metabolic disorders - 8.44 ± 2.07% (p <0.001) and neoplasms - 7.21 ± 1.93% (p <0.001). The share of these 5 classes of diseases is 84.69% of the total structure.

The frequency of determination of disability in children annually increases by +1.09 units with a growth rate of + 0.91% and a growth rate of 100.91%.

The incidence of diseases that caused disability in children was highest in the following classes: diseases of the nervous system - 42.06 ± 4.29 (p <0.001); congenital anomalies, chromosomal abnormalities - 29.57 ± 3.88 (p <0.001); diseases of the ear and its adnexa - 11.96 ± 2.69 (p <0.001); diseases of the endocrine system, eating disorders and metabolic disorders - 10.21 ± 2.51 (p <0.001) and neoplasms - 8.74 ± 2.33 (p <0.001).

A stable annual growth rate of children with disabilities at 4.52% suggests that the process will continue in the future.

Complex treatment carried out within the framework of individual programs for rehabilitation / habilitation of disabled children allowed to completely restore health in 43 children (4.77%), improve the condition - 52 (5.77%), stabilize the pathological process - 90.24%. Weight gain occurred in 4 people (0.44%) due to the progression of the disease.

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INTRODUCTION

The health of women and children is an important indicator of social development and reflects its socio-economic situation. The reduction in maternal and infant mortality rates is included in the main development goals identified by the United Nations [1]. In almost all countries with reliable information, premature birth rates are constantly increasing. This equally affects both rich and less affluent countries [2]. In 2012, Russia moved to the recommended World Health Organization criteria for childbirth, according to the Order of the Ministry of Health and Social Development of Russia №1687n dated December 27, 2011 «On medical birth criteria, the form of the birth certificate and the procedure for its issuance» (registered in the Ministry of Justice of the Russian Federation on March 15, 2012 № 23490) [3]. For the first time in the history of Russian medicine, the term of birth of 22 weeks of gestation and more is established; the body weight of the child at birth is 500 grams or more (or less than 500 grams for multiple births); the length of the body of the child at birth of 25 cm or more (in case the mass of the child's body at birth is unknown). Order of the Ministry of Health of the Russian Federation № 15-4-10 / 2-9480 of December 17, 2013 introduces a clinical protocol on management of early births [4]. In addition, the clinical protocol «Organization of medical evacuation with preterm birth» was developed and recommended for implementation from 21.09.2015. [5]. In each subject of the Russian Federation, monthly monitoring of the performance of these clinical protocols is carried out.

Objective: To analyze the frequency of premature births and very early premature births in the structure of all genera in the Republic of Sakha (Yakutia), to analyze perinatal mortality and its components.

Materials and methods of research. The analysis of the structure of births and perinatal mortality according to the official medical statistics of the State institution «Yakut Republican Medical Information and Analytical Center of the Ministry of Health of the Republic of Sakha (Yakutia)» for 2011-2016.

Results and discussion

According to the results of the analysis, it was shown that before the adoption of the «new live birth criteria», the share of preterm birth in the total delivery structure was 5.4% in 2011, in 2012 this figure rose to 6.9%. This increase of 1.5% is due to early premature births previously registered in the structure of late miscarriages in the period up to 28 weeks. In subsequent years, the proportion of preterm birth remains at the same level (2012 - 0.6%, 2013 - 0.5% 0, 2014 - 0.4%, 2015 -0.5% 2016 - 0.5%).

The frequency of preterm births in the RS (Y) in 2016 was 6.9% in the structure of all genera, early premature births of 0.5%, which is 5.8% and 0.4% higher than in the Russian Federation in 2016 (Table 1-5).

We analyzed the structure of genera in the fields of complex scientific research in the Republic of Sakha (Yakutia), from the group of Arctic district - Verkhoyansk and Eveni-Betantai, Central - Tattinsky and from the group of western district - Verkhnevilyui. In the Even-Bytantaisk district in 2011 there were only 6 births, and all of them are premature, in the following years the number of births is small, and all of them occurred on time. It should be noted that in the Verkhoyansk district the smallest premature birth is observed: in 2011 - 3 (2.02%) out of 148, in 2012 - 10 (0.62%) out of 161, in 2014 - 4 (2.56%) out of 156 in 2016 - 3 (2.6%) out of 115, which is much lower than the Russian indicators. During the entire period, very early premature births were not tolerated. In the Verkhne-Vilyui district in 2011, there were 14 premature births (3.7%) of 378 in 2012. As elsewhere, the increase was 16 (5%) of 338 cases and 1 case (0.26%) of very early premature births. In 2013 and 2014 the rate of early premature births is almost the same at 4% and 3.76%. In 2015 the proportion of premature births decreased 4 (1.6%) and 2 (0.8%) cases of very early premature birth occurred. In 2016 premature birth 4 (2%) and very early 1 (0.5%).

