

CAUSES OF CONGENITAL ANOMALIES IN CHILDREN

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Congenital anomalies can be defined as structural or functional anomalies that occur during intrauterine life. Also called birth defects, congenital disorders, or congenital malformations, these conditions develop prenatally and may be identified before or at birth, or later in life. An estimated 6% of babies worldwide are born with a congenital anomaly, resulting in hundreds of thousands of associated deaths. However, the true number of cases may be much higher because statistics do not often consider terminated pregnancies and stillbirths.

But where do these defects come from? Although some birth defects are inherited, others are a product of harmful environmental factors known as teratogens, and still others are multifactorial, resulting from a complex interaction of genetic and environmental influences. However, in approximately half of all birth defect cases, the causes are unknown

Some congenital anomalies can be treated with surgical and non-surgical options, such as cleft lip and palate, clubfoot, and hernias. Others, including heart defects, neural tube defects, and down syndrome, can cause lifelong impacts.

Of course, not all birth defects have such profound consequences. Consider, for example, cleft lip and palate; this is a multi factorial birth defect that, if left uncorrected, can create difficulties with eating and speech. Children born with cleft lip usually undergo corrective surgery at an early age. Although genes definitely play a role in the development of this defect, environmental factors, including smoking and the use of ant seizure drugs, have been associated with a greater risk of bearing a child with cleft lip and/or palate. [2]

Congenital anomalies are one of the main causes of the global burden of disease, and low- and middle-income countries are disproportionately affected. These areas are also less likely to have facilities to treat reversible conditions such as clubfoot, leading to more pronounced and long-lasting effects.[1]

Environmental factors

Maternal exposure to certain pesticides and other chemicals, as well as certain medications, alcohol, tobacco and radiation during pregnancy, may increase the risk of having a fetus or neonate affected by congenital anomalies. Working or living near, or in, waste sites, smelters or mines may also be a risk factor, particularly if the mother is exposed to other environmental risk factors or nutritional deficiencies.

The presence of children with congenital anomalies in families and the percentage of families tend to hereditary diseases[2].

Among biological factors interval between births is one factor that much affect health children. It noted that indicators children's health inversely proportional the interval between births, and the less the interval, the higher risk of having children with defects development. About in 70% of cases children born with interval up to 3 years.

The interval between birth

Given negative the impact of marriage between close relatives health children, we thought it necessary to study it. Our study showed that children from families parents were connected, had 4.0 times more chances to be born with congenital anomalies, than children from families whose parents were not related

Marriage between relatives

Health parents determines the health of the family. It was established, that the presence of chronic diseases parents or children of families where one of the parents often suffers from acute diseases 2.0 times higher than children, born from healthy parents. Received data showed the birth children with various hereditary diseases extragenital disease the mother at the development of congenital abnormalities(anemia, nephropathy, gynecological disease), pregnancy (toxemia, preeclampsia) strongly influenced by health children [27].

Maternal related disease during pregnancy

If pregnancy complicated complications (the risk of miscarriage, toxicity in pregnancy) or if the child he was born with asphyxia, congenital defects, was detected, the risk of birth defects in 2.0 times higher than in children with normal pregnancy and uncomplicated childbirth [14].

The age of the mother at the time of delivery

According to the study, 60% of children were born mothers in age 20-29 years, and 34% of mothers at the age of 30-39 years, and 2% of children born from mothers in the age 40 years and older.

Education parents medical knowledge is great value in a healthy the birth of children their correct care and education. In the study level of education mothers were marked with the following results: 30% with higher education, 60% with an average special education 10% with an average education [17].

Health, including the health of the fetus and child, is an integral quantity, determined by a number of objective factors that are not dependent on human influence and are related to its activities. The first unrelated factors are the genetic code of the developing organism, which determines the following vital parameters: sex, growth and physical development rates and levels, "binding" periods and activity of key enzyme processes in the body, morphological and functional functions of tissues, organs and systems. The rate and level of maturation, the level and quality of the interaction of the body's control mechanisms, the basis of the fetus's response to external traumatic influences, as well as metabolic and adaptive to non-pregnant life in the first hours, days and weeks of life and adaptive mechanisms, later pathological conditions, and genetically related conditions that lead to disease [12,21,30].

