TREATMENT OF DEVELOPMENTAL DEFECTS AND HEALTH STATUS OF POST-TERM INFANTS

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ANNOTATION

In newborns with prolonged pregnancy, perinatal damage to the central nervous system (CNS) is observed. In children born to women with a truly post-term pregnancy, there is a high incidence of respiratory diseases, allergic dermatitis, and pathology of the central nervous system.

Keywords: post-term infants, perinatal lesion, treatment, prevention.

INTRODUCTION

Background: At present, it is believed that the ontogenetic process in children is closely related to the peculiarities of intrauterine development, the timeliness of childbirth and the condition of the newborn at birth. According to the recommendations of the International Association of Obstetricians and Gynecologists (FIGO) and the American Society of Obstetricians and Gynecologists (ACOG), pregnancy of 42 weeks or more is defined as over-worn[1,3,5]. In the practice of domestic health care, a post-term pregnancy is considered to be a pregnancy for a period of more than 287 days, when the fetus has signs of biological overmaturity; A pregnancy of more than 287 days, proceeding without complications and ending with the birth of a healthy child without signs of post-term pregnancy, is considered a physiological condition aimed at carrying the fetus. It should be noted that "... Specialists of the Royal Society of Obstetricians and Gynaecologists, when diagnosing a post-term pregnancy, do not take into account the condition of the newborn child, but the achievement of a gestational age of 41 weeks. The number of post-term pregnancies ranges from 0.4% (Austria and Belgium) to 5.5–7.0% (Denmark and Sweden) and the Americas. In Russia, this figure is in the range of 1.4–16.0% ..."[2,6,7]. Despite the fact that the relationship between the development of post-term pregnancy and environmental factors, daily routine, and the nutritional status of mothers and children has been considered in the works of a number of scientists, it has not yet reached its full disclosure. The development of preventive measures and effective methods of treatment of pathological conditions that may occur in children born preterm in the future as a result of aspiration, ingestion of myconium fluid, the development of sepsis and hypoxic-ischemic encephalopathies is one of the urgent problems of modern medicine [8,9,10].

The aim of the study is to improve the hygienic features of treatment and prevention of health disorders and malformations of children born prematurely.

RESEARCH METHODS

Analytical, hygienic, instrumental, biochemical, clinical and statistical research methods were used to improve the hygienic features of treatment and prevention of health and malformations of post-term children, as the main group (226 children) were taken children born preterm and

treated in the Department of Children's Diseases of the Multidisciplinary Clinic of the Tashkent Medical Academy. The control group consisted of 68 healthy children. The total number of children under observation was 294.

The subject of the study was the level of development status of post-term infants in the ontogenetic process, their anthropometric parameters after birth (height, body weight, chest circumference), health status and medical history of children, risk factors affecting health, and the results of blood tests.

RESULTS AND DISCUSSION

A detailed description of the objects, subjects and methods of research is given. The research was carried out on the basis of the research plan of the Department of Child and Adolescent Hygiene and Food Hygiene of the Tashkent Medical Academy To conduct the dissertation research, children born prematurely, who are on inpatient treatment in the Department of Pathology of Newborn Children of the Multidisciplinary Clinic of the Tashkent Medical Academy, served under supervision. Age gradation of children The study and control groups are presented in Table 1.

METHODS OF STUDY EVALUATION

The analysis of the results of referral and in-depth medical examination of children born preterm, as well as their diseases, was carried out on the basis of the International Classification of Diseases ICD-10 (1993).

Specialists such as a paediatrician, neurologist, otolaryngologist, ophthalmologist, endocrinologist, hematologist and orthopedic surgeon were involved to ensure a quality medical examination.

To ensure the quality and accuracy of the results of the research, children born within five years of age were taken under observation. The health groups of each child were determined on the basis of the data of the preventive examinations performed.

Table 1 Distribution of children included in the study

Years	A group of post-term babies			Control group		
	altogether	Boys	Girls	altogether	Boys	Girls
2016	16	12	4	11	5	6
2017	26	16	10	12	6	6
2018	45	26	19	11	5	6
2019	44	27	17	12	6	6
2020	46	27	19	11	5	6
2021	49	25	24	11	5	6
Altogether	**226**	**133**	**93**	**68**	**32**	**36**

The physical development and health status of the children were assessed based on the results of the analysis of the data of the card (reporting form 026), and the general development of the child was assessed according to the data of the card (reporting form 112).

Physical development standards of post-term infants [WHO, 2007] were assessed based on somatometry data (height, body weight, chest circumference); The use of anthropometric

methods to assess the indicators of physical development of children served to clarify the results of the study.

Of particular importance in assessing the harmonious development and micronutrient status of children is the quality of nutrition, a comparison was carried out in accordance with the materials and indicators specified in the relevant regulatory documents.

Health status and risk factors influencing the health status and development of post-term infants were assessed by the odds ratio Mamatkulov B.M. (2013). The relationship between cause and effect was investigated using the "Case-Control" research methodology. At the same time, 2 groups were taken: the main group (sick children) and the control group (healthy children), the state of health of which was analyzed retrospectively. For data analysis, a four-cell table is used using the "Case-Control" research method. In the Case-Control study method, the odds ratio (OR) is considered.

Health status and risk factors influencing the health status and development of post-term infants were assessed on the basis of the SF-36 questionnaire.

