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ANALYSIS OF STOLIN DISTRICT THYROID DISEASES INCIDENCE IN 2013–2017

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Iodine deficiency diseases are among the most common non-communicable human diseases. Among many etiological factors for the rapid increase in the incidence, iodine deficiency in the environment, unfavorable environmental situation, and the consequences of the Chernobyl accident are to be noted. The morbidity indicators of the population of the Stolin district of the Brest region with iodine deficiency pathology of the thyroid gland in the period from 2013 to 2017 were analyzed.

Keywords: thyroid gland, incidence, long-term dynamics, trends, incidence structure.

Thyroid diseases in the structure of endocrine pathology take the second most frequent place after diabetes. The determining factor in the epidemiology of these diseases and their nosological structure is the level of iodine intake. Deficiency of iodine in the body is the main factor affecting the health status of the thyroid gland in people living in the Republic of Belarus [2]. The prevalence of young and middle-aged people among sick people makes this pathology especially relevant.

The aim of this work was to analyze the dynamics of the incidence [1] of the population of the Stolin region with iodine deficiency thyroidopathy for the period 2013–2017. in general and by age groups. The object of the study was the reporting materials on the number of cases of thyroid diseases registered in the population served by the Stolin Central District Hospital.

In the structure of endocrine pathology of the population of the Stolin region, the average annual proportion of thyroid diseases in the period from 2013 to 2017 amounted to 47,5%. Morbidity indicators were calculated for the entire population and by age groups: children (0–14 years old), adolescents (15–17 years old) and adults (18 years old and older). During the period under review, a steady growth trend was revealed in the dynamics of the general incidence of the population of the region with thyroid gland diseases ($R^2 = 0,99$). The average annual value of the incidence rate A_0 was 242,18 cases of diseases per 10 thousand of the population. The overall incidence increased from 198,5 ‰ to 289,4 ‰ or 1.5 times. In the dynamics of the primary incidence over five years, a steady upward trend was also noted ($R^2 = 0,81$). The average annual value of A_0 was 30,8 cases of diseases per 10 thousand of the population. The primary incidence rates at the end of the study period in relation to the initial year of the study increased 1.7 times: from 22,2 ‰ in 2013 to 36,8 ‰ in 2017. The ratio of primary and total morbidity in 2013 amounted to 1: 8,9, in 2017 - 1: 7,9, which indicates the prevalence of chronic forms of thyroid pathology.

An analysis of the dynamics by age groups showed a steady upward trend in the indicators of the general and primary morbidity in the district's children (R^2 was 0,81 and 0,74, respectively). The average annual values of A_0 were 55,1 and 19,8 cases of thyroid disease per 10 thousand children in the district, respectively. In adolescents, a moderate upward trend ($R^2 = 0,65$) was revealed in the dynamics of the general incidence rate, and the indicators increased 1.3 times. Primary incidence had a steady upward trend ($R^2 = 0,99$), an increase of 2,6 times. The average annual values of A_0 were 357,5 and 95,24 cases of disease per 10 thousand adolescent population of the region, respectively. The ratio of primary and total morbidity was 1: 3,75. The overall incidence of adults was characterized by steady growth ($R^2 = 0,99$). The average annual incidence rate was 287,46 cases of diseases per 10 thousand of the adult population. In the dynamics of the primary incidence of the population over 18 years of age, a slightly pronounced upward trend was noted ($R^2 = 0,48$). The average annual indicator A_0 was 30,62 ‰. The ratio of primary and general morbidity in adults is 1: 9,4.

The results of the analysis showed the highest incidence and prevalence of iodine deficiency thyroid pathology among the adolescent population of the Stolin region. Chronic forms of the disease were recorded more often

in the adult population. In the structure of the general morbidity of the population, 45,9 % were nodular goiter, hypo-thyroidism was 24 %, autoimmune thyroiditis – 20,6 %, endemic goiter – 5,2 %, thyrotoxicosis – 4 %.

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IRON DEFICIENCY ANEMIA AMONG PREGNANT WOMEN OF VARIOUS AGES

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It is shown that most cases of iron deficiency anemia occur in the second trimester of pregnancy. The highest values of hemoglobin level, transferrin saturation with iron and the minimum values of the total iron binding capacity of serum are observed among pregnant women 18–25 years old.

Keywords: iron deficiency anemia, anemic syndrome, complications of pregnancy, fetal development.

Anemia can occur at any period of a person's life, not only with various diseases, but also with certain physiological conditions, for example, during pregnancy, lactation, during a period of increased growth. The most common in clinical practice is anemia that develops as a result of iron deficiency in the organism.

The research part of the work was carried out on the basis of a maternity hospital of City Clinical Hospital №5 of Minsk. Case histories of pregnant women with iron deficiency anemia were taken. Five age groups were formed: 18–25 years; 25–30 years; 30–35 years; 35–40 years; 40–45 years. The main indicators for the diagnosis were the values $Hb < 110 \text{ g/l}$ in 1 and 3 trimesters and the values $Hb < 105 \text{ g/l}$ in 2 trimester. The diagnosis of iron deficiency anemia (IDA) was made on the basis of the results of a set of laboratory tests, including the determination of iron metabolism: serum ferritin (FC), transferrin saturation with iron coefficient (STI), total iron binding capacity of serum (TICS). The criteria for laboratory diagnosis for IDA among pregnant women were: $FC < 20 \text{ mcg/l}$, $STI < 17 \%$, $TICS > 65 \text{ mcml/l}$.

Anemia was first detected in the I trimester among 19 % of pregnant women, in the II trimester among 60,3 % of women and in the III trimester among 20,7 % of pregnant women. So, most cases of iron deficiency anemia occur in the second trimester of pregnancy.

The highest hemoglobin values occur in the younger age group (18–25 years), moreover, both among healthy women and in the group of women with anemia.

The highest rate of serum ferritin was found in the older age group (40–45 years); minimum values were observed in the group of patients 35–40 years old.

Iron transferrin saturation was highest in the group of 18–25 years old, minimum values identified for age 35–45 years. The same peculiarity was noted among healthy women.

Among pregnant women with anemia there is an increase in the total iron binding capacity of serum, here-with minimum values observed among pregnant women at age 25–30 years, the highest values – at age 40–45 years.

PROGNOSTIC SIGNIFICANCE OF MOLECULAR BIOLOGICAL SUBTYPES OF BREAST CANCER

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Based on the literature data, molecular biological subtypes of breast cancer associated with aggressive tumor potential and prognosis of the disease course were studied, based on the determination of the level of expression of ER and PR, Her-2/neu and Ki-67.