



MODERN VIEWS ON POLYCYSTIC OVARIAN SYNDROME AND FERTILITY

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Abstract: The article analyzes the data of women with polycystic ovary syndrome. The symptoms and course of PCOS were studied, as well as a comparative analysis of various methods of restoring fertility in PCOS. The study involved 100 women, the work was carried out in