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THE ROLE OF EXTRAGENITAL DISEASES IN THE STRUCTURE OF MATERNAL MORTALITY

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ABSTRACT

In this paper, was analyzed the data of scientific research on the importance of extragenital diseases in the structure of maternal mortality. In the civilized world's countries, extragenital diseases occupy the first place among the causes of maternal mortality. According to the WHO and many scientists, among the deceased women in childbirth and puerperas, 37.9% died of extragenital pathology, of which 35.3% were respiratory diseases, 14.1% - diseases of the circulatory system, 7.0% - injuries and poisoning, 3, 5% - neoplasms, 2.4% each - some infectious diseases, congenital anomalies; 1.2% each - diseases of the nervous system, digestive organs, musculoskeletal system.

Of extragenital pathologies, chronic conditions etiologically unrelated to pregnancy are often found, such as cardiovascular diseases; systemic diseases of the connective tissue; bronchopulmonary diseases; digestive tract diseases; liver disease kidney disease chronic diseases of the blood system; diseases of the nervous system; diabetes and others.

Key words: pregnancy, childbirth, maternal mortality, extragenital diseases

INTRODUCTION

Based on an expert assessment of the causes of maternal mortality, they can be summarized as follows: 12-15% - severe extragenital pathology (diseases of the cardiovascular system, hepatitis, cancer, etc.), 25% - iatrogenic causes (errors in

diagnosis, obstetric tactics, intensive care); 60% - obstetric complications on a severe premorbid background [4].

From 2006 to the present, extragenital diseases have occupied a leading place in the structure of causes of maternal mortality.

Statistics in Russian Federation According to preliminary data, based on an analysis of reporting cards and explanatory notes of the chief obstetrician-gynecologists of the constituent entities of the Russian Federation on maternal deaths, in 2009 they died after an ectopic pregnancy - 3.1%, after an abortion - 17.1% , from complications of childbirth and the postpartum period - 61.9% of women from the total number of mothers who died, pregnant women died 18.3%.

Among the deceased women in childbirth and puerperal from extragenital pathology (excluding those who died of influenza A (H1N1), 37.9% died, of which 35.3% were respiratory diseases, 14.1% were diseases of the circulatory system, 7.0% were injuries and poisoning, 3.5% - neoplasms, 2.4% each - some infectious diseases, congenital anomalies; 1.2% each - diseases of the nervous system, digestive organs, musculoskeletal system.

The structure of maternal mortality in the world, determined by developing countries, has been very stable over recent years: among those who die every year, more than 500 thousand mothers, 80 thousand die of extragenital diseases [5]. In the Russian Federation, diseases that are not dependent on pregnancy and childbirth (extragenital diseases) have occupied 3-4 places in the structure of causes of maternal mortality for many years. With extragenital pathology, 17–20% of maternal deaths are associated. According to A.T. Egorova (2009), extragenital pathology ranks first among indirect causes, which makes the problem of maternal losses from somatic pathology super relevant.

In the world's civilized countries extragenital diseases occupy the first place among the causes of maternal mortality. Untimely diagnosis, underestimation of the severity of the condition at the time of diagnosis and the lack of awareness of specialists about the features of the course of pancreatitis in pregnant women are the main causes of maternal mortality in acute pancreatitis. A real reduction in this

indicator can only be achieved by healing sick women outside and during pregnancy [3].

An analysis of official data on maternal mortality according to the criteria of the International Classification of Diseases of the 10th revision and comparison with indicators in European countries and the USA shows that in the last 10 years, Russia has recorded a consistent decrease in the single maternal mortality rate: in 2005, 27.7, 2010 18.6, in 2013 12.9, in 2014 11.9, in 2015 10.7 and in 2016 8.3 per 100 00 live births. This was mainly due to a significant decrease in the proportion of obstetric losses and was due to the expansion of the network of well-equipped perinatal centers.

At the same time, stabilization of the share of extragenital causes was found. Among them, in 2014, diseases of the cardiovascular system (51.7%), respiration (29.8%), digestion, and other causes (18.2%) dominated. The demographic, socio-economic, medical conditions for the occurrence of extragenital causes are analyzed; they are compared with similar data in European countries and the USA. Recommendations on improving the pathological analysis of maternal mortality in Russia are presented. It is necessary to improve the pathological diagnosis of direct and indirect causes of maternal mortality, to ensure the quality and completeness of autopsies of deceased women [22; 1].

