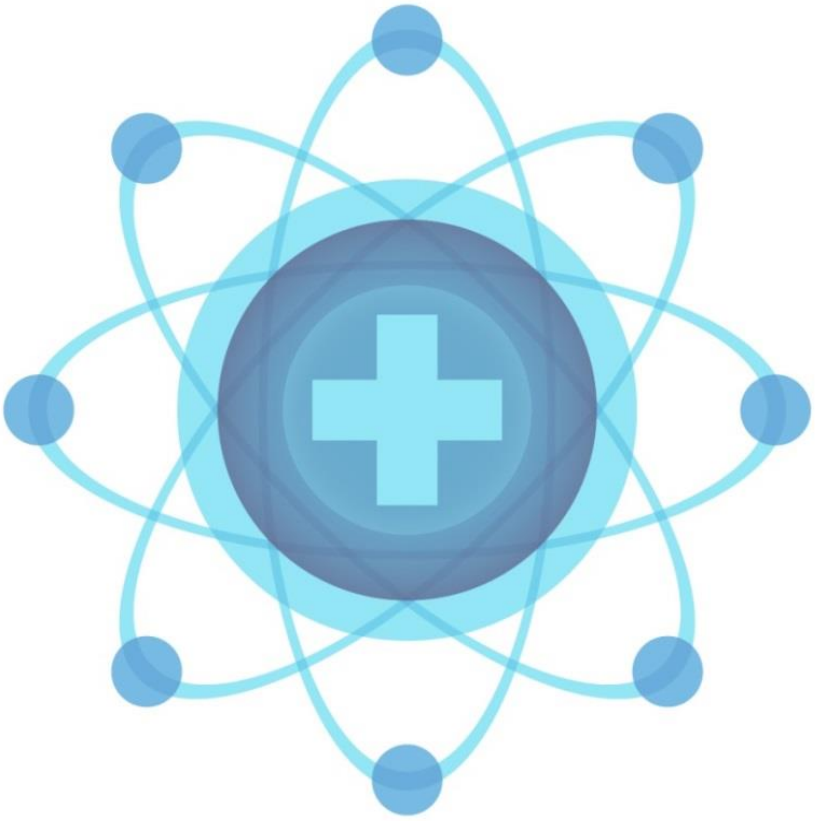

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HYGIENE ANALYSIS OF RISK FACTORS AFFECTING THE GROWTH AND DEVELOPMENT OF PRE-TERM CHILDREN

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Abstract: In the study, we assessed and analysed the quality of the implementation of a system of hygienic, preventive and therapeutic care aimed at preventing and reducing the role of risk factors affecting the growth and development of preterm children, according to the analysis and assessment of the odds ratio of risk factors in organising the conduct and implementation of primary and secondary prevention among family doctors at the primary care level. The odds ratios with higher risk factors included placental dysfunction (4.8), poor nutritional status during pregnancy, endocrine disorders (4.4) and anaemia (4.1), and genetic predisposition (4.02). Moderate risk factors were pelvic inflammatory disease (3.5), fetal abnormalities (3.1), overweight and obesity (3.07). Relatively low odds ratios included frequent childbirth (2.6), short birth intervals (2.15), age of the mother under 18 years (2.15) and first pregnancy in mothers aged 30 years (2.07), and, factors with lower odds ratios included repeated abortions (1.9) and early toxicosis (1.6). Therefore, comprehensive hygienic interventions are needed to correct growth and developmental abnormalities in preterm infants after birth.

Keywords: Postterm infants, risk factors, odds ratio, growth and development.

INTRODUCTION

Ensuring hormonal growth and development of preschool children of different ages is the basis of hygienic measures aimed at preventing various infectious and non-infectious diseases. Common consequences of preterm pregnancies include fetal macrosomia, labor complications, birth trauma, and an increased rate of cesarean deliveries. This causes children to develop pathological conditions in the early stages of development, growth and development are disrupted. Hormonal development of children is inextricably linked with its development in the mother's womb. Complications of preterm pregnancy include a high rate of reversal of gestosis, anemia, hypoxia, and fetal asphyxia, as well as complications during labor include premature discharge of amniotic fluid, labor force abnormalities, clinical narrow pelvis, hypotonic bleeding, fetal hypoxia and asphyxia, and fetal description of birth injuries is repeated in the works of several authors [10;11;12;15;16].

