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## Research Article

# ANALYSIS OF THE THYROID STATUS OF PREGNANT WOMEN IN THE IODINE-DEFICIENT REGION

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## ABSTRACT

Thyroid hormones play an important role during pregnancy, providing organogenesis, growth and development of the fetus, teach in the formation and development of the brain and its structure, influencing cognitive abilities. Thyroid dysfunction is associated with the pathological course of pregnancy and childbirth, as well as a negative effect on the fetus. Iodine deficiency, which persists throughout Uzbekistan, creates prerequisites for more frequent development of subclinical hypothyroidism and hypothyroxinemia of pregnant women. Therefore, early detection of thyroid dysfunction during gestation in regions of iodine deficiency is relevant. Chronic iodine deficiency leads to a wide range of pathology, united by the term "iodine deficiency diseases" (IDD). In addition to diseases of the thyroid gland (thyroid gland), IDZ involve pathological conditions suspended by a relative deficiency of thyroid hormones: violation of reproductive function, miscarriage of pregnancy, emerging anomalies and stillbirths, replacement of growth and development of the child, as well as cognitive disorders. Therefore, iodine deficiency is most dangerous at the stage of intrauterine development of the child and in early childhood due to the great importance of thyroid hormones in the formation of the structure of the brain and the development of intelligence. Reminders of mild iodine deficiency



in the regions leads to a decrease in mental abilities, mental health disorders and a weakening of the physical development of the child.

## KEYWORDS

Iodine deficiency, pregnant women, thyroid gland, thyrotoxicosis, hypothyroidism, iodine deficiency diseases.

## INTRODUCTION

**Purpose:** To assess the thyroid status in pregnant women in regions of iodine deficiency.

## MATERIALS AND METHODS

A single-center prospective return to the population of pregnant women registered from June 2021 to December 2021 in the women's consultation of the 2nd family polyclinic of Samarkand was conducted. The investigation included pregnant women 18 years and older who registered for a women's consultation in the 1st trimester and signed an informed consent for training in the following. Excluded from the study were women with a history of favorite thyroid pathology who receive medications that can replenish the results of the study (cordarone, X-ray contrast properties administered during observations 6 months prior to the study, other medications that support pharmacological doses of iodine above 1000 mcg), as well as with conditions and diseases that, according to many investigating doctors, can affect the results. Out of 350 pregnant women who registered for a women's consultation within six months, 208 were excluded by the hairstyle of non-compliance with the inclusion and exclusion criteria: late treatment (n = 62), thyroid pathology in the anamnesis (n = 61: subclinical hypothyroidism – 48, AIT – 4, nodular goiter – 4,

gestational thyrotoxicosis – 3, Graves' disease in the anamnesis – 2, hemistrulectomy on the occasion of nodular goiter - 2), cancellation from participation (N = 51), the impossibility of further observation (N = 34). Thus, 142 women were included in the investigation.

## RESULTS

According to the results of medical and biological monitoring of iodine deficiency in the population of pregnant women in Samarkand, the iodine promise improved, as evidenced by the median concentration of ioduria of 143.3 micrograms / l, the frequency of endemic goiter was 0.46%. Continuous screening of a woman in the 1st trimester of pregnancy without a history of thyroid pathology revealed subclinical hypothyroidism in 68.16% of pregnant women, the support of antibodies to thyroperoxidase was established in 35.5% of women. Study participants. A survey of 142 conditionally healthy pregnant women in the 1st trimester was conducted. The average age of pregnant women was 25.4, 4.1 years (from 18 to 40 years). The average gestation period during the examination is 10 weeks. The main results of the study. The results of thyroid pathology screening among conditionally healthy pregnant women with no history of thyroid pathology are presented in the table. 1.

Nosological form	% (abs. number)
Subclinical hypothyroidism	68,16% (48)
Manifest hypothyroidism	7,1% (5)
Gestational subclinical thyrotoxicosis	4,26% (3)
Increasing the level of AT-TPO	35,5% (25)
Nodular oats	5,68% (4)
Diffuse oats	2,84% (2)

According to the survey results, in 87 (61.2%) pregnant women, TSH indicators were within the reference values recommended for the 1st trimester of pregnancy – 0,1-2,5 An increase in the level of TSH above the upper limit of the reference interval (2.5 mMU/l) was determined in 35 (24.6%) women, the average of them only in 13 (9.1%) pregnant women TSH was higher than 4.0 mMU/l and in 2 (1.4%) diagnosed manifest hypothyroidism. Robust 18 (12.6%) monitored mistletoe TSH levels in the range of 2.5-4.0 mMU/l. The level of TSH content below the reference (below 0.1 mMU/l) was determined in 2 (1.4%) pregnant women The increase in AT-TPO titers was recorded in 26 (18.3%) people. Ultrasound examination of the thyroid gland revealed diffuse oats in two women (1.4%), in four (2.8%) women, nodular oats were diagnosed during pregnancy

The median concentration of ioduria (MCM) in pregnant women was 143.3 [86-290.4] mcg/l, which corresponds to the optimal iodine supply in this cohort. From where only 51.3% of pregnant women had levels of ioduria in the target range; in 2.2%, ioduria exceeded 500 mcg / l; in 46.5% of women, urinary iodine excretion rates did not reach the recommended level for pregnant women; no results below 20 mcg / l were found. A survey of pregnant women showed that only 49% (81) of respondents use iodized salt for the entire prevention of iodine deficiency in the family. In women who used iodized salt in households for cooking, the volume of the thyroid gland was significantly lower than in pregnant women who did not use it (p = 0.0333)

It was also found that in the 1st trimester of pregnancy, 69.8% (97) of pregnant women used iodine preparations, of which 46.4% (64) also used iodized salt, while in the groups of pregnant women who did

not receive iodine preparations, only 7.04% (10) placed iodized salt in housewives. The proportion of pregnant women who do not receive iodine preparations and do not use iodized salt was 10.5% (15)

**Exits.** The loadable problem of iodine deficiency, widespread subclinical hypothyroidism in the population of pregnant women, it is necessary to include a study of the thyroid status in the standard of observation of pregnant women when they are registered in family polyclinics for early diagnosis and timely therapy of hypothyroidism. It is also recommended to extend preventive measures aimed at replenishing iodine deficiency, starting from the stage of pre-gravida preparation.

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