EGP of pregnant women is a large group of diverse and diverse diseases, syndromes and conditions, united only by the fact that they are not gynecological diseases or classical obstetric complications of pregnancy. The entire EGP of pregnant women can be divided into two categories: non-pregnancy and pregnancy-associated. In turn, the first group is divided into chronic (preexisting) and acute (first occurring during pregnancy, but outside the etiological connection with it) [21; 2].

Types of EGP not etiologically related to pregnancy include chronic non-pregnancy related conditions such as cardiovascular disease; systemic diseases of the connective tissue; bronchopulmonary diseases; digestive tract diseases; liver

disease kidney disease chronic diseases of the blood system; diseases of the nervous system; diabetes and others

Acute diseases include infectious diseases; pneumonia surgical pathology; hemoblastosis [6].

The main characteristics of EGP associated with pregnancy are the etiological association with gestation; conditionality of pathophysiological mechanisms inherent in pregnancy by physiological changes; temporary limited pregnancy, sometimes postpartum. Examples of pathologies in this group include gestational diabetes, obstetric cholestasis, acute fatty liver disease, peripartal cardiomyopathy, postpartum thyroiditis, and postpartum depression.

The situation in Ukraine shows that since 2004, the maternal mortality rate in Ukraine is unstable, which indicates the absence of control over this indicator by the health system. The share of EGP among the causes of maternal mortality over the past five years amounted to 34.1%. Cardiovascular diseases predominate in the nosological structure of EGP (40.3%), infectious diseases (24.7%) are in second place, and neoplasms are in third (14.7%). The remaining diseases account for 20.3%.

The most common cardiovascular causes of maternal loss are extremely high pulmonary hypertension; cardiomyopathy, including and peripartal; aortic aneurysm; cerebral aneurysms and arteriovenous malformations of cerebral vessels [10]. Among infectious lesions, in most cases, pneumonia, meningoencephalitis, HIV/AIDS, and tuberculosis lead to the death of a woman.

In the group of malignant neoplasms, the lethal outcome is more often caused by leukemia, myeloproliferative diseases, brain tumors, and cancer of a different location (breast, stomach, pancreas). Relatively rarely, maternal losses occur due to diabetes mellitus, pheochromocytoma, acute fatty degeneration of the liver, acute viral hepatitis, epilepsy, thrombotic thrombocytopenia, pancreatitis.

Based on many years of analysis of maternal deaths due to EGP, the following conclusions can be drawn. In most cases, women die for whom pregnancy was not contraindicated. The late appeal of pregnant women for medical help, especially

for respiratory infections, in many cases plays a decisive role. Medical errors, including nonfatal, occur in all cases. The most promising reserve for reducing losses is the persistent and systematic promotion of sanitary knowledge among women of reproductive age.

Increasing the doctor's personal responsibility for unskilled actions and tightening the certification system is a real way to improve maternal pregnancy outcomes. Regulatory support for the provision of highly specialized care for pregnant women in specialized hospitals, regardless of gestational age, is an urgent need in cases of extragenital pathology.

A healthcare strategy to reduce maternal losses should be to ensure high-quality pre-conceptual preparation of women with chronic EGP and a fundamental improvement in the organization of primary care for pregnant women.

EGP of the mother often and naturally affects the condition of the fetus. The most common causes of perinatal morbidity and mortality are diabetes mellitus, arterial hypertension, glomerulonephritis and other glomerulopathies, as well as cyanotic heart defects. Diseases of a woman often cause miscarriage and premature delivery [11].

The cause of prematurity is oncological diseases; progressive heart failure; high pulmonary hypertension; arterial hypertension, uncontrolled medication or with joined preeclampsia, as well as many diseases associated with pregnancy [12; 13].

Contraindications to gestation in case of chronic (preexisting) EGP are regulated by the Order of the Ministry of Health and the National Academy of Medical Sciences of Ukraine dated November 29, 2013 No. 1030/102 "On improving the system of family planning and reproductive health in Ukraine". The document reflects 60 somatic diseases and 14 mental disorders. In the department of internal pathology of the State Institution "IPAG NAMS of Ukraine" for two years a study was conducted of a questioning of puerperas who were discharged from the department with newborns. As a result of the study, it was found that termination of pregnancy for up to 12 weeks was proposed by 21.6% of women, in

the late term - 14.8%. The main problem is that doctors often cannot accurately assess the risk of an impending pregnancy for a woman's health and predict a perinatal outcome.

