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PROLACTIN AND SECONDARY INFERTILITY

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ABSTRACT: Hyperprolactinemia is a persistent elevation of prolactin levels in the blood serum. The hyperprolactinemia syndrome is a symptom complex that arises against the background of hyperprolactinemia, the most characteristic manifestation of which is impaired reproductive function. The causes of hyperprolactinemia can be diverse, both endogenous and exogenous. The primary method of treatment is dopamine agonist therapy; in the case of tumor genesis, surgical and radiation methods are also used. About 15% of patients exhibit resistance to dopamine agonists, which necessitates the development of individualized treatment approaches. Timely diagnosis and a properly selected therapeutic strategy play a crucial role in preventing pathological changes caused by hyperprolactinemia.

KEYWORDS: Hyperprolactinemia, prolactinoma, pituitary adenoma, dopamine agonists, therapy resistance, reproductive system, benign breast dysplasia, anovulation.

INTRODUCTION

An elevated level of prolactin in the blood serum indicates the presence of disorders in the hypothalamic-pituitary system that regulates reproductive function. Hyperprolactinemia is one of the key causes of dysfunction in the hypothalamic-pituitary-ovarian axis. According to statistics, prolactinomas are diagnosed in 25–30% of women with pathological hyperprolactinemia. In addition to tumors, elevated prolactin levels may result from stress, hypothyroidism, polycystic ovary syndrome, and severe liver and kidney diseases.

The mammary glands are considered a kind of "mirror" of the female endocrine system. Prolactin stimulates the growth of epithelial cells, increases the number of estrogen receptors, which increases the risk of hyperplastic processes and fatty transformation of the mammary gland parenchyma.

MAIN PART

The hyperprolactinemia syndrome develops against the background of chronically elevated prolactin levels in the blood. Its main symptom is the disruption of menstrual and generative functions. Prolactin secretion is regulated by neuroendocrine mechanisms involving neurotransmitters (dopamine, serotonin), peripheral endocrine gland hormones, and other factors.

Hyperprolactinemia may be:

- **Physiological** (pregnancy, lactation, stress);
- **Pathological** (pituitary tumors, hypothyroidism, chronic kidney failure);

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- **Medication-induced** (antipsychotics, antidepressants, oral contraceptives).

TREATMENT

The choice of treatment method depends on the cause of hyperprolactinemia, the presence of a tumor process, the level of prolactin, and the patient's reproductive plans.

Pharmacological treatment

Dopamine agonists — *bromocriptine*, *cabergoline* — are used effectively to lower prolactin levels and restore ovulatory function.

Surgical intervention

Indicated in cases of prolactinomas resistant to pharmacological therapy or in cases of severe optic chiasm compression.

Correction of concomitant conditions

Includes treatment of hypothyroidism, discontinuation of prolactin-elevating medications, normalization of body weight, and hormonal balance correction.

CONCLUSION

Prolactin plays a central role in regulating female reproductive function. Hyperprolactinemia can be a major factor in the development of secondary infertility, causing anovulation and menstrual cycle disturbances. Effective therapy requires early diagnosis, identification of the underlying cause, and individualized treatment selection. Modern methods, primarily pharmacological therapy with dopamine agonists, offer a high chance of restoring fertility and normalizing hormonal status.

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