The American Association of Obstetricians and Gynecologists regulates the use of induced labor only in cases where the risk of labor resolution is low for the mother and the fetus in relation to prolongation of labor. According to the National Statistics Centers of America and Canada, the percentage of induced births in North America is more than 20%. In the Russian Federation, this indicator varies from 5% to 18% [13]. Pregnancy complications such as gestosis, fetoplacental insufficiency, rhesus-factor immunological incompatibility, preterm pregnancy rate, especially the large size of the fetus accompanied by the anatomical narrowness of the pregnant woman's pelvis can have an unpleasant effect on the health of the mother and baby. In this regard, in order to ensure safe motherhood, the birth of a living, healthy child,

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it is necessary to solve the issue of the need to solve childbirth before the due date in many cases. One of the possible solutions to this problem is induced labor.

Babies are characterized by higher birth weight and lower Apgar scores at birth. Preterm pregnancies are associated with a higher risk of both maternal and perinatal complications. In order to prevent these complications, it is necessary to induce labor after 41 weeks of gestation. Methods of diagnosing preterm pregnancy and determining the contingent of women for appropriate induced labor are still controversial [6;7].

In the growth and development of children, their development in the mother's womb, the length of the body at the time of birth, weight, head circumference, the formation of organ systems, the development of signs such as breathing, heartbeat in the future relative to the birth, and the importance of ensuring the hormonality of mental and physical development are mentioned in a number of scientific sources [1;9;12;14].

In preterm pregnancies, fetal growth interruption syndrome (FGIS) is 1.7 times more common than in term babies. At the same time, among children with various breathing and neonatal disorders in the early neonatal period, cases such as placental insufficiency, fetal hypotrophy of the I-III degree at birth, and the development of chronic hypoxia in the fetus are also reported.

Based on the data provided by A.A. Lodigina [2015], it can be seen from the analysis of the adaptation problem of children born prematurely that cases such as respiratory distress syndrome, spinal fracture, and hip dysplasia were noted among premature children [8].

According to the scientific research conducted by O.N.Novikova, L.R.Mustafina [2019], great attention is paid to the health status of babies in premature births, as well as to the future development of children. Preterm birth is considered a risk factor for the development of severe mental disorders, overweight and obesity in adulthood, especially in girls born after 43 weeks of age [6]. Russian scientists note that perinatal mortality in preterm pregnancies is 19‰, and neonatal morbidity is 29%, which is 6 times higher than in term pregnancies. Obstetrical tactics in preterm pregnancies allowed to avoid perinatal losses in complications of gestation, to reduce the number of births of children with an Apgar score of less than 7 by 4.8 times, to reduce hypoxic-ischemic damage of MAT by 11 times, and to reduce meconial aspiration by 5.4 times [13] .

The purpose of the study. It consists of a hygienic analysis of the effects of diseases and risk factors on growth and development in premature children.

RESULTS AND DISCUSSION

In order to identify and compare risk factors in the study, the risk factors affecting the growth and development of premature children were examined based on the "case-control" group in a 1:1 ratio (810:810) and were analyzed according to the gradation of risk factors. The "case-control" research method is one of the analytical research methods, and the relationship between the cause and effect under study is studied in relation to the effect. In this case, 2 groups: case (disease) and control

10.5281/zenodo.7308490
(healthy) group were taken, and they were retrospectively analyzed. As a result, the number of risk factors affecting the health status was analyzed.

A four-cell table is used for data analysis in the case-control research method [5].

We selected preterm children in the case group and term children in the control group. We studied the risk factors in these groups by means of a questionnaire and calculated the odds ratio.

Table 1

A four-cell table for data analysis in a case-control study

	The event	Control
The effect of the risk factor (there is)	a[1]	b[2]
Effect of risk factor (none)	c[3]	d[4]
	a+c [(5)]	b + d [(6)]

[1]–there is an effect of a risk factor in the anamnesis of the studied case group; [2]– there is an influence of the risk factor in the anamnesis of the studied control group; [3]– there is no influence of the risk factor in the anamnesis of the studied case group; [4]– there is no influence of the risk factor in the anamnesis of the studied control group; [5]– the total number of people in the case group; [6]– the total number of people in the control group.