A powerful reserve for improving both maternal and perinatal outcomes is the surgical treatment of extragenital diseases during pregnancy. The most common indications for planned surgical interventions during gestation are cardiological diseases, oncological diseases, benign and malignant brain tumors, as well as diseases such as thyrotoxicosis and cerebral arteriovenous malformations.

Delivery of pregnant women with severe EHP should be carried out in a hospital of the III level of perinatal care or in a specialized center. In cases of mild or insignificant extragenital diseases, delivery takes place in an obstetric hospital at the patient's choice.

According to statistics, in Ukraine there is a steady increase in the frequency of cesarean section surgery (in 1997 - 8.56%, and in 2014 - 17.39%). Delivery by caesarean section in pregnant women with EGP is not the best way, since when it is carried out it is impossible to avoid rapidly occurring and significant hemodynamic disturbances; there is a lot of blood loss; significantly (more than 3 times) increases the risk of venous thrombosis / thromboembolism and purulent-inflammatory complications; higher risk of activation of an autoimmune inflammatory process, exacerbation of chronic infections.

The study of literary material allows you to highlight certain points that require special attention. Late termination of pregnancy with severe EHP is a complex and dangerous intervention, which should be performed only in cases where other means of changing the unfavorable outcome of pregnancy do not exist or they are exhausted. Emergency abortions and delivery are not a way to treat acute and severe conditions in pregnant women due to EGP. Emergency interruption or emergency delivery against the background of exacerbation / decompensation of EGP can aggravate the patient's condition, contribute to death.

In all cases of an acute, severe, unstable state of a pregnant woman caused by extragenital disease, therapeutic efforts should be directed to life-threatening

pathology. Caesarean section is not the safest and most gentle way of delivery in most types of EGP. If it is impossible to find a solution equally meeting the interests of the health of the mother and the unborn child, priority is given to the interests of the mother.

Previous study results in Uzbekistan. Mamatkulov B.M. et al. (2015) [23] analyzing the dynamics of maternal mortality in Ferghana, Namangan and Andijan regions for 2003–2013. in connection with some social and medical factors, is noted that more than $\frac{3}{4}$ of all maternal losses in Ferghana Valley are determined by 4 reasons: extragenital diseases during pregnancy; pathology that develops during pregnancy; complications that occurred during childbirth and in the postpartum period; iatrogenic. Additional reasons that aggravate the risk of maternal mortality are a complex of medical, social, social and hygienic and medical and organizational factors. Researchers concluded that extragenital diseases come first in the development of maternal mortality, obstetric complication comes in second, social category in third, and age in fourth.

According to the WHO, every year worldwide, 600 thousand women and more than 8 million babies die from pregnancy and childbirth complications. Every minute in developing countries, one woman dies from complications during pregnancy or childbirth that could have been prevented or treated. Most deaths are considered preventable, and safe delivery and management of obstetric complications are the only and most decisive measure to save lives during antenatal and postpartum care [16; 17; 14].

Since the independence of the Republic of Uzbekistan by the President of the country, special attention has been paid to the issues of protecting the health of motherhood and childhood, the birth and upbringing of a healthy generation. In this regard, targeted state programs were implemented aimed at fulfilling the tasks within the framework of the programs “Healthy mother - healthy child”, “For healthy generation”, “Mother and child”, “Screening of mother and child”, Resolution of the President of the Republic of Uzbekistan No. PP - 1144 of July 1, 2009, the adopted program of measures to further strengthen and increase the

effectiveness of the work to strengthen the reproductive health of the population, the birth of a healthy child, and the formation of a physically and spiritually developed generation for 2009–2013. et al. [16].

Thanks to the implementation of these programs, maternal mortality rates decreased by more than three times, demographic stability was achieved, and life expectancy increased from 67 to 72.5 years [21]. At the same time, a detailed analysis of the causes of maternal mortality, the factors causing maternal mortality, was not carried out in the republic. This is especially true of such a densely populated region with a high birth rate as Ferghana Valley. The analysis of the dynamics of maternal mortality in Ferghana, Namangan and Andijan regions for a sufficiently long period (2003–2013) was carried out in conjunction with some socio-medical factors according to statistics from the Ministry of Health of the Republic of Uzbekistan and data from regional epidemiological centers [23]. This made it possible to determine the trend of this process and evaluate its features. A retrospective analysis of MS for the indicated period showed a sharply defined wave-like character. Thus, the highest mortality was observed in 2003–2006, and then it decreased by 2007–2008. In addition, increased again in 2009. Since 2010, the authors have revealed a gradual decrease in this indicator - the maternal mortality rate in Ferghana Valley for 2003-2013.