The second group of factors relates to factors whose impact is related to human activity and can be conditionally divided into non-medical and, in particular, medical types.

Non-medical factors include social, societal, social, religious, spiritual, and environmental factors that affect the developing fetal organism and the newborn organism. Their influence is realized through the body, psyche, perception, lifestyle and activities of the woman.

Depending on the situation, this condition can mitigate and even flatten the negative impact on the fetus and child, as well as increase and significantly increase its impact. It should be noted that in addition to environmental influences, these factors, which have nothing to do with biology and medicine, still have a large biological effect, because the child undergoes processes of high intensity: growth, development and perfection, a new form of human existence as well as cases of reconstruction, which are very important in terms of their level and importance, and so on. Therefore, their medical and non-biological nature is characterized by impaired growth and development of the fetus, impaired organ and tissue maturation, normal management processes in the body, the formation of adaptive mechanisms for survival outside of pregnancy and their effects. Thus, non-medical adverse factors affecting the health of the fetus and newborn are considered to have genetic and, in particular, biological effects no less than medical factors. Understanding this situation by each individual, the whole society and the state creates new opportunities to improve the quality of health not only of fetuses and newborns, but also of the population of the whole country. This problem is undoubtedly of independent political and state importance.[6,15,22,29]

Second, medical factors include women - maternal pathology, pregnancy, obstetric pathology, diseases acquired during pregnancy (fetal diseases), neonatal diseases, and the quality of medical care for women, fetuses, newborns. All these factors primarily affect the growth, development and improvement of the fetal organism in order to realize one of the most important functions of the human body - an independent and full life outside of pregnancy.

Obviously, the health of the fetus and newborn does not depend solely on any cause or factor, so it cannot be the sole concern of the parent, only the family, only medicine or society or the state. Their mutual harmony is necessary for the normal development and health of a person.

Nowadays, the importance of fetal pathology leading to impaired or impossible adaptation of the child to life outside of pregnancy is clearly increasing. These problems include immunosuppressive pregnancies, congenital infections, respiratory distress syndrome, and developmental defects. The nervous, endocrine, and immune systems of the fetus and newborn are immature and, accordingly, the most inefficient in the implementation of adaptive mechanisms. It is their functional deficiency that sometimes serves as a starting point in the formation of pathology. These deviations are the basis for the formation of functional disorders and diseases. There is a fairly clear link between the physical development of the fetus and genetically related factors and the risk of developing various pathological conditions.

For example, chromosomal aberrations in children with delayed gestational development occur in 7% of cases (2 times more than in healthy newborns), while developmental defects occur in 11% and 5% in healthy newborns, respectively. These data require attention to be paid to human development during pregnancy. At the present time, there is a need to create a State National Program aimed at building and assessing the quality of fetal and child health in the new millennium. This situation can be a serious basis for predicting the formation of the nation's health, determining the priorities for the development of science and applied medicine.

Analysis of local and foreign literature shows that changes in the chemical composition of the human environment are one of the main causes of birth defects in children.

There are currently more than 500 substances that have a teratogenic effect. These include substances with different chemical composition: ethanol, testosterone, lead, chloroprene, mercury, ethyleneamine, benzene, most pesticides, sulfur carbon, poor quality tumors, and even some of the anti-diabetic drugs, even vitamin D. Hybridization of representatives of one species belonging to populations adapted to different natural conditions has been proven to lead to high mortality of the offspring, its high incidence of malignant tumors and other undesirable complications, including developmental anomalies. Such effects can often be explained by the adaptive nature of organisms in different environmental conditions[10,11].