In the "case-control" research method, the odds ratio-OR indicator is considered. If OR is equal to 1.0, it indicates that there is no connection between the disease (its consequence) and the risk factor under study, if OR>1.0, it indicates that there is a correlation between the event and the risk factor [5].

Hygienic analysis of the main risk factors for the health status of premature children is presented in Table 2.

Table 2

Odds ratio of major factors affecting preterm birth

№	**Risk factor**	**Risk factor gradation**	**Event group R1**	**Control group R2**	**P=P1/P2**	**ШН**
1	Mother's age is less than 18 years	Under 18	4,4	2,1	2,10	2,15
		childbearing age	95,6	97,9	0,98	1,00
2	Mother's age is over 30	Above 30	8,4	4,2	2	2,07
		Less than 30	92,7	95,8	0,97	1,00
3	Obesity	There is	12,1	4,3	2,81	3,07
		No	87,8	95,7	0,92	1,00
4	Inflammation of the Small pelvic	There is	12,5	3,9	3,2	3,5
		No	87,5	95,7	0,9	1,0

10.5281/zenodo.7308490

	organs					
5	Early toxicosis	Strong	33,1	23,4	1,4	1,6
		Didn't happen	66,9	76,6	0,9	1,0
6	High number of abortions	There were many	2,3	1,1	2,1	1,9
		Not much	88,4	79,6	1,1	1,0
7	Endocrine diseases	Available	6,4	1,5	4,3	4,40
		Does not exist	95,6	98,5	1,0	1,0
8	Hereditary predisposition	There is	5,4	1,4	3,9	4,02
		No	94,6	98,5	1,0	1,0
9	Dysfunction of the placenta	There is	6,4	1,4	4,6	4,8
		No	93,9	98,5	1,0	1,0
11	Defective development of the fetus	Available	32,5	13,1	2,5	3,1
		Does not exist	69,5	86,9	0,8	1,0
12	Anemia	There is	34,5	26,4	1,3	1,5
		No	65,5	73,6	0,9	1,0
13	Frequent births	There is	8,4	3,4	2,5	2,6
		No	91,9	96,6	1,0	1,0
14	Shortness between births (1-2 years)	Short	4,4	2,1	2,10	2,15
		Long (3 or more years)	95,6	97,9	0,98	1,00
15	Not eating healthy during pregnancy	There is	6,4	1,5	4,3	4,40
		No	95,6	98,5	1,0	1,0

Table 2 shows that 15 of the most important calculated risk factors were taken as the main factors. Factors with an odds ratio (OR) of less than 1.0 were not considered in the analyses.

If we divided those with the highest risk factor of odds ratio (OR) into those with a risk ratio of 4.0 and above, the average risk ratio of the risk factor was between 3 and 4. If the factors with a relatively low risk ratio of odds ratio (OR) were formed by factors in the ratio of 2 to 3, the values of factors with a low ratio of odds ratio (OR) were taken from 1 to 2 and analyzed hygienically, analytically and socio-hygienicly.

Placental dysfunction is one of the main risk factors affecting the health status of preterm children, and the highest odds ratio analyzed was placental dysfunction with an odds ratio of 4.8.

It's no secret that placental dysfunction during pregnancy has the highest chance of affecting the mental and physical development of children born prematurely as a result, development lags behind.

Diseases of the endocrine system are included in the group of diseases specific to our territory. Among the diseases of the endocrine system, iodine deficiency and

10.5281/zenodo.7308490
the resulting endemic goiter, infant mortality, stillbirth, spontaneous abortion, low birth weight, retardation of mental and physical development have been reported [4] .

According to the results of hygienic, epidemiological and clinical scientific studies carried out by researchers, endocrine system diseases occupy the second place after respiratory system diseases among different strata of the population living in our territory.

The next indicator of the conducted analyzes was diseases of the endocrine system in pregnant women, and their indicator, that is, the odds ratio was 4.4 0. Endocrine system diseases include iodine deficiency, endemic goiter and diabetes.