Analysis of the frequency of MS in various regions of Ferghana Valley showed its lowest values Andijan region, where this indicator increased until 2004-2005, and then gradually decreased. In Namangan region, high mortality rates persisted in 2003–2006, then again increased sharply by 2009, having substantially decreased the following year. The downward trend continued in subsequent years. Moreover, the decline was significant precisely in this region of Ferghana Valley. The same dynamics is noted in Ferghana region, however, the severity was lower than in other areas. Unlike Andijan and Namangan regions, in Ferghana region, maternal mortality remained at a high level during the entire observation period, despite the downward trend, it is concluded that it is necessary to pay attention to the condition of pregnant women and take measures to reduce maternal mortality.

An analysis of maternal mortality, depending on social factors, showed that the age of women in childbirth and puerperas varied from 17 to 41 years, averaging 26.3 + -1.3 years. Women aged 20–24 years (30.9%) prevailed in the age structure of the deceased, 25–29 years (28.1%) in second place, and 30–34 years (16.9%) in third place. That is, the majority (59.0%) of women died at the most reproductive age (20–29 years old), and mortality among young women in childbirth was 11.2%.

An analysis of comparative data on the structure of causes of maternal mortality, depending on location and age, shows that urban residents predominate at the age of 20–24 years (34.6%), and at the age of 30–34 and 35–39 years old, residents of the village 19.4 and 13.9% (respectively 14.3 and 8.6% of city residents). The first place was occupied by EHZ - infectious diseases 60%, diseases of the cardiovascular system (CVS) (16%), diseases of the genitourinary system (6%), blood diseases (8%), digestive system diseases (6%), parasitic disease (4 %). In second place were complications during childbirth. These were mainly hypotonic hemorrhages, which were detected with a high frequency with premature detachment of normally located placenta (PONRP) (30%), atony of the uterus (35%), rupture of the cervix with hemorrhagic shock (8.0%). Also, this includes peritonitis (25%), amniotic fluid embolism (8.0%), antenatal discharge of amniotic fluid (4%). In third place, the causes of maternal mortality included complications during pregnancy. These were mainly gestosis (83.8%), ectopic pregnancy (9.2%), cystic drift (7%), in 8.6% the cause of maternal mortality was iatrogenic.

The state of the hepatobiliary system directly or indirectly affects all stages of the course of pregnancy, childbirth and the condition of newborns. Timely correct and comprehensive diagnosis of liver lesions during pregnancy, assessment of the degree of risk of maternal and perinatal pathology is necessary to select the right tactics for managing childbirth and preventing complications of pregnancy. The presence of hepatobiliary pathology and the occurrence of jaundice syndrome during pregnancy have always been considered as an alarming sign of serious distress, threatening the health of a woman and a fetus [22; 26]. Currently, there is

an increase in the frequency of pathology of the hepatobiliary system at a young age, 4-7 times more often in women than in men. According to WHO experts, every 5 women and every 10 men in Europe suffer from pathology of the liver and biliary tract.

In the structure of extragenital pathology, chronic diseases of the liver and biliary tract (GWP) occupy a special place and make up 3% in pregnant women. Acute cholecystitis (stoneless) is rare during pregnancy - 0.3%, due to the progesterone effect on the smooth muscles of the gallbladder and gastrointestinal tract. Hypomotor dyskinesia in about a third of women occurs in the 1st trimester of pregnancy and in 2/3 in the 2nd and 3rd trimesters. The frequency of cholecystectomy during pregnancy is about 0.1-0.3%. Perinatal losses among pregnant women with pathology of the hepatobiliary system are about 20-30 % mainly due to antenatal losses during exacerbation of the disease during gestation. In this regard, the study of clinical features and the diagnosis of liver diseases in pregnant women, as well as the development of optimal tactics for their management, remains an urgent problem at the present time. The study was conducted in the city clinical hospital number 7 in Tashkent.

