

## **AUTOIMMUNE INFLAMMATION OF FEMALE GONADS: OVARIES - CLINICAL AND MORPHOLOGICAL CHARACTERISTICS**

*Nematova Nargiza Nematilloevna*

### **Introduction**

The preservation of reproductive health in women is crucial for maintaining demographic stability and ensuring the birth of healthy offspring. Disorders of the ovulation process, endocrine imbalances, and pathological changes in ovarian tissue are among the primary causes of infertility in the majority of cases. In particular, autoimmune inflammation of the ovaries (oophoritis) has emerged as a significant problem in contemporary gynecology. This condition manifests as a disruption of hormonal function and morphological alterations due to the immune system developing antibodies against its own tissues.

### **Objective**

The study aims to investigate autoimmune inflammatory processes in the ovaries, elucidate their clinical and morphological features, and assess their impact on reproductive health.

### **Materials and Methods**

This research involved a systematic scientific and methodological analysis of published literature from the past decade, including foreign and domestic sources. Clinical observations and morphological studies relevant to autoimmune oophoritis were reviewed. Immunohistochemical indicators, hormonal analyses, and clinical manifestations were synthesized based on relevant articles.

### **Main Part**

Autoimmune inflammation in the ovaries is characterized by lymphocytic infiltration of ovarian tissue, granulomatous changes, and dystrophic damage to follicles. Common clinical symptoms associated with this condition include:

- Menstrual cycle disorders (amenorrhea, oligomenorrhea)
- Hormonal deficiencies (estrogen and progesterone insufficiency)
- Infertility
- Association

with endocrine diseases (autoimmune thyroiditis, type 1 diabetes mellitus)

Immunohistochemical studies reveal an increase in the concentration of CD4+ and CD8+ lymphocytes in ovarian tissue, accompanied by plasma cell infiltration and antibody accumulation. Morphologically, fibrotic changes in the stroma and microcirculatory disorders in vascular tissue have been observed. These alterations significantly impair reproductive function in ovarian tissue.

### **Conclusion**

Autoimmune inflammation of the ovaries poses a serious threat to female reproductive health. This process can manifest as hormonal dysfunction, infertility, and a comorbidity with various endocrine disorders. Therefore, the implementation of clinical-morphological diagnostics and immunological examinations is essential. Modern treatment approaches include immunomodulatory therapy, restoration of hormonal balance, and an integrated strategy aimed at supporting reproductive function.

### **LITERATURE**

1. Медведев Б.И., Жукова Л.В. Иммунологические аспекты патологии женской репродуктивной системы. – М.: ГЭОТАР-Медиа, 2019.
2. Сухих Г.Т., Прилепская В.Н. Репродуктивная иммунология: руководство для врачей. – М., 2020.
3. Podfigurna A., Meczekalski B. Autoimmune diseases in women with premature ovarian failure. *Menopause Review*. 2019;18(2):69–75.
4. Persani L., Rossetti R., Cacciatore C. Genes involved in human premature ovarian failure. *J. Mol. Endocrinol.* 2021;66(3):87–101.
5. Umehara T., Kawai T., Kuroda T. The pathological roles of autoimmune responses in ovarian disorders. *Front. Immunol.* 2020;11:10–15.
6. Cooper G.S., Stroehla B.C. The epidemiology of autoimmune diseases. *Autoimmun Rev.* 2021;20(4):102–109.
7. Yan Y., Xu J., Zhou J. Immune system and ovarian function: an insight into autoimmune oophoritis. *Reprod. Biol. Endocrinol.* 2022;20(1):34–42.