Identifying the causes of developmental anomalies and the emergence of various diseases at this or that stage of human life has led to the conclusion that there are sensitive periods in human life to various factors and substances: The first and most important period is the period before egg fertilization . For at least 3 months (depending on the dose under the influence of ionizing radiation - several years) it is necessary to prevent the entry of substances with teratogenic properties into the body of the mother and father of the future child. The second period is the period of embryogenic development. During this period, especially in the 2-3rd week of pregnancy (when organogenesis is active, ie the period when the foundation is laid for various organs and systems of the body), the fetus becomes very sensitive). For example, 300,000 nerve cells are formed per minute. Naturally, the organ most active in cell division during exposure to a teratogenic substance is more likely to develop anomalies.[1,3,13]

Congenital malformations include serious changes in children's health that significantly affect their morbidity and mortality.

In recent years, there has been an increase in the incidence of this type of pathology among children and adolescents. In this case, despite the development and improvement of medical science, the number of primarily detected congenital anomalies among the population over 17 years of age, i.e. in the group of adolescents and adults, did not decrease, but increased by 1.1%. There is a tendency to increase infant mortality from congenital anomalies. Areas with low rates of frequency of this pathology are bordered by regions with high rates of them. Questions arise about the reasons for these discrepancies, the completeness and quality of the diagnosis, and the primary accounting and collection of data. In addition, given the diversity of natural and socio-economic characteristics of the regions, the influence of environmental factors on the formation of congenital malformations is of interest [6,8,16].

It is known that alcohol serves as a direct cause of every tenth embryonic pathology. For every 10 mentally immature children, 5 were born to pianist parents. Analysis of the questionnaires showed that 5.3% of mothers and about 50% of fathers smoked alcohol, 6.6% of mothers and 61.7% of fathers smoked. Mothers of children with congenital malformations were more likely to have anemia, pyelonephritis, cardiovascular disease, as well as pathology of the thyroid gland, measles and venereal diseases. 53% of women had a history of somatic diseases, 26.3% had gynecological diseases, and in this regard, 50% of women used drugs, including several drugs at the same time. Prior to pregnancy, 37.4% of women and 33.4% of women during pregnancy were exposed to harmful occupational conditions[7,12].

Detection

Health care before and around the time of conception (preconception and periconception) includes basic reproductive health practices, as well as medical genetic screening and counselling. Screening can be conducted during the 3 periods listed:

Preconception screening can be useful to identify those at risk for specific disorders or at risk of passing a disorder onto their children. Screening includes obtaining family histories and carrier screening, and is particularly valuable in countries where consanguineous marriage is common.

Peri-conception screening: maternal characteristics may increase risk, and screening results should be used to offer appropriate care, according to risk. This may include screening for young or advanced maternal age, as well as screening for use of alcohol, tobacco or other risks. Ultrasound can be used to screen for Down syndrome and major structural abnormalities during the first trimester, and for severe fetal anomalies during the second trimester. Maternal blood can be screened for placental markers to aid in prediction of risk of chromosomal abnormalities or neural tube defects, or for free fetal DNA to screen for many chromosomal abnormalities. Diagnostic tests such as chorionic villus sampling and amniocentesis can be used to diagnose chromosomal abnormalities and infections in women at high risk.

Neonatal screening includes clinical examination and screening for disorders of the blood, metabolism and hormone production. Screening for deafness and heart defects, as well as early detection of congenital anomalies, can facilitate life-saving treatments and prevent progression towards some physical, intellectual, visual, or auditory disabilities. In some countries, babies are routinely screened for abnormalities of the thyroid or adrenal glands before discharge from the maternity unit.

Prevention

Preventive public health measures work to decrease the frequency of certain congenital anomalies through the removal of risk factors or the reinforcement of protective factors. Important interventions and efforts include: Based on this, is prevention and early detection congenital anomalies in institutions primary health help identifying the leading factors risk flash disease system the approach to prevention diseases increase quality of life and quality of life of the population. The role of nursing nurses in ensuring the closest and direct communication with the population working doctors.

