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Research Article

A DIFFERENTIATED APPROACH TO THE TREATMENT OF INFERTILITY IN PCOS

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ABSTRACT

The frequency of PCOS is approximately 11% among women of childbearing age, and in the structure of endocrine infertility it reaches 70%. The article presents data on a differentiated approach to the treatment of patients with PCOS for the natural restoration of fertility. The study examined 150 patients who applied to the gynecological department of clinic No. 1 of the Samarkand State Medical University for infertility in 2017-2021. Using the methods of differentiated conservative and surgical treatment of infertility in women with different PCOS phenotypes, based on the study of clinical, laboratory and ultrasound parameters, pregnancy occurred in 75.3% of patients.

KEYWORDS

Polycystic ovary syndrome (PCOS), normalization of body weight, correction of metabolic disorders, stimulation of ovulation, gonadotropin releasing factor antagonists, combined oral contraceptives (COCs).

INTRODUCTION

Among women with hirsutism, polycystic ovaries are detected in 65-70% of cases [4,12]. At the same time, being an endocrine-dependent pathology, PCOS with various menstrual irregularities and hirsutism is diagnosed in more than 60% of cases [3,7, 15].

There is no consensus in the literature on the treatment of PCOS. The primary therapy in the

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treatment of anovulatory infertility in patients with PCOS is weight loss, of course, in cases of overweight. It has been proven that menstrual function returns to normal with a loss of 5 to 10% of body weight. With the development of obesity, a decrease in body weight of less than 5% from the initial one does not lead to the expected effect, 5-10% gives a satisfactory effect, and more than 10% leads to a good treatment effect [17, 19].

The use of insulin sensitizers is not only indicated in the presence of insulin resistance, but also helps to reduce the risk of developing hyperstimulation syndrome during in vitro fertilization in patients with PCOS [17,18]. The duration of therapy is 3-6 months, including against the background of ovulation stimulation.

There are a large number of scientific papers in The Cochrane Library database proving the beneficial effect of COCs on the clinical manifestations of hyperandrogenism [16,23]. The main world recommendations for the management of patients with PCOS provide for the use of clomiphene citrate as the first line treatment for anovulatory infertility [2, 8, 16]. Exogenous gonadotropins in in vitro fertilization and laparoscopic drilling are considered as 2nd line therapy [13, 17] when clomiphene citrate with or without metformin is ineffective.

MATERIALS AND METHODS

The study examined 150 patients who applied to the gynecological department of clinic No. 1 of the Samarkand State Medical University for infertility in 2017-2021. The age of the examined patients was from 22 to 35 years, on average 29.8 ± 3.4 years.

50 patients were attempted to restore fertility without surgery. In order to normalize ovulatory function and treat infertility, 100 patients underwent endosurgical interventions: 64 women had drilling or unilateral ovarian resection, 36 women had bilateral ovarian resection.

In the absence of ovulation within three months after the operation, ovulation inducers (clomiphene citrate and rFSH) were additionally and sequentially used, each no more than three cycles according to generally accepted methods. While maintaining anovulation, IVF was recommended to patients. The IVF procedure was also prescribed to patients with restored ovulatory function against the background of folliculogenesis inducers, but with persistent infertility.

We analyzed the effect of surgical treatment of PCOS, taking into account the volume of the operation, on the levels of homocysteine, AMH, total testosterone, FSH, LH, the ratio of FSH/LH and total estradiol, which were determined before and three months after the intervention.

RESULTS AND DISCUSSIONS

All patients presented with unsuccessful infertility treatment. A history of 138 (92%) had already been treated to correct menstrual irregularities with the help of hormonal and non-hormonal agents. But no effect. In order to stimulate ovulation, 87 (58%) patients were prescribed clomiphene citrate in the

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past (for 3-6 cycles). 81 patients (54%) were prescribed hysteroscopy to exclude the uterine form of infertility and in the presence of abnormal uterine bleeding to exclude the pathology of the uterine cavity. In all cases, a histological examination of the endometrial scraping was additionally performed. At the same time, the following pathological conditions were diagnosed in 39.3%: endometrial hyperplasia - in 20 (13.3%) patients; endometrial polyps - in 5 (3.3%) patients; hypotrophy or atrophy of the endometrium - in 34 (22.7%) patients (similar changes were recorded among patients with secondary amenorrhea and with severe oligomenorrhea with delayed menstruation from 3 to 6 months); submucous myoma - in 1 (0.7%) patients.

During laparoscopy performed in 100 (66.7%) patients for the purpose of surgical stimulation of ovulation, the following concomitant factors of infertility were found: adhesive process of the 1st degree according to the classification of Hulka J.F - in 9 patients (6%); external genital endometriosis I-II degree according to AFSCE classification in 3 patients (2%); subserous uterine myoma - in 4 patients (2.7%); ovarian cysts - in 3 patients (2%)

In total, during laparoscopy, these pathological manifestations were detected in 19 (12.7%) patients, 5 (26.3%) of them had a combination of several types of pathology.

Using the tactics of reducing body weight to a BMI level below 29.9 and prescribing metformin in the first cycle after the abolition of COCs, we managed to induce ovulatory cycles in 43 (28.7%) patients. However, we observed spontaneous pregnancy only in three women of phenotype C (before treatment, they had an ovulatory cycle, but were overweight).

In 40% of patients with PCOS, ovulation does not occur after multiple cycles of CC treatment, they are considered resistant (resistant) to CC. In our study, out of 47 patients who underwent ovulation stimulation with clomiphene citrate for 6 cycles, 16 women were clomiphene-resistant (34% in relation to the group with this method of treatment, and 10.7% in relation to all examined).

Conducted only 1 course of stimulation of ovulation with gonadotropins, which resulted in ovulatory cycles in 15 out of 21 women (71.4%). However, clinical pregnancy occurred only in 11 patients of this group, which was 7.3% in relation to all examined and 52.4% in this group. All patients with the D phenotype (4 women) and 7 patients with the A phenotype became pregnant. The protocol was canceled in 6 women who had more than 3 follicles larger than 16 mm in the middle of the protocol. 10 patients in this group (47.6%) were referred for IVF.

In total, we observed 100 patients with various PCOS phenotypes who underwent surgical treatment for anovulation. In the postoperative period, the patients were observed for three menstrual cycles. Spontaneous clinical pregnancy occurred in 67% of women. 33% of patients from this group after the diagnosis of anovulation 3 months after surgical

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treatment were again prescribed clomiphene citrate for 3 months. As a result, it was possible to achieve natural conception in 8 patients with phenotype B, two patients with phenotype A. In total, 10% of women with PCOS became pregnant after repeated use of clomiphene citrate after surgery.

Thus, we achieved a natural restoration of fertility in only 133 women with PCOS.

CONCLUSION

Using the methods of differentiated conservative and surgical treatment of infertility in women with PCOS based on the study of clinical, laboratory and ultrasound parameters, pregnancy occurs in 75.3% of patients.

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