



MAIN CAUSES AND SCREENING ALGORITHM FOR MENSTRUAL CYCLE DISORDERS

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ABSTRACT

Menstrual cycle disorders (MCDs) are often multifactorial and can be associated with endocrine disorders, stress, metabolic disorders, genetic factors, or medication use. Of particular importance is polycystic ovary syndrome (PCOS), which is one of the leading causes of menstrual dysfunction and infertility. In one study, PCOS was detected in approximately 66% of women with anovulatory disorders.

Introduction. Menstrual cycle irregularities (MCDs) are caused by hormonal imbalances (thyroid, ovaries, pituitary gland), stress, sudden weight changes, inflammation, or uterine pathologies (polyps, fibroids). Screening includes a pelvic ultrasound, hormonal assessment (FSH, LH, prolactin, TSH, estradiol), smear tests for infections, and a gynecological examination.

Every woman has experienced menstrual cycle irregularities (MCI) at least once in her life. The causes of this problem can be organic, hormonal, or neuroendocrine. This diversity is due to the complex regulation of the menstrual cycle, with multiple body systems involved.

Hyperprolactinemia is a particularly notable cause of menstrual irregularities. This condition occurs due to excessive prolactin production by the anterior pituitary gland, not only during pregnancy and lactation but also outside of them. Clinically, it can manifest as menstrual irregularities, galactorrhea (abnormal milk secretion from the mammary glands), and even infertility.

According to clinical studies, various menstrual irregularities can be detected in a significant proportion of gynecological patients, and in adolescents, they are one of the most common gynecological problems.

Due to the high prevalence of MCDs and their impact on reproductive health, the development of effective diagnostic and screening algorithms is a pressing issue in modern gynecology.

Purpose of the study. To study the main causes of menstrual cycle disorders and develop a screening algorithm for the early detection of this pathology among women of reproductive age.

Material and research methods. A clinical observational study was conducted in the Fergana maternity hospital for the study period 2021–2025..

The study involved 214 women of reproductive age (16-39 years) who sought gynecological care in Fergana Region gynecological clinics complaining of menstrual

irregularities. The statistical analysis used the following methods: mean values ($M \pm SD$), χ^2 -test, Student's t-test, and significance level $p < 0.05$.

Research results and their discussion. The age distribution of the patients was determined, with an average age of 26.8 ± 5.3 years.

The proposed algorithm for screening for menstrual cycle disorders includes the following steps: initial screening, clinical examination, laboratory diagnostics, instrumental diagnostics, and determination of treatment strategy.

Hormonal imbalances and pelvic inflammatory diseases also play a significant role in the causes of menstrual dysfunction. The influence of stress factors confirms the role of psychoemotional state in regulating reproductive function. The study's results demonstrate that the use of a comprehensive screening algorithm enables the timely identification of causes of menstrual dysfunction and improves treatment effectiveness.

Conclusions:

1. Menstrual irregularities are a common gynecological condition among women of reproductive age;
2. The main causes of menstrual irregularities are polycystic ovary syndrome, hormonal imbalances, and pelvic inflammatory disease;
3. Stress and metabolic factors play a significant role in the development of menstrual irregularities;
4. The developed screening algorithm allows for the timely identification of the causes of menstrual dysfunction and increases the effectiveness of treatment.

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