General practice institutions primary medical assistance is important to implement the above.

Patronage is form work treatment-and-prophylactic institutions the main objectives of which are holding home health and preventive events introduction the rules of personal hygiene and improvement sanitary conditions in the home. Especially widely patronage is used in institutions maternity and childhood, some the dispensaries. Is doctors, precinct (nursing) sisters baby clinics, dispensaries and rural medical plots by paramedics and midwives women's clinics and midwifery points.

Patronage pregnant - composite part of the system dispensary observations for pregnant woman, the purpose which is implementation complex events directed on the formation, save and strengthening the health of the mother warning development she diseases and complications pregnancy early detection, treatment and the provision of conditions for normal the development of the fetus [7].

- ✚ ensuring adolescent girls and mothers have a healthy diet including a wide variety of vegetables and fruit, and maintain a healthy weight;
- ✚ ensuring an adequate dietary intake of vitamins and minerals, and particularly folic acid in adolescent girls and mothers;
- ✚ ensuring mothers avoid harmful substances, particularly alcohol and tobacco;

- ✚ avoidance of travel by pregnant women (and sometimes women of child-bearing age) to regions experiencing outbreaks of infections known to be associated with congenital anomalies;
- ✚ reducing or eliminating environmental exposure to hazardous substances (such as heavy metals or pesticides) during pregnancy;
- ✚ controlling diabetes prior to and during pregnancy through counselling, weight management, diet and administration of insulin when required;
- ✚ ensuring that any exposure of pregnant women to medications or medical radiation (such as imaging rays) is justified and based on careful health risk–benefit analysis;
- ✚ vaccination, especially against the rubella virus, for children and women;
- ✚ increasing and strengthening education of health staff and others involved in promoting prevention of congenital anomalies;
- ✚ screening for infections, especially rubella, varicella, and syphilis, and consideration of treatment. [7].

Conclusions

Medical the patronage of children the first month life and future observation with performs pediatrician rural medical station, remote areas pediatrician visiting medical brigade of the Central district hospital.

Experienced and trained the nurse may become not only assistant the doctor in the treatment children, but also the main help families in the organization care, nutrition, control physical and psychomotor development of the child, training conduct correctional events at various border and functional States peculiar children first months of life.

Unprofessional nursing care in the postoperative period can cause an increase in its duration and lead to an adverse outcome. Inattentive attitude to the first deviations in the condition of children in the period after surgery can sometimes cost the patient's life. The main role of managing the postoperative period belongs to the nurse, who not only performs timely doctor's appointments, but also takes care of children. The nurse is constantly in the patient's room, so most often notices the slightest changes in his condition and is sometimes forced to independently provide first aid. The duty nurse also includes training in rules of care for the patient and his family members. Let's consider the features of nursing care in the postoperative period for children with congenital malformations of the maxillofacial region. [7].

Medical nursing service plays an important role the protection of the health people, prevention diseases and the protection of the health our people. Many medical and social problems in the society will prevented if the work in this direction will be for the necessary level. In particular, will be achieved significant results in the prevention maternal and infant mortality a sharp decline in congenital anomalies, making decisions about healthy lifestyle in society. So it will be developed a plan to raise nursing service on the new level based on such an important criteria.

At to him, now patronage the work will be in three stages. On the first stage the population examined every six months. It determines the segment of the population, need in philanthropic support. On the second stage in people's homes will be organized targeted nursing events with the participation of nursing nurses doctor total practices and specialists. It covers lonely elderly people in need in the waiting room family, disabled and others in need care, children in the age of 1 year and persons with disabilities pregnant women new mothers. Target patronage organized every week in accordance with a certain plan.

In organization the third stage patronage events staff primary health aid direct help scientists regional and national medical institutions and specialized research centers. Now time event is monthly and covers patients with chronic diseases in need in a specialized medical help. According to from disease outpatient or stationary treatment is provided in the district, regional and national institutions. Nursing nurse regularly works with pregnant women to provide information on the origin congenital the anomaly and its prevention.