Current study and results

The study is based on examination data from 72 pregnant women with pathology of the hepatobiliary system aged 20 to 43 years, the average age of which was 27.3 ± 0.2 years. The work used the collection of anamnestic data, generally accepted clinical laboratory and instrumental methods of examination, including ultrasound of the fetus, ultrasound of the liver and biliary tract of the mother. Pregnant women were observed throughout pregnancy. The features, the onset of childbirth and the features of labor activity were studied, and the state of children at birth was also evaluated. Research results: when analyzing the obstetric history, we found that 12.5% of women had spontaneous abortions, 15.3% had medical abortions, 34.7% had dysregulation of the menstrual cycle, and 4.2% did not develop pregnancy. The pathology of the hepatobiliary system was

characterized in 81.9% of viral etiologies and in 18.1% of the development of pregnant cholestasis (CB).

Among the viral etiology, acute hepatitis A (OGA) was diagnosed in 9.7% of women, acute hepatitis B (OGV) - in 1.4%, chronic hepatitis B (CHB) - in 15.3%, chronic hepatitis C (CHC) - in 43.1%, hepatitis mixed (B + C) - in 1.4%, chronic hepatitis of non-viral etiology (CG) - in 11.1.

Thus, a study of the outcomes of previous pregnancies and childbirths in all examined pregnant women revealed one or another complication: spontaneous miscarriage, medical abortion, gestosis. In addition, 91.7% of women had complications of pregnancy and abnormalities of labor. In the perinatal period, fetal malnutrition was noted in 5 cases, in 3 cases with chronic hepatitis C, in 1 case with chronic hepatitis C, and in 1 case with chronic kidney disease. The intrauterine growth retardation was diagnosed in 4 pregnant women, moreover, in 1 case - with RSA, in 1 - CB and in 2 cases with CHC. The study of disorders of the hepatobiliary system shows that the nature of the hepatobiliary pathology in pregnant women was quite diverse and its aggravating effect on the course of pregnancy and childbirth was clearly visible, which requires careful monitoring by both infectious disease specialists and obstetrician-gynecologists. Due to the timely delivery of patients with diseases of the hepatobiliary system, there were no cases of perinatal losses.

The second group consists of 65 pregnant women with a history of reproductive losses and chronic viral infections (HSV and CMV), who were offered a comprehensive rehabilitation method involving immunoprophylaxis methods. An analysis of the examined pregnant women by age showed that the vast majority of women in all 3 groups (85.2%, 76.9%, respectively, in the groups) had a history of reproductive losses ranging from 20 years to 29. The social status of the examined pregnant women with reproductive losses the history is represented mainly by housewives (63.9%, 52.3%, respectively, in groups). There were slightly more than half of the pre-pregnant women in group 1 (51.2%), in group 2 - 41.9%, in group 3 - 65.0%. In somatic history, childhood infections were

observed in 16 (39.6%) pregnant women of the 1st group, in 19 - (44.2%) and in 5 (12.5%) - 3 groups. Frequent acute respiratory viral infections before this pregnancy were noted in 33 (80.5%) pregnant women of the 1st group, in 24 (55.8%) - 2 groups and in 10 (25.0%) - 3 groups. The index of diseases in the 1st group was 1.9, in the 2nd group - 1.6 in the 3rd group - 1.2, which indicates the relationship between the frequency of diseases and reproductive losses.

The development of extragenital pathology is closely associated not only with medical, but also with environmental, social, economic factors, with some national and family traditions, the state of living standards, culture, public awareness and others. One of the main forms of extragenital pathology is anemia of varying degrees, including iron deficiency (IDA). Iron deficiency anemia (IDA) is a disease in which the content of iron in the blood serum, bone marrow and depot is reduced. As a result, hemoglobin formation is disturbed, hypochromic anemia and trophic disorders in the tissues occur. IDA remains a serious problem of extragenital pathology in obstetrics. Although many scientific aspects of this problem have been solved, it continues to attract much attention, since the frequency of the disease does not decrease.

Iron deficiency anemia is widespread throughout the world. They are affected by people of both sexes at any age, but especially often children, young girls and pregnant women. At the end of pregnancy, almost all women have latent iron deficiency, and 1/3 of them develop iron deficiency anemia. Like hypovitaminosis, this is one of the most common alimentary-dependent conditions in pregnant women. According to WHO, the frequency of IDA in pregnant women in different countries ranges from 21 to 80%, judging by the level of hemoglobin and from 49 to 99% - by the level of serum iron. In poorly developed countries, the frequency of IDA in pregnant women reaches 80%. In countries with high living standards and lower birth rates, IDA is diagnosed in 8–20% of pregnant women. [WHO, Geneva, 2002] The main reason for the development of iron deficiency anemia is blood loss of various nature.

