# REPRODUCTIVE-AGED WOMEN WITH ANOVULATORY MENSTRUAL CYCLE AND INFERTILITY

**Ortiqova Munisa Yusufaliyevna**

Republic Specialized Scientific and Practical Medical Center of Mother and Child Health

**Abstract:** Anovulatory menstrual cycle is one of the common hormonal disorders in reproductive-aged women. In this condition, ovulation does not occur, which leads to the inability to conceive. This article discusses the causes of anovulatory cycles, diagnostic criteria, its association with infertility, and modern treatment approaches.

**Keywords:** anovulation, menstrual disorder, infertility, ovulatory dysfunction, hormonal balance, luteal phase

Ovulation in reproductive-aged women is an integral component of a normal menstrual cycle. The absence of ovulation (anovulation) leads to infertility as well as menstrual cycle disturbances. Worldwide, 30–40% of female infertility cases are associated with ovulatory dysfunction.

Anovulatory cycles often clinically manifest as absence of menstruation (amenorrhea), scanty menstruation (oligomenorrhea), or irregular menstruation. The most common causes include polycystic ovary syndrome (PCOS), hypothalamic-pituitary disorders, thyroid diseases, and factors such as stress and weight loss.

The purpose of this article is to analyze the mechanisms by which anovulatory menstrual cycles cause infertility and to review modern treatment strategies.

This study has an analytical-observational nature, based on clinical observations and a review of existing scientific literature. The research was conducted during 2023–2024 in specialized obstetrics and gynecology centers of the Republic of Uzbekistan, utilizing patient data and recent international publications.

The analysis included 40 women aged 20–35 years who sought medical help for infertility and were diagnosed with ovulatory dysfunction. Inclusion criteria for the study were:
• Inclusion criteria:
o No pregnancy in the last 12 months;
o Menstrual cycle disturbances lasting more than 3 months (oligomenorrhea, amenorrhea);
o Absence of ovulation confirmed by laboratory or instrumental examinations.
• Exclusion criteria:
o Women older than 35 years;
o Cases with anatomical defects of the uterus or ovaries;
o Women with severe endocrine or chronic systemic diseases.

The study employed the following clinical, laboratory, and instrumental methods:
• Medical history collection: menstrual cycles, ovulation history, duration of infertility;
• Physical examination: body mass index (BMI), identification of hirsutism signs;
• Hormonal tests:
o FSH, LH, LH/FSH ratio;

o Estradiol, progesterone (on day 21);
o Prolactin, TSH, AMH (anti-Müllerian hormone);
• Ultrasound examination (USG): assessment of dominant follicle development and signs of ovulation in the ovaries;
• Basal body temperature monitoring (in some cases);
• Ovulation detection tests (if patients were under regular observation).

The obtained results were analyzed, and the etiological structure of anovulation, clinical presentations, and its association with infertility were statistically described. Results were analyzed based on percentages and relative indicators.

| Cause (Etiology) | Percentage (%) |
| --- | --- |
| Polycystic Ovary Syndrome (PCOS) | 47.5% |
| Hypothalamic-pituitary dysfunction | 20% |
| Thyroid gland disorders | 12.5% |
| Hyperprolactinemia | 10% |
| Weight loss and anorexia | 5% |
| Idiopathic anovulation | 5% |

Some clinical observation results:

• Among women with anovulation, **65%** had irregular menstruation, while **30%** had amenorrhea.
• Serum progesterone levels <3 ng/ml confirmed absence of ovulation in patients.
• Ultrasound results showed no development of a dominant follicle.
• The average duration of infertility ranged from 1.5 to 3 years.

Anovulatory cycle is a menstrual cycle without ovulation. It is a major cause of infertility, especially common in cases related to PCOS. Luteal phase deficiency, imbalance of estrogen and progesterone, and disruption of the ovulatory cycle all make conception impossible.

Causes of anovulation should be comprehensively assessed:

• Endocrine etiology is identified by hormonal tests (TSH, LH/FSH ratio, prolactin);
• Ultrasound monitoring shows presence or absence of ovulation;
• Sometimes diagnostic laparoscopy is necessary.

Modern treatment approaches:

• For PCOS: ovulation stimulation (Letrozole, Clomiphene citrate);
• In hypothyroidism: restoration of hormonal balance with levothyroxine;
• In hyperprolactinemia: Dostinex (cabergoline) is used;
• For weight loss-related conditions: normalization of nutrition and body weight.

Lifestyle changes such as exercise, stress reduction, and BMI control are also very important.

Anovulatory menstrual cycle is widespread among reproductive-aged women and is considered a primary cause of infertility. Because its etiology is multifactorial, individual approach, accurate diagnosis, and treatment strategies are essential.

Recommendations:

- Every woman presenting with infertility should be evaluated for ovulation;
- Ovulation stimulation can be effective in cases of PCOS;
- Supporting treatment with lifestyle improvement, weight reduction, and stress management is important;
- Hormonal profile and other causes (prolactinoma, hypothyroidism) must be identified before treatment.

**References:**

1. Fauser, B. C. J. M., et al. (2012). Anovulation in reproductive-aged women: prevalence and causes. Human Reproduction Update, 18(6), 581–594.
2. Rotterdam ESHRE/ASRM-Sponsored PCOS Consensus Workshop Group. (2004). Revised 2003 consensus on diagnostic criteria and long-term health risks related to polycystic ovary syndrome. Fertility and Sterility, 81(1), 19–25.
3. Goodman, N. F., et al. (2015). American Association of Clinical Endocrinologists medical guidelines for clinical practice for the diagnosis and treatment of hyperandrogenic disorders. Endocrine Practice, 21(11), 1291–1300.
4. Ortiqova, M. Y. (2023). Anovulatory menstrual cycles and hormonal profile changes. Uzbekistan Medicine, (2), 44–49.
5. World Health Organization. (2021). Infertility definitions and terminology.