The population of our country is included among families with many children. Before independence, the number of deaths of mothers and children was considered to be extremely high, but as a result of the adoption and implementation of a number of laws, decisions, decrees and programs, after the years of independence, maternal, infant and child deaths have been significantly reduced compared to previous years. Despite this, iodine and iron deficiency cases, complications of frequent and short-term births, along with a number of changes are still reported among mothers and children [4,12;14;16].

The ratio of chances in the analysis of the results of the return of births that were short between births, i.e. more than 1 year and up to 2 years was 4.40.

Today, genetic studies are being carried out to assess the development of various somatic diseases and their risk factors, and the main indicators of genes are determined, and it is planned to carry out a number of preventive measures in this regard.

Hereditary predisposition is the main criterion for evaluating the transmission of various diseases from father or mother to child. It is appropriate to carry out genetic research in the scientific justification of the transmission of diseases in parents. If genetic research is not carried out, it can be justified by the odds ratio based on the questionnaire. In a comparative analysis of genetic susceptibility the odds ratio was 4.02.

Recurrent anemia, iron deficiency anemia among women in families, that is, women of childbearing age, lactating women and girls, not only in our region, but also among a number of women and mothers, girls and children in developing countries. Recent data have shown that the prevalence of this disease is more than 40%. Most of the vomiting is associated with diseases of the digestive system. The rate of recurrence of anemia was 3.92.

Inflammatory diseases of small pelvic organs in women are one of the main factors of premature birth. The main reasons for this may be the decrease in the ability of our girls to adapt to different climatic conditions, the narrowing of their pelvis, the failure to treat various inflammatory diseases in time, the failure to diagnose cervical diseases in time, and national traditions, early marriage, lack of sexual communication culture, and non-observance of hygienic skills.

In inflammatory diseases of the small pelvic organs, the odds ratio was 3.5. This ratio is also one of the high indicators.

10.5281/zenodo.7308490

Non-observance of healthy eating criteria, consumption of drinks with various synthetic compounds, poor nutrition during pregnancy, consumption of fas-futs, consumption of sweets during childhood, toxicosis, excess body weight, obesity and postpartum obesity are the next risk factors. The odds ratio for overweight and obese women was 3.07.

Most of the women in our study had frequent miscarriages. Women have reversed the process of carrying out successive pregnancies in a short period of time, not the full growth and development of children, this interval was up to 1 year. The odds ratio found in women in this condition was 2.6.

One of the main factors affecting premature birth is the age of the pregnant women or the mother is less than 18 years. This is one of the main factors that cause it today. Early marriage of our girls under 18 years of age, deficiencies in the body, early pregnancy, pelvic defects, excess body weight, lack of body weight in some situations, diseases of the genital area can cause fetal development and premature birth. The odds ratio of the risk factor for a pregnant woman under the age of 18 was 2.15. The sequence of the next odds ratio was determined by the age of the mother over 30 years, early toxicosis and the number of abortions.

In conclusion, it should be noted that the implementation of the hygienic, preventive and medical care system aimed at preventing the risk factors that have the main effect on the growth and development of children born after the term under control, and the implementation of measures for the systematic elimination of the identified cases should be carried out by family doctors at the primary level and it is desirable to achieve a reduction by implementing a systematic approach to the implementation of primary and secondary prevention among gynecologists. In order to reduce the influence of factors that can endanger the growth and development of premature children, neonatologists and family pediatricians can prevent the derailment of growth and development by developing a systematic procedure for their control.

CONCLUSION

1. Factors with higher odds ratios include placental dysfunction (4.8), poor nutrition during pregnancy, endocrine disorders (4.4) and anemia (4.1) and genetic predisposition (4.02). did
2. Factors with odds ratios with moderate risk factors included pelvic inflammatory disease (3.5), fetal malformation (3.1), and overweight with varying degrees of obesity (3.07).
3. Risk factors included in the relatively low odds ratio include frequent births (2.6), short birth intervals (2.15), maternal age below 18 years (2.15), and first pregnancy in mothers over 30 years old (2 ,07).
4. Factors with low odds ratio included high number of abortions (1.9) and early toxicosis (1.6).

10.5281/zenodo.7308490

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