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# Features of diagnostics and treatment of endocrine infertility.

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**ANNOTATION**

About 200 million people in the world suffer from infertility. Endocrine

Infertility (Infertility) accounts for 35% - 40% of the causes of infertility in women. Conducted examination and treatment of various forms of EB. Analysis of the results allows draw conclusions that despite the existing standards of EB therapy,the effectiveness of treatment is possible only with a differentiated approach in each specific case. Complex organization of the reproductive system female body, a combination of disorders of the pituitary-gonadal,thyrotropic-thyroid systems cause difficulties in the treatmentendocrine infertility. However, a clear understanding of the phasing

examination of this category of women allows you to develop an individual

treatment and follow-up program for each patient. This allows

optimize conservative treatment and reduce its time in women with EB,

timely resolve the issue of the use of assisted reproductive

technologies. Correction of identified violations will improve the results

conservative treatment of the underlying disease and the effectiveness of therapy endocrine forms of infertility.

**Keywords:** Endocrine infertility, differentiation diagnostics of EB, drug hormonal treatment of EB,polycystic ovary syndrome, anovulation.

## INTRODUCTION

Infertility affects millions of people of reproductive age, impacting their families and communities. According to WHO estimates[2], the problem infertility affects between 48 million couples and 186 million the world. Even though assisted reproductive technologies (ART) have existed for more than three decades and 5 million children in the world were born as a result of ART activities, such as extracorporeal fertilization (IVF), these technologies are still largely available and unaffordable in many parts of the world. Equal access to fertility treatment remains a problem in most countries, especially in low- and middle-income countries. Uzbekistan belongs to the countries with high social value childbearing, therefore, in the national policy of the country, the strategy of protection reproductive health is a priority. Effective March 2019 law "On the protection of the reproductive health of citizens", which provided the legal basis for the development assisted reproductive technologies. The prevalence of infertility in Uzbekistan is very high: with a diagnosis over 25 thousand women are infertility under dispensary supervision and 7 thousand men.

## LITERATURE AND METHODOLOGY

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As the analysis of the literature shows, the main causes of female infertility are as follows: obstruction of the fallopian tubes in 30% of cases, diseases of the uterus in 18% of cases, idiopathic causes in 7% of cases, immunological factors in 5% and psychological factors in 5% of cases. Endocrine infertility accounts for 35% - 40% of the causes of infertility in women[6].

Anovulation can be caused by the following endocrine

diseases[2]:

· Diabetes mellitus type 1 and 2

· Hyperprolactinemia (of various origins)

· Hypothyroidism

· Congenital hyperplasia of the adrenal cortex

· PCOS (polycystic ovary syndrome)

· Cushing's syndrome

· Pathology of the pituitary gland, including hormone-producing tumors pituitary (Acromegaly, Itsenko-Cushing's disease, prolactinoma), cancer pituitary gland, hypofunction of the pituitary gland (decrease in the production of pituitary hormones due to infectious disease, traumatic brain injury and other reasons];

· Hypogonadotropic ovarian insufficiency

· Stress and depression.

· Genetic diseases; Shershevsky-Turner syndrome;

Gonadal dysgenesis

· Obesity

Environmental and lifestyle factors such as smoking, excessive alcohol consumption and being overweight, as well as severe iodine deficiency conditions can have an impact on fertility[9].In addition, exposure to environmental pollutants can be directly toxic to germ cells (eggs

and spermatozoa) and affect their numbers and quality, which leads to infertility [7].

**Purpose:** to study the causes and clinical features of endocrine

infertility, systematization of the diagnosis and treatment of EB, analysis of effectiveness hormonal treatment for infertile women.We studied 57 women aged 24-39 years with a diagnosis of "primary infertility", of which 39 (68.4%) were diagnosed with pathology of the genital systems in a woman or her husband. In 18 (31.6%) women with established primary diagnosis of "endocrine infertility" was examinedendocrinological status, the level of thyroid and sex hormones,biochemical and general clinical tests, ultrasound of the thyroid gland, genitals and glands, according to indications - computed tomography (CT) of the pituitary gland. Hormones were examined - follicle-stimulating (FSH),luteinizing (LH), estradiol, prolactin, if necessary -total testosterone, androstenedione, progesterone, and also thyrotropic hormone (TSH), thyroid hormones - free T4, free T3; antibodies to thyroid peroxidase (AT TPO). Insulin-like factor testing growth (IGF 1), insulin, cortisol, adrenocorticotropin (ACTH),glycosylated hemoglobin (HbAc1) - according to indications. Insulin level and IGF 1 in the blood was determined not only in patients with diabetes mellitus, but also in patients with hyperprolactinemia, PCOS, obesity, because the basis infertility may lie hyperandrogenic anovulation, formed in conditions of hyperinsulinemia [1], and hyperprolactinemia is characterized by decrease in insulin concentration [6]. Conducted conservative

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treatment,which is based on the correction of hormonal disorders, taking into account etiopathogenesis, EB clinic and individual characteristics of each female patients.