Development phased integrated system approach to primary secondary and tertiary stage; to establish program to the algorithm events early identifying and prevention congenital anomalies and give practical recommendations on the formation of the population skills healthy lifestyle; identification risk groups population which allows to conduct a comprehensive the assessment of the degree risk factors influencing the formation of polar anomalies in activities family health clinics.

List used sources

1. Congenital anomalies/ <https://www.who.int/health-topics/congenital-anomalies>
2. Ingrid Lobo, Ph.D. (Write Science Right) & Kira Zhaurova, M.S. (Nature Education) © 2008 Nature Education Citation: Lobo, I. & Zhaurova, K. (2008) Birth defects: causes and statistics. Nature Education 1(1):18 Birth Defects: Causes and Statistics
3. Mirzarakhimova K.R., Nurmamatova K.Ch., Abdashimov Z.B. Изучение статистики врожденных аномалий/«ВЕСТНИК НАУКИ» № 12 (21) Том 4 ДЕКАБРЬ 2019 г. 207-215 стр. <https://www.xn----8sbempclcwd3bmt.xn--p1ai/archiv/journal-12-21-4.pdf>
4. Rizaev JA, Nurmamatova Q., Dismukhamedov D.M., Mirzarakhimova K.R. The distribution of congenital anomalies among children/ http://tsdi.uz/journals/stom/stoma_jurnal_9.pdf
5. ¹²³⁴Wei Cui, Chang-Xing Ma, Yiwei Tang, e.a. (2005) Sex Differences in Birth Defects: A Study of Opposite-Sex Twins. Birth Defects Research (Part A) 73 p. 876-880.
6. Received the data are consistent with the results research Kozlova V. I. et al. (1995)
7. Mirzarakhimova K.R., Nurmamatova K.Ch., Turaxanova F.M., Abdashimov Z.B. Causes of congenital anomalies in children and the role of nursing in it. The american journal of medical sciences and pharmaceutical research/ <https://doi.org/10.37547/TAJMSPR/Volume02Issue07-09>
8. Мирзарахимова К.Р. Распространенность врожденных аномалий у детей: факторы риска и роль патронажной медсестры в их предупреждении “Медицинская сестра” Научно-практический журнал №5 41-48 бет <https://medsestrajournal.ru/ru/25879979-2020-05-08>
9. Medical management, optimization and improvement of the healthcare system in Uzbekistan Mirvarisova L.T., Nurmamatova K.Ch., Mirzarakhimova K.R. http://tsdi.uz/journals/stom/stoma_jurnal_8.pdf <http://dx.doi.org/10.26739/2091-5845-2018-1-27>
10. Rare form aneurysms aortic arch V. Arakelyan, N. A. Gidasov, V. G. Papitashvili Patologiâ Krovoobrašeniâ i Kardiohirurgiâ. 2016; 20(4):16-25 DOI 10.21688/1681-3472-2016-4-16-25
11. The phenomenon child disability in context quality life population Olga Nikolaevna Potapova Sovremennye Issledovaniâ Social’nyh Problem. 2015; 0(4):524-536 DOI 10.12731/2218-7405-2015-4-46
12. Ebstein's anomaly in children: A single-center study in Angola Valdano Manuel, Humberto Morais, Manuel Pedro Magalhães, Maria Ana Sampaio Nunes, Gilberto Leon, Manuel

- Ferreira, António Pedro Filipe Júnior *Revista Portuguesa de Cardiologia*. 2015;34(10):607-612
13. Mirzarahimova K. R., Nurmatova K. H, Prevention of dental diseases in women during pregnancy, *Medicine tomorrow day Materials XVI международной scientific-practical conference students and young scientists*. 2017, Chita. 414-415с
 14. Medical Thesis <http://medical-diss.com/medicina/vzaimodeystvie-semi-i-meditsiny-v-sovremennom-obschestve#ixzz6IirD509q>
 15. Atoev M. A. The impact of environmental environmental factors the development dental abnormalities in children and development treatment-and-prophylactic events (for example, Mr. Zarafshan and Bukhara) abstract. dis. kand. med. Sciences :14.00.21 / M. A. Atoev; MOH of RUz, Tashkent Medical Academy. – Tashkent 2007 – 19
 16. Masharipova R.Yu., Khasanova G.M. *Повышение двигательной подготовленности студентов-стоматологов в процессе учебных занятий физической культурой // Vestnik nauki*. Issue №3 (24) 2020g. RF, Tolyatti
 17. Masharipova R.Yu. *Повышение специальной двигательной активности студентов-стоматологов // Научно-теоретический журнал «Наука, образование и культура»*. № 8 (52) .2020
 18. Sherkuzieva GF, Turakhonova FM, Mustanov J.A. / Results of laboratory research of the quality of drinking water / Tomsk, 2017. <https://moluch.ru/archive/135/>
 19. Mirzarakhimova K.R, Nurmatova K.Ch. «Prevention of dental diseases in women during pregnancy» *Медицина завтрашнего дня Чита, 18-21 апреля 2017* URL: https://www.elibrary.ru/ip_restricted.asp?rpage=https%3A%2F%2Fwww%2Eelibrary%2Eru%2Fitem%2Easp%3Fid%3D29860094
 20. Integrated the study of the state of health forecasting risk factors and development multilevel program prevention child disability. *Article Research journal No. 15 (95). "Young a scientist."* Moscow, Kazan. August 1, 2015.-Page 283-287.
 21. The volume samples for populationage study urological morbidity. *Article. Experimental and clinical urology № 1. Moscow-2015. -C. 1-5.*
 22. K.R. Mirzarakhimova, K.C. Nurmatova *Prevention Of Dental Diseases In Women During Pregnancy Medicine tomorrow day*, 418-419
 23. Mirzarakhimova K.R. Nurmatova Q.Ch, Turakhonova F.M. *South Asian Journal of Marketing & Management Research (SAJMMR)* <https://saarj.com> 82-89 бер 10.5958/2249-877X.2020.00074.0
 24. D.A. Kasimova, K.R. Mirzarahimova *Factor of diet in the development and prevention congenital anomalies TA-nabedrennik joints. Muharrir the Minbariuu VA Etisalat*
 25. Mirzarahimova K. R. *Electromyography as a method functional diagnosis dental anomalies III international youth scientific-practical forum "Medicine the future: from development to application" dedicated 75th anniversary Orenburg state medical University*. 508 article.
 26. Mirzarakhimova K. R. *Congenital dent facial anomalies. I- international scientific-practical Internet conference "Actual questions medical science in XXI century"* 219-223 St
 27. Mirzarahimova K. R. *To learn statistics congenital dental anomalies I- international scientific-practical Internet conference "Actual questions medical science in XXI century"* 152-157сt
 28. Mirzarahimova K. R., Nurmatova K. CH, *The prevalence dental diseases mouth among pregnant women. "ACTUAL PROBLEMS OF MODERN DENTISTRY" Samarkand medical Institute, 2017*

29. Mirzarahimova K. R., Nurmamatova K. CH, the question on the prevalence functional disorders dental system in children, XII International (XXI All-Russian)Pirogov scientific medical conference students and young scientists Moscow, 2017 120 c
30. Abdurashitova Sh. A., NurmamatovaK.Ch.Primeneniye proektnogo obucheniya pri provedenii prakticheskix zanyatiy po obshchestvennomu zdorovyu i upravleniyu zdravooxraneniem // Vestnik Nauki i Tvorchestva. №3. 2016. - URL: <https://cyberleninka.ru/article/n/primeneniye-proektnogo-obucheniya-pri-provedenii-prakticheskix-zanyatiy-po-obshchestvennomu-zdorovyu-i-upravleniyuzdravooxraneniem/viewer>