

Krivenko L.S., Nazaryan R.S.

INFLUENCE OF MATERNAL PATHOLOGY AND ATOPIC DISEASES ON DEVELOPMENT OF ORAL CAVITY PATHOLOGY IN CHILDREN

Kharkiv National Medical University, Kharkiv

Abstract. *The recent growth in children somatic pathology can often be attributed to a violation of prenatal development or early neonatal period of life. Maternal diabetes, hypertension, preeclampsia, threatened abortion, premature birth are described as adverse effects on a growing body. The increasing prevalence of atopic diseases, including asthma associated with atopy, atopic dermatitis and allergic rhinitis, has become a major concern for allergists and health authorities in many countries. The aim of the study was to examine the effects of adverse pregnancy on the state of the oral cavity of children, their dental status.*

During the in-depth examination performed dental examination of apparently healthy children referred pediatrician. The survey included patients aged 6-14 years with a diagnosis of caries (study group - 119 people). Also fifty-five children aged 12 to 18 suffering from allergies (asthma, atopic dermatitis, allergic rhinitis) were examined with common dental methods. And healthy children with intact teeth (control group - 15 persons). Result of dental checkup children were divided into two main groups: non-sanitized and sanitized. Our results are combined with the known facts that one of the most important factors leading to the formation of the child's pathology may cause the presence of adverse factors during pregnancy. Thus, the unfavorable factors of pregnancy lead to persistent changes of the oral cavity in children.

Keywords: child, oral cavity, pregnancy, atopic pathology.

The recent growth in children somatic pathology can often be attributed to a violation of prenatal development or early neonatal period of life. Maternal diabetes, hypertension, preeclampsia, threatened abortion, premature birth are described as adverse effects on a growing body [8,9]. That leads to difficulty postnatal adaptation, disruption of the formation of the nervous, cardiovascular and other functional systems of the body [3]. However, it is believed that the incidence of adverse pregnancy increases, which makes in connection with this study the pathogenesis of the impact of these factors on the child's body in order to develop appropriate

approaches to prevention, early correction of violations and optimal rehabilitation. This approach seems important not only medical but also social spheres.

Currently, there is no doubt the fact that practically all diseases are accompanied by neonatal disorders of the vascular system. This is due to the fact that the vascular system is an indicator of any pathological process, identifying infant state regulatory and adaptive mechanisms, especially connective tissue matrix. At the same time, we know that the consequences of a breach of the vascular system, particularly at the level of the microvasculature are degenerative and inflammatory periodontal disease [1, 3, 6].

Other point of view is increasing prevalence of atopic diseases, including asthma associated with atopy, atopic dermatitis and allergic rhinitis, has become a major concern for allergists and health authorities in many countries. Asthma is a major cause of morbidity and mortality at all ages. It is important that allergic diseases have chronic recurrent nature, so dental status of children undergoes some changes. Today there is a need for detailed clinical studies that will identify clinical characteristics of periodontal diseases in children with atopic diseases [6,7].

The aim of the study was to examine the effects of adverse pregnancy and atopic pathology on the state of the oral cavity of children, their dental status.

Materials and methods. During the in-depth examination conducted dental examination of apparently healthy children referred pediatrician. The survey included patients aged 6-14 years with a diagnosis of caries (first study group - 119 people). Fifty-five children aged 12 to 18 suffering from allergies (asthma, atopic dermatitis, allergic rhinitis) were examined with common dental methods. To identify the degree of gingivitis index CPI was used. And healthy children with intact teeth (control group - 15 persons). In each group, isolated groups according to the presence of adverse factors of pregnancy. Result of dental checkup children were divided into two main group: non-sanitized and sanitized. The intensity of caries was assessed in accordance with the classification of T.F. Vinogradova. Dental health of children in group 1 corresponded to the I degree or compensated form of caries with single carious lesions. Caries index ranged from 1 to 3. The children in group 2 had multiple

caries (II degree of caries). Caries index ranged from 10 to 20, which corresponded to subcompensated form of caries.

Results and discussion. Tooth decay is the most common disorders of the teeth, especially in childhood. Along with the change in the shape and size of the tooth there is a change of its tissues, there is a tendency to slow down the ripening enamel disruption timely full maturation other solid tissues. Caries in children at different ages proceeds differently. For a caries of deciduous teeth affect the anatomical and physiological characteristics, the overall resistance of the body of the child and the highly reactive properties of childhood. Caries is determined not only by the condition of the tooth tissue, but also factors largely oral, oral fluid, whose composition depends on the organism and reflect its numerous variations.