They upset the balance in the body between the intake and removal of iron. The natural source of iron is food. A woman consumes an average of 2000–2500 kcal daily with food, which contain 12–15 mg of iron, of which no more than 2 mg can be absorbed - this is the absorption limit of this mineral. At the same time, a woman loses daily with urine, feces, sweat, desquamating skin epithelium, and up to 1 mg of iron falling out hair. However, women also lose a significant amount of blood during menstruation, pregnancy, childbirth and lactation. Therefore, often the need for iron exceeds the possibilities of absorption of iron from food. This is the cause of iron deficiency anemia [WHO, Geneva, 2002; 7]. Up to 75% of healthy women lose less than 40 mg of iron during menstruation. In the days remaining until the next menstruation, the body compensates for this loss, and anemia does not develop. With heavy or prolonged menstruation with blood, 50–250 mg of iron is released. The need for iron in these women increases by 2.5–3 times. Such an amount of iron cannot be absorbed even with a high content of it in food.

There is an imbalance leading to the development of anemia [WHO, Geneva, 2002; 7; 8; 9]. Iron losses during each pregnancy, during childbirth and during lactation are 700–900 mg (up to 1 g) of iron. The body is able to restore iron stores within 4–5 years. If a woman gives birth earlier than this period, she will inevitably develop anemia [7]. Numerous literature data indicate that iron deficiency anemia in pregnant women are among high risk factors for mother and fetus in various climatogeographic regions of the planet. Numerous literature data indicate that IDA in pregnant women refers to high risk factors for mother and fetus. For the prevention and treatment of hypochromic conditions, it is necessary to restore iron stores in the body. For this, various means are used: medications, diet therapy, special products.

The most common treatment for anemia is to prescribe medications containing ferrous or trivalent iron or complex iron preparations with macro- and microelements, vitamins. Despite the large selection of drugs, many authors believe that therapy does not always lead to the rapid elimination of anemia in

pregnant women, which may be due to the presence of not only iron deficiency, trace elements, but also different solubility and absorption of iron preparations. It is known that under normal conditions, iron absorption occurs mainly in the duodenum and partly in the stomach and in the upper part of the small intestine. With iron deficiency in the body, it can be absorbed by the mucous membrane along the entire digestive tract. It is known that up to 15 mg of iron is supplied daily with ordinary mixed food, however, with its deficiency, 3-4 mg of iron can be absorbed, regardless of its content in food [8; 18].

Unfortunately, treatment of pregnant women with various iron-containing drugs has a practically low effect. This may be due to several points: late initiation of therapy (after 20 weeks); violation of the formation of the placental bed and placenta due to anemic angiopathy; immune deficiency in women with hypoxic syndrome; amino acid deficiency for the synthesis of the hemoglobin protein subunit. Therefore, the following factors are crucial: the timing of treatment; a complex combination of drug and non-drug methods of therapy; the presence of criteria for the effectiveness of therapy; features of delivery of women with anemia [27; 28]. Today, there is reason to talk about a global “epidemic of anemia” among pregnant women. The very high prevalence of the disease significantly affects the course of pregnancy, childbirth and the postpartum period, the condition of the fetus and newborns in the population as a whole. At the same time, the adverse value of anemia increases many times in the clinic of extragenital pathology. Latent iron deficiency and iron-folic acid deficiency anemia in pregnant women are treatable conditions. Thus, it is relevant and necessary to carry out extensive work on the early detection, adequate diagnosis and treatment of iron deficiency conditions in adolescent girls and women of childbearing age.

CONCLUSION

Thus, extragenital diseases currently occupy a leading place in the structure of causes of maternal mortality. Among the deceased women in childbirth and puerperas from extragenital pathology, 37.9% died, of which 35.3% were respiratory diseases, 14.1% were diseases of the circulatory system, 7.0% were

injuries and poisoning, 3.5% were neoplasms, 2.4% each - some infectious diseases, congenital anomalies; 1.2% each - diseases of the nervous system, digestive organs, musculoskeletal system. The structure of maternal mortality in the world, determined by developing countries, has been very stable over recent years: among those who die every year, more than 500 thousand mothers, 80 thousand die of extragenital diseases [5].

In the Russian Federation, diseases that are not dependent on pregnancy and childbirth extragenital diseases occupy 3-4 years in the structure of causes of maternal mortality for many years. With extragenital pathology, 17–20% of maternal deaths are associated. According to A.T. Egorova (2009) [20], extragenital pathology takes the first place among indirect causes, which makes the problem of maternal losses from somatic pathology super-relevant.

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