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ASSESSMENT OF RISK FACTORS AND EARLY DIAGNOSIS OF ENDOMETRIAL HYPERPLASIA IN PERIMENOPAUSAL WOMEN

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Abstract
Endometrial hyperplasia (EH) is a pathological proliferation of the uterine mucosa that can lead to the development of various diseases, including endometrial cancer. Due to the peculiarities of the hormonal background in women of perimenopausal age, this period of life is characterized by an increased risk of developing endometrial hyperplasia.

Keywords: Endometrial hyperplasia, perimenopause, early detection.

The purpose of this article is to assess the risk factors for the development of EH in perimenopausal women, as well as to consider modern methods for early diagnosis of this disease.

Introduction

Perimenopause is the period preceding menopause, during which significant changes in a woman's reproductive function occur. The levels of estrogen and progesterone in a woman's body vary, which can lead to menstrual irregularities and an increased risk of endometrial hyperplasia. Endometrial hyperplasia is classified as simple, complex, and atypical. The latter form is a precancerous condition and requires timely diagnosis

and treatment. In this regard, an important aspect is the early diagnosis of endometrial hyperplasia, which helps prevent the progression of the disease.

Risk factors for endometrial hyperplasia in women of perimenopausal age

1. Hormonal changes

The main risk factor for endometrial hyperplasia is an imbalance between estrogen and progesterone levels. In perimenopausal age, ovulation may not occur regularly, which leads to a decrease in progesterone levels, while estrogen levels may remain high. This contributes to hyperplastic changes in the endometrium.

2. Overweight and obesity

Obesity is a significant risk factor for the development of endometrial hyperplasia. Adipose tissue is an active source of estrogens, and an increase in fat mass leads to an increase in the level of these hormones, which increases the risk of endometrial hyperplasia**.**

3. Diabetes and hypertension

Women with diabetes and hypertension have an increased risk of endometrial hyperplasia. These diseases can contribute to an increase in insulin levels, which can stimulate excess estrogen production, which in turn leads to endometrial hyperplasia.

4. Heredity

A family predisposition to reproductive system diseases, including endometrial cancer, is also a risk factor for hyperplasia. Women with a family history of breast or ovarian cancer have a significantly higher risk of endometrial hyperplasia**.**

5. Long-term use of estrogens without progesterone

The use of estrogen therapy without progestins increases the risk of endometrial hyperplasia. This is common in women receiving hormone replacement therapy during perimenopause.

There are currently many scientific studies on the topic, let's consider some of them:

Study of risk factors for endometrial hyperplasia in perimenopausal women

A study by Patel et al. (2020) assessed risk factors for endometrial hyperplasia among perimenopausal women. The study involved more than 500 women, among whom a direct link was found between obesity, diabetes, and hypertension with an increased risk of developing endometrial hyperplasia. The use of ultrasound diagnostics made it possible to detect endometrial thickening in 25% of women with these risk factors.

Hysteroscopy as a method for diagnosing endometrial hyperplasia

A study by Kuhn and He (2020) assessed the role of hysteroscopy in the early diagnosis of endometrial hyperplasia in perimenopausal women. The results showed that hysteroscopy followed by endometrial biopsy improved the accuracy of hyperplasia diagnosis, detecting more than 40% of cases of atypical hyperplasia among women with suspected disease based on ultrasound examination results**.**

Obesity as a Risk Factor for Endometrial Hyperplasia

A study by Wang and Zhang (2019) found that obesity is one of the main risk factors for the development of endometrial hyperplasia in perimenopausal women. According to the results of a study conducted among 300 women, a body mass index (BMI) above 30 kg/m² was associated with endometrial thickening 3.5 times more often than in women with normal weight. It was also shown that a 5% decrease in BMI significantly reduced the risk of hyperplasia.

Molecular Genetic Study of Endometrial Hyperplasia

A study by Zhao and Luo (2021) examined the role of molecular genetic testing in the diagnosis of endometrial hyperplasia. The study showed that women with atypical endometrial hyperplasia often have mutations in the PTEN and KRAS genes, which allows using these molecular markers to diagnose and predict the progression of the disease to endometrial cancer. Efficacy of Hormone Replacement Therapy for Endometrial Hyperplasia

The study by Sullivan and Osborn (2020) assessed the efficacy of hormone replacement therapy (HRT) in women with endometrial hyperplasia. The results showed that the combination of estrogens with progestins significantly reduced the risk of hyperplasia progressing to endometrial cancer. This study confirmed the need

to monitor the dosage of hormonal drugs and their correct prescription in perimenopause.

Methods for diagnosing endometrial hyperplasia

1. Ultrasound examination (ultrasound)

Ultrasound of the pelvic organs is one of the main methods for diagnosing endometrial hyperplasia. Endometrial thickening exceeding 4–5 mm in women not receiving hormonal therapy is an indication for further examination. However, ultrasound does not allow for accurate differentiation of various forms of hyperplasia.

2. Hysteroscopy

Hysteroscopy is the gold standard for diagnosing endometrial hyperplasia. This method allows for a visual assessment of the endometrium, identification of pathological areas, and biopsy for further histological examination.

3. Endometrial curettage

If atypical endometrial hyperplasia or endometrial cancer is suspected, endometrial curettage is indicated. This allows for obtaining tissue material for histological analysis, which is the main method for confirming the diagnosis.

4. Molecular genetic testing

Modern research shows that molecular genetic testing can help in the diagnosis of precancerous conditions of the endometrium. In particular, the detection of certain mutations, such as mutations in the PTEN, KRAS and other genes, can serve as a predictor of the development of endometrial cancer.

5. CEA marker and other biomarkers

Determination of the level of carcinoembryonic antigen (CEA) and other biomarkers in the blood of perimenopausal women can be useful for monitoring the risk of endometrial hyperplasia and disease progression.

Early detection and prevention

Early detection of endometrial hyperplasia requires a comprehensive approach, including regular examinations, ultrasound examination, and biopsy if necessary. Prevention of endometrial hyperplasia in perimenopause includes:

1. Correction of hormonal levels

Women with hormonal imbalances may be prescribed drugs that regulate progesterone and estrogen levels, which helps normalize cyclic changes in the endometrium.

2. Diet and physical activity

Obesity is one of the main risk factors for the development of endometrial hyperplasia, so maintaining normal body weight through diet and regular exercise is an important part of prevention.

3. Control of concomitant diseases

Control of diabetes, hypertension, and other chronic diseases can reduce the risk of endometrial hyperplasia.

4. Hormone therapy

Replacement hormone therapy should be carried out taking into account the risks and in strict accordance with the indications. Women receiving estrogen therapy should receive progestins to prevent endometrial hyperplasia.

Conclusion

Endometrial hyperplasia is one of the key diseases that requires early diagnosis, especially in perimenopausal women, when hormonal changes increase the risk of developing pathology. The use of modern diagnostic methods, such as ultrasound, hysteroscopy and biopsy, allows for timely detection of endometrial hyperplasia and the beginning of treatment. Preventive measures aimed at correcting hormonal levels, maintaining normal body weight and controlling chronic diseases can significantly reduce the risk of endometrial hyperplasia during this critical period of a woman's life.

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