In addressing the problem of caries a significant place has an important physiological properties of the enamel - permeability. This property enamel depends on the characteristics of its structure and chemical composition of the solid, highly mineralized tissue incapable of regeneration. The level of permeability of the enamel is determined pH. Permeability increases with caries in the step chalk stains, i.e. at the earliest stage of the pathological process (focal demineralization). The permeability of enamel for inorganic and organic substances varies. Calcium and phosphorus slowly penetrate the enamel and never overcome the enamel-dentine connection. Organic substances penetrate hard tissues is significantly faster. Permeability of enamel immature temporary and permanent teeth is significantly higher than the permeability of permanent teeth formed [2].

Increased permeability of enamel - a sign of progressive demineralization of dental hard tissues, but thanks to this property is developed and the reverse process - remineralization, which contributes to the suspension of caries. Saliva plays an important role in maintaining homeostasis of the oral cavity. Caries resistance and caries susceptibility to a large extent depend on the qualitative and quantitative changes in the saliva, the nature of salivary pH. Contained in plaque bacteria stimulate the production of cytokines, in turn, enhance the permeability of proinflammatory cytokines, oral tissue, which is important in the pathogenesis of

dental caries. However, there is no consensus about the role of pro- and anti-inflammatory cytokines in the development of caries.

Nineteen children had asthma; fifteen children were suffering from atopic dermatitis, twenty-one suffered from allergic rhinitis. Among children with asthma, periodontal disease were detected in 73.4% of cases. The bleeding gums have been established among 61.3% of the examined children, calculus - among 12.1% of patients. Average sextant characterized by healthy periodontal tissues was 1.2, with bleeding - 3.6, with mineralized dental calculus - 1.2. The most common clinical form of periodontal disease detected in children with this pathology was catarrhal gingivitis - in 78.3% of patients. Also during the investigation was found hypertrophic (14.2%) and ulcerative-necrotic (7.5%) gingivitis. In most cases, generalized gingivitis was diagnosed (62.4%); localized form - in 37.6% of cases.

Among children with a diagnosis of atopic dermatitis periodontal disease were detected in 71.6% of cases. Results of clinical examination showed that bleeding gums were observed in 48.3% of children, dental calculus - in 23.3% of children. Number of intact sextants in children was 3.2, with bleeding - 1.5, with dental calculus - 1.3. Among periodontal diseases catarrhal gingivitis was the most common (75.7%), hypertrophic was met in 24.3% of cases, ulcer-necrotic gingivitis was not detected in any child. The prevalence of generalized form of gingivitis was 58.2%, localized gingivitis was diagnosed in 41.8% of cases.

In children with allergic rhinitis, periodontal diseases were found most frequently among all groups of children with atopic conditions - in 78.8% of patients. The study of periodontal status showed that bleeding gums were found in 45.8% of children, dental calculus - in 33.0% of children. According to our data, the average number of intact periodontal sextant was 2.8, with bleeding - 2.2, with dental calculus - 1. The most common forms of periodontal diseases were defined: catarrhal gingivitis - in 74.6% of cases, hypertrophic gingivitis - in 24.4% of cases. The prevalence of generalized gingivitis was 59.6% of children.

Our results are combined with the known facts that one of the most important factors leading to the formation of the child's pathology may cause the presence of adverse

factors during pregnancy is often accompanied by the development of chronic placental insufficiency [4]. Emerging with immune, trophic, endocrine and metabolic disorders, along with activation of free radical oxidation have a damaging effect on the fetus, the nature and extent of which depends on the duration and length of gestation.

Conclusions. Thus, the unfavorable factors of pregnancy lead to persistent changes of the oral cavity in children. Such atopic pathology as asthma, atopic dermatitis, allergic rhinitis could be cause of changes in periodontal tissues in childhood.

References.