**RESULTS AND DISCUSSION**

Of the 18 patients with endocrine infertility, two (11.1%) suffered from

type 1 diabetes mellitus with a long history of the disease - more than 5 years.The examination revealed two more (11.1%) patients with type 2 diabetes who did not knew about their disease and were treated for a long time for infertility in gynecologist. Both patients were obese, but did not consider this cause of her infertility. Calculation of body mass index showed that out of 18 examined patients, normal Only 6 (33.3%) women had BMI, three (16.7%) had underweight, which is also unfavorable for the onset

pregnancy; 8 (44.4%) - BMI over 25: obesity is most pronounced in

patients with newly diagnosed type 2 diabetes mellitus, two (11.1%)

patients with hypothyroidism, two (11.1%) patients with PCOS, 2 (11.1%) patients with adenoma pituitary - cushingoid obesity. In addition to medical treatment, all obese women, regardless of the primary disease, are prescribed

diet therapy: hypocaloric - before pregnancy and rational healthy nutrition - during the gestation period [6]. All 3 (16.7%) women with a deficiency

body weight normalized weight, 2 (11.1%) with hypothyroidism as a result of treatment had a decrease in body weight, however, three (16.7%) women with cushingoid obese weight remained unchanged.6 (33.3%) were diagnosed with polycystic ovary syndrome (PCOS) with severe insufficiency of the luteal phase and hyperandrogenism, in 5 (22%) hyperprolactinemic hypogonadism, 5 (22%) - thyroid pathology glands (thyroid), including two with hypothyroidism, three with euthyroid diffuse goiter. Given the residence of patients with EB in conditions of severe iodine deficiency[9], not only for patients with thyroid pathology, but for all.The subjects were prescribed iodine-containing preparations. An endocrinologist and a gynecologist were treated with appropriate correction of hormonal disorders in the level of hormones - prolactin, FSH, LH,TSH, T3, T4 in the blood, according to approved treatment protocols [4]. Apart from of this type 1 diabetes mellitus, an adequate dose is selected insulin therapy, and in patients with type 2 diabetes, with PCOS, with alimentary obesity correction of carbohydrate metabolism was carried out by Metformin1000 within 6 months. Of two patients with type 1 diabetes, one pregnancy occurred, but the delivery ended in stillbirth,no other pregnancy occurred. For women with type 1 diabetes (DM1) is characterized by accelerated aging, which manifests itself in an increase in the frequency cardiovascular events, ovarian-menstrual disorders functions, in the early onset of menopause. It is shown that the violation reproductive function in women with type 1 diabetes may be due to in particular, with a decrease in ovarian reserve [3]. In patients with type 2 diabetes pregnancy occurred one year after the start of therapy. Of 6 (33%) patients with PCOS, only two, the rest continue conservative treatment;there was no surgical intervention. Among 5(22%) patients with hyperprolactinemic hypogonadism in two a pituitary adenoma was diagnosed, one had a microadenoma with severe Clinic of Itsenko-Cushing's disease; All three were recommended postpone pregnancy planning until pituitary treatment and adrenal glands, since the increased content of androgen in a patient with NIR also indicates a violation of the adrenal glands [8]. For two, after conducting a course of treatment with Dostinex - pregnancy occurred,culminating in the birth of healthy children. The best result was achieved with

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patients with thyroid pathology: all treated patients became pregnant and had favorable delivery with live birth.

**RESULTS**

The complex organization of the reproductive system of the female body, a combination of disorders of the pituitary-gonadal, thyrotropic-thyroid systems cause difficulties in the treatment of endocrine infertility. However, a clear idea of the stages of examination of this category of women allows you to develop an individual program of treatment and observation every patient. This allows optimizing conservative treatment and reduce its time in women with endocrine infertility, timely address the issue of the use of assisted reproductive technologies. Correction of identified violations will improve the results conservative treatment of the underlying disease and the effectiveness of therapy endocrine forms of infertility.

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