After the introduction of a clinical protocol on the routing of pregnant women with threatening premature births in 2016, 117 pregnant women with threatening premature births were transported in the Perinatal Center of RB № 1 RS (Y). Of the medical organizations of the second level - 58 women, which amounted to 49.57%, of the medical organizations of the first level - 59 women, which amounted to 50.42%. Due to timely routing, the proportion of premature births taken in the Perinatal Center RB № 1 RS (Y) increases annually. The proportion of premature births taken in the Perinatal Center of RB № 1-NCM was: in 2012, - 28.5%, in 2014. - 41.5%, in 2015. - 47%, in 2016. - 49.3% (Table 6).

Analyzing the structure of early premature births, we can note the following dynamics: in 2016 the proportion of early premature births in the perinatal center RB1 RS (Y) increased significantly: in 2012 - 23%, in 2013 - 23.7%, 2014 - 47, 9%,

Table 1

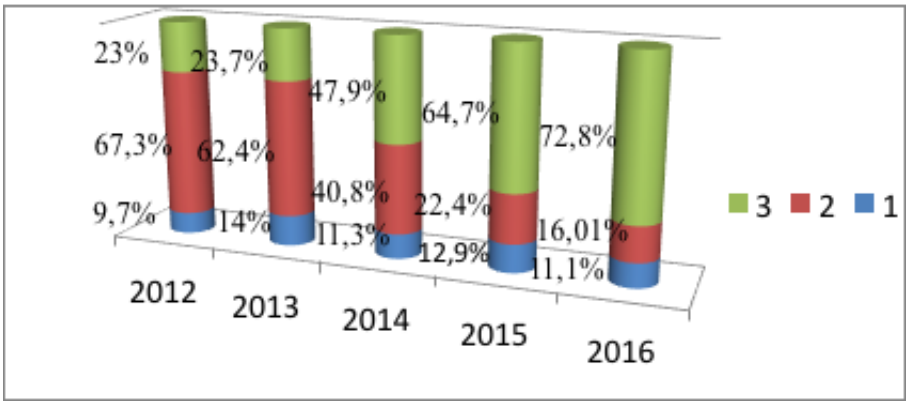
Premature births in the structure of all births in the RS (Ya) districts and the RF for 2011-2016, abs. number (%)

Births	RS (Ya)						RF
	2011	2012	2013	2014	2015	2016	2016
Total	16193	16922	16578	16948	16379	15425	1838559
Birth premature	884 (5,4)	1160 (6,9)	1078 (6,5)	1172 (6,9)	1159 (7,1)	1075 (6,9)	105995 (5,8)
Birth premature very early	-	112 (0,6)	93 (0,5)	71 (0,4)	86 (0,5)	84 (0,5)	8542 (0,4)
Verkhne-Vilyui district							
Total	378	338	299	266	245	201	1706656 (92,3)
Birth premature	14 (3,7)	16 (5)	10 (4)	10 (3,76)	4 (1,6)	4 (2)	105995 (5,8)
Birth premature very early	-	1 (0,26)	0	0	2 (0,8)	1 (0,5)	8542 (0,4)
Verkhoyansk district							
Total	148	161	140	156	133	115	1838559
Birth premature	3 (2,02)	10 (0,62)	7 (5)	4 (2,56)	4 (3)	3 (2,6)	105995 (5,8)
Birth premature very early	-	0	0	0	0	0	8542 (0,4)
Tattinsky district							
Total	262	263	236	224	205	182	1838559
Birth premature	8 (3)	5 (1,9)	5 (2,11)	11 (4,9)	11 (5,36)	4 (2,2)	105995 (5,8)
Birth premature very early	-	1	1	3	0	0	8542 (0,4)
Even-Bytantaisk district							
Total	6	8	2	1	3	3	1838559
Birth premature	6 (100)	0	0	0	0	0	105995 (5,8)
Birth premature very early	-	0	0	0	0	0	8542 (0,4)

Table 2

The frequency of premature births in the RS (Y) for 2011-2016 by groups of medical organizations