The SF-36 study was conducted to examine the quality of life of mothers of preterm babies by selecting (100) women who gave birth late at term and (100) women who gave birth at term and comparing them with each other. The SF-36 (Medical Outcomes Study Short-Form 36) questionnaire is a widely used standardized questionnaire for assessing the quality of life of the population, which helps most patients to assess various aspects of their life during the disease. To study women's quality of life on the SF-36 questionnaire, each question was scored and calculated separately for each scale. For the overall assessment of women's quality of life, questions were asked on 8 scales. These questions included scales that assessed the following factors: 1) physical activity (PF); 2) based on the role of physical activity in a person's life (RP); 3) Pain Scale – (BP); 4) general health – (GH); 5) Viability Scale – (VT); 6) a scale reflecting social activity – (SF); 7) a scale based on the role of psycho-emotional activity in a person's life – (RE); 8) mental state (MN).

The concentration of hemoglobin in the blood was determined according to a standard method on a semi-automatic biochemical analyzer "CYANSmart" with software (Cypress Diagnostics, Belgium), hematocrit was determined on a centrifuge (Cypress Diagnostics, Belgium), the number of erythrocytes was determined in the Goryaev chamber.

Statistica for Windows 7.0, a package of applications for personal computers was used for statistical processing of the study results.

It is shown that from year to year the birth rate of children increases sharply in comparison with the birth rate in other developed countries. The results are presented in Table 2.

From the data presented in Table 2, it can be seen that the birth rate in our republic in 2016 amounted to 726,170 newborns, in 2020 - 905,211 newborns, and in 4 years the birth rate increased by 24%. From the above data, it can be seen that in the city of Tashkent this figure increased by 43.6%, and in the Tashkent region - by 27.0%.

Table 2 Number of children born by region by year, stat.uz

Area	2016	2017	2018	2019	2020	2021
Uzbekistan	726170	715519	768520	814 960	841817	905211
Tashkent city	43879	43150	45548	50285	54401	63034
Tashkent region	57190	54794	59300	64086	65 954	72659

According to information received to date, more than a million babies are born every year. For example, in 2022, 932,200 babies were born in a single year. One of the priorities of State policy is the improvement of their health status, the medical care provided, the improvement of living conditions and upbringing, and the provision of harmonious development.

Table 3 Morbidity rates of newborns hospitalized in the neonatal pathology department of the multidisciplinary clinic of the Tashkent Medical Academy (per 1,000 children)

Years	Number of newborns treated	Absolute number of diseases	Index
2016	1258	115	9,14
2017	1392	108	7,76
2018	1418	120	8,46
2019	2511	118	4,71
2020	2511	100	3, 91
2021	2588	125	8,65

From the data presented in Table 3, it can be seen that during the hygienic analysis of the state of health and the level of morbidity in post-term infants, the number of children treated in the neonatal pathology department increased from 1,258 to 2,511, i.e. an increase of 9.9 per cent. This shows that this figure has doubled in five years.

In order to identify and compare risk factors affecting the growth and development of post-term infants, they were studied on the basis of the "Case-control" group in a ratio of 1:1 (100:100) and analyzed according to the gradation of risk factors. In the Case-Control study method, the odds ratio (OR) is considered. If the OR is 1.0, then there is no association between the disease (its consequence) and the risk factor being studied, if the OR is >1.0, then it indicates the presence of a correlation between the event and the risk factor.

The 15 most important risk factors were analyzed, and placental dysfunction had the highest odds ratio, with an OR of 4.8. It is known that placental dysfunction in pregnancy has the greatest chance of affecting the mental and physical development of babies born prematurely, resulting in developmental delays. This situation, along with a negative impact on the development of the fetus, causes a delay in childbirth, and after birth, it causes developmental delays due to the development of various diseases. Diseases of the endocrine system are among the diseases endemic to our region, including iodine deficiency, endemic goiter and diabetes mellitus. The index of endocrine diseases in pregnant women, that is, the odds ratio, was 4.40. The odds ratio for short births, i.e. 1 year to 2 years, was 4.40.

Molecular genetic studies are necessary to assess the possibility of transmission of hereditary diseases from parents. If a genetic study has not been performed, the odds ratio analysis can be performed based on the evaluation of the results of the questionnaires. In a comparative analysis of genetic predisposition, the odds ratio was 4.02.

Chronic iron deficiency anaemia is not only found in women of childbearing age, breastfeeding women and girls living in our region, but it is also common in developed countries. Recent data have shown that the prevalence of these diseases is more than 40%. Most of the cases of these diseases are related to diseases of the digestive system. In the presence of chronic iron deficiency anemia, the odds ratio was 3.92.

Pelvic inflammatory diseases in women are one of the main factors in post-term birth. In pelvic inflammatory disease, the odds ratio was 3.5.

Other risk factors are non-compliance with the criteria for a healthy diet, consumption of drinks with various synthetic compounds, irrational nutrition during pregnancy, consumption of fast food, consumption of sweets in childhood, toxicosis, overweight, obesity and postpartum obesity. The odds ratio for overweight and obese women was 3.07.

Inference.

Taking into account the analysis of the sharp increase in the number of children, in 2016 there were 726,170 children, and in 2020 this figure was 905,211, which shows an increase of 24% in 5 years. In turn, in the city of Tashkent, the growth was 43.6%, and in the Tashkent region, the number of newborns increased by 27.0%. Obviously, when more than a million children are born a year, the number of premature babies born increases dramatically.

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