1. Безрукова И.В. Быстропрогрессирующий пародонтит. Этиология. Клиника. Лечение. : Дис...д-ра.мед.наук: 14.0021. - М., 2001. – 212 с.
2. Белоклицкая Г.Ф. Клинико-патогенетическое обоснование дифференцированной фармакотерапии генерализованного пародонтита: автореф. дис. на соискание ученой степени док. мед. наук: спец. 14.00.21 «Стоматология» / Г.Ф. Белоклицкая. - К., 1996. - 32 с.
3. Волосовец А.П. Нарушение процессов микроциркуляции: актуальность в педиатрии и перспективы лечения / А.П. Волосовец, С.П. Кривоустов, Т.С. Мороз // Практична ангіологія. – 2008. - №4 (15). – С. 29-33
4. Гвоздева Ю.В., Захаров И.А. Комплексный метод профилактики и лечения стоматологических заболеваний у детей с высокой степенью перинатального риска // Актуальные проблемы управления здоровьем населения: Сб. науч. трудов – Нижний Новгород, 2009. – С. 86–89.
5. Данилевский Н.Ф., Борисенко А.В. Заболевания пародонта / Н.Ф. Данилевский, А.В. Борисенко // Киев: Здоровье, 2000. - 464 с.
6. Иванов В.С. Заболевания пародонта / М.: Медицина. - 1998. – 296 с.
7. Косенко К.Н. Профилактическая гигиена полости рта: [монография] / К.Н. Косенко, Т.П. Терещина // Одесса: КП ОГТ, - 2003. - 296 с.
8. Яковцова А.Ф., Марковський В.Д., Гаргін В.В., Сорокіна І.В., Губіна-Вакулик Г.І., Омельченко О.А., Мирошніченко М.С., Галата Д.І., Потапов С.М., Шапкін А.С. Патологічна анатомія плоду від матерів з ускладненою вагітністю // Патологія. – 2012. - №3. – С.40-42.
9. Willemsen R.H., De Kort S.W.K., Van Der Kaay D.C.M., Hokken-Koelega A.C.S. Independent effects of prematurity on metabolic and cardiovascular risk factors in short small-for-gestational-age children // Journal of Clinical Endocrinology and Metabolism. - 2008. - №2. - P. 452-458.

Кривенко Л.С., Назарян Р.С.

Вплив материнської патології та атопічних захворювань на розвиток патології ротової порожнини у дітей

Харківський національний медичний університет, Україна

Резюме. Зростання у дітей соматичної патології часто може бути віднесено до порушення внутрішньоутробного розвитку. Материнські цукровий діабет, гіпертонія, преєклампсія, загроза переривання вагітності, передчасні пологи характеризуються як несприятливі фактори для зростаючого організму. Зростаюча поширеність atopічних захворювань, включаючи астму, atopічний дерматит та алергічний риніт, є серйозною проблемою для алергологів в багатьох країнах. Під час диспансерного спостереження оцінювали стоматологічний стан дітей. У дослідженні взяли участь пацієнти віком 6-14 років з діагнозом карієс (перша дослідницька група - 119 осіб). Крім того п'ятдесят п'ять дітей у віці від 12 до 18 страждали від алергії (бронхіальна астма, atopічний дерматит, алергічний риніт). Результат огляду стоматологічного статусу дітей вказує, що одним з найбільш важливих факторів, що ведуть до утворення патології дитини може викликати присутність несприятливих факторів під час вагітності та наявність atopічної патології.

Ключові слова: дитина, ротова порожнина, вагітність, atopічна патологія

Кривенко Л.С., Назарян Р.С.

Влияние материнской патологии и atopических заболеваний на развитие патологии ротовой полости у детей

Харьковский национальный медицинский университет, Украина

Резюме. Рост у детей соматической патологии часто может быть отнесен к нарушению внутриутробного развития. Материнские сахарный диабет, гипертония, преэклампсия, угроза прерывания беременности, преждевременные роды характеризуются как неблагоприятные факторы для растущего организма. Растущая распространенность atopических заболеваний, включая астму, atopический дерматит и аллергический ринит, является серьезной проблемой для аллергологов во многих странах. Во время диспансерного наблюдения оценивали стоматологический статус детей. В исследовании приняли участие пациенты в возрасте 6-14 лет с диагнозом карієс (первая исследовательская группа - 119 человек). Кроме того 55 детей в возрасте от 12 до 18 страдали от аллергических проявлений (бронхиальная астма, atopический дерматит, аллергический ринит). Результат оценки стоматологического статуса детей указывает, что одним из наиболее важных факторов, ведущих к образованию патологии ребенка может быть наличие неблагоприятных факторов во время беременности и наличие atopической патологии.

Ключевые слова: ребенок, ротовая полость, беременность, atopическая патология.

Received: 5.07.2015

Accepted: 6.09.2015