	2012	2013	2014	2015	2016
3 group	331 (28,5)	411 (38,1)	487 (41,5)	545 (47)	530 (49,3)
2 group	616 (53,1)	514 (47,7)	528 (45,1)	467 (40,3)	451 (41,9)
1 group	213 (18,4)	153 (14,2)	157 (13,4)	147 (12,7)	94 (8,7)
of all premature births	1160	1078	1172	1159	1075



The frequency of very early premature births in the RS (Y) for 2011-2016 by groups of medical organizations

Table 3

The structure of perinatal mortality in the RS (Y) districts and in the RF in 2011-2016 гг., ‰

Name	RS (Y)								RF
	2006	2010	2011	2012	2013	2014	2015	2016	
Stillbirth %0	6,3	5,2	5,4	8,4	5,22	6,4	6,5	6,4	5,73
Early neonatal mortality %0	5,2	2,9	3,0	4,6	4,5	3,2	3,4	2,5	2,8
Perinatal mortality %0	11,5	8,1	8,4	13,0	10,8	10,0	10,6	9,6	7,9
Verhnevilyui district									
Stillbirth %0	3,2	0	5,2	0	6,7	3,8	16,3	5,0	5,73
Early neonatal mortality %0	3,2	2,6	7,9	3,0	6,7	3,8	4,1	0	2,8
Perinatal mortality %0	6.4	2,6	13,1	3,0	13,4	7,5	20,3	5,0	7,9
Verkhoyansk district									
Stillbirth %0	0	18,6	0	24,8	7,0	12,8	0	0	5,73
Early neonatal mortality %0	0	4,7	6,8	0	14,2	0	7,5	0	2,8
Perinatal mortality %0	0	23,3	6,8	24,8	21,1	12,8	7,5	0	7,9
Tattinsky district									
Stillbirth %0	8,0	6,9	3,8	7,6	0	0	9,7	5,5	5,73
Early neonatal mortality %0	12,1	3,5	3,8	3,8	0	0	9,8	0	2,8
Perinatal mortality %0	20,0	10,3	0	11,4	0	0	19,4	5,5	7,9
Eveno-Bytantai district									
Stillbirth %0	0	0	0	0	0	0	0	3,3	5,73
Early neonatal mortality %0	0	0	0	0	0	0	0	0	2,8
Perinatal mortality %0	0	0	0	0	0	0	0	3,3	7,9

2015 - 64.7%, 2016 - 72.8%. The increase in this indicator was caused by the timely evacuation of pregnant women with very early premature births, who threatened very early on from the second level, whereas at the same level, these rates practically did not decrease in 2012. - 9.7%, 2013 - 14%, 2014 - 11.3%, 2015 - 12.9%, and in 2016 - 11.1%. (diagram 1).

Early neonates with «extremely low body weight» caused a sharp increase in perinatal mortality from 8.4% in 2011 to 13.0% 0 in 2012. This was due to an increase in the rate of early neonatal mortality in 2011 - 3.0% 0, 2012 - 4.6% 0, indicating a lack of timely routing of patients with threatening premature birth in a third-level hospital and inaccessible to intensive care units for admission and care for newborns deeply premature. In addition, there is a decrease in the level of early neonatal mortality (2013 - 4.5% 0, 2014 - 3.2%, 2015 - 3.4% 0, 2016 - 2.5% 0), which, in turn, decrease in perinatal mortality in the republic (in 2013 - 10.8% 0, 2014 - 10% 0, 2015 - 10.6% 0, 2016 - 9.6% 0). Nevertheless, perinatal mortality in the RS (Y) in 2016 is 1.7% higher than in the Russian Federation. (Table 7-11). A similar picture is observed for the regions under study.

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In the growth rate of perinatal mortality contributes to stillbirth, it is not only ante and intranatal loss of fruit, but the termination of pregnancy at a period of more than 22 weeks about congenital malformations of the fetus. Annually, this indicator has a significant part in the structure of stillbirth (2013г. – 1,08%0, 2014г. – 0,4%0, 2015г. – 0,7%0, 2016г. – 0,7%0). This is partly due to the untimely conduct of prenatal diagnosis of congenital malformations of the fetus. To date, the stillbirth rate in the RS (Y) has no tendency to decline and amounted to in 2011 – 5,4%0, 2012 – 8,4%0, 2013 – 6,3%0, 2014 – 6,8%0, 2015 – 7,2%0, 2016 – 7,1%0.

Thus, our analysis shows that only timely carrying out of such activities as pregravid preparation, full examination of a pregnant woman when registering for a dispensary record, accurate compliance with the terms of combined first trimester screening and prenatal ultrasound diagnosis (FMF certificates) can reduce the rate of preterm birth and stillbirth due to timely detection and termination of pregnancy with severe congenital malformation of the fetus. Also, the doctor's watchfulness, strict adherence to clinical recommendations (protocols of treatment) with preterm delivery and routing of pregnant women with threatening premature births, will allow to avoid

premature births at the first level, which is the main task facing the obstetrician-gynecological service of the Republic of Sakha (Yakutia) in 2017 .

The article was prepared based on the results of the project «Multivariate study of the health status of the indigenous and newcomers of the Republic of Sakha (Yakutia) with the aim of optimizing the regional programs to improve the quality of life of the inhabitants of the republic, taking into account territorial, ethnic characteristics in the conditions of modern socioeconomic development.» Programs of comprehensive scientific research in the Republic of Sakha (Yakutia), aimed at the development of its productive forces and social sphere for 2016-2020.

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THE STATE OF THE HYDROSPHERE AND MALIGNANT NEOPLASMS IN YAKUTIA

ABSTRACT

The analysis of hydrochemical factors of the environment with the purpose of finding out the degree of their influence on the incidence of malignant neoplasms of the population living in extreme conditions of the Far North has been carried out.

Keywords: neoplasms, hydrochemical factors of the environment, morbidity.

INTRODUCTION

Annually around 10 million new cases of malignant neoplasm (MN) and more than 6 million deaths from them are detected in the world [6, 7]. In Russia, the overall incidence rate of all forms of MN in men for 2001-2015 increased by 26.8% (from 313,90 / 0000 in 2001 to 398,10 / 0000 in 2015), and in women - by 32,6% (from 306,5 to 406,40 / 0000), and at the end of 2015, there were more than 3.4 million patients registered with specialized oncological institutions in the country with a diagnosed disease, which is 36.5% (over 1.24 million people) 2001 (2.16 million people) [4].

In the Republic of Sakha (Yakutia) (RS(Ya)) in 2015, 2528 people were registered, or 651 (25.7%) people. more compared to 2001 (1877 people). During this period of time, the number of males with the first diagnosis of MN increased by 22.8%, and in women - by 28.4%. The increase in the number of patients was accompanied by an increase in the proportion of people of older age groups, both in men and women.

In Yakutia, the beginning of the third millennium is characterized by a fairly high average annual rate of growth (2.15%) in the number of patients diagnosed with MN for the first time in their life, which was mainly due to relatively high rates of increase in the incidence of women (2.25%) , than for men (1.75%).

Meanwhile, for the analyzed period, according to the State Committee on Statistics RS(Y), in the population indicators there was a negative balance of the average annual number of the population (for men -0.30, and for women -0.05%). The increase in the number of people with a negative dynamics of the demographic situation testifies to the true nature of the growth of the indicators of cancer morbidity in the republic [3]. According to the WHO Committee on Cancer Prevention, 90% of tumors are associated with external causes and 10% depend on genetic factors (7).

A review of the literature on the microelement composition of soils and plants on the territory of the Republic shows that in general Yakutia is characterized by Mo, Se, B deficiency, with a relatively high content of Fe, Cu. In soils of natural forage lands (76%) and in arable (91%), alkaline and strongly alkaline environments predominate.In the valleys of the rivers Amga, Aldan, Vilyui, Lena, chloride-sulfate are common, and in chloride lands, chloride, sulfate, and hydrocarbonate types of salinity. Consequently, according to the physico-microelement composition of soils and plants, which are extremely important for the successful development of a living organism, the territory of the Republic of Sakha can be classified as anomalous geochemical provinces of the country [5].

The **aim** of the study is to assess the degree of influence of hydrochemical environmental factors on the incidence of disease in people living in extreme conditions of the North in the territory of intensive industrial development.

Materials and methods of research. The materials of reporting of the Yakutsk Republican Oncology Dispensary for the period from 2001 to 2015 were analyzed. Materials on the chemical composition of surface waters, presented by the Yakutsk and Tiksinsky territorial departments for hydrometeorology and environmental control, were used for the period from 1979 to 1985. Mathematical analysis 71,800 samples were sampled for each of 28 ingredients taken from 82 observation points for 1979-1985 located throughout the territory of the republic. The statistical data were processed according to the generally accepted methodology, using the «Statistical» software package (Table 1).

Results and discussion

Analysis of cancer morbidity in the