery (autocostoplasty, in case of maxilla alveolar defects), performed at 10-11 years of age. Rhinoplasty is performed at the age of 14. Since the birth of a child with CCLP, the orthodontist monitors and treats the defects and deformities of the dentition directly. Between each stage of surgery, we maintained continuous contact with the parents of the children and received the information we needed about the child's condition before and after surgical treatment, his development, to choose the tactics of further treatment and monitoring of the child. With the help of this program we can timely carry out surgical treatment, compare the results between the stages of operations, and, if necessary, make correction of defects.

Thus, it creates convenience for parents both informationally and economically, as well as directly for the doctor in terms of dynamic observation of the functional and aesthetic condition and development of the child.

Conclusions.

Congenital malformations of the maxillofacial region have a high prevalence rate in children, occupy significant positions in the morbidity and mortality structure; adult patients with such pathology often have difficulties with obtaining a profession and employment, which substantiates the medical and social significance of the problem not only in the Kyrgyz Republic, but also for healthcare in other countries of the world. Numerous studies have studied the influence of risk factors in the groups "genetic factors", "environment" and "lifestyle", but the group of factors "organization of medical care and their rehabilitation" is practically not studied. In order to further develop programs to prevent the prevalence of

congenital pathology, improve the quality of comprehensive treatment method, as well as medical and social rehabilitation of such patients and work with families of children with CCLP, we have developed a single program ONYX CEPH3 providing dispensary and rehabilitation of children.

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ГРНТИ:76

РОЛЬ ГИПОТЕРМИИ ПРИ ОСТРОЙ СПАЕЧНОЙ КИШЕЧНОЙ НЕПРОХОДИМОСТИ

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THE ROLE OF HYPOTHERMIA IN ACUTE ADHESIONS INTESTINAL OBSTRUCTION

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Аннотация. Обобщены результаты интенсивной терапии 68 пациентов (39 мужчин и 28 женщин) в возрасте от 23 до 86 лет с острой спаечной кишечной непроходимостью. Исследование проведено в 2 группах больных: 1-ю (основную) составили 30 пациентов, которым в комплексе интенсивной терапии проводили гипотермическую энтеральную санацию, 2-ю – 38 пациентов, которым провели лишь декомпрессию кишечника. Результаты лечения сравнивали по клиническим и лабораторным параметрам. Интубация и гипотермическая санация кишечника при острой спаечной кишечной непроходимости являются эффективным способом удаления токсичного кишечного содержимого, при этом уменьшается всасывание токсичных веществ в организме, предотвращая риск развития ишемического поражения и стимулируется перистальтика кишечника. Все это способствует улучшению общего состояния больных в течение более короткого срока и достижению положительных конечных результатов лечения. Летальность составила 11,1 и 20%.

Abstract. Results of intensive care of 68-patients (39- male, 28 female, aged from 23 to 86 years) with intestinal obstruction are summarized. All the patients were divided into two groups: 1st (study) group consisted of 30 patients who have been treated with hypothermal enteral sanitation, patients of 2nd group (38 have been treated with intestinal decompression only. Results of treatment were compared by clinical and laboratory parameters. It is demonstrated that intestinal intubation and hypothermal sanitation at acute intestinal obstruction are effective methods for elimination of toxic intestinal contents, prevent ischemic damage and stimulate peristalsis of intestine. The positive final results after this treatment are demonstrated. Lethality was 10,5 and – 21%.

Ключевые слова: гипотермия, кишечная непроходимость, гипохлорит натрия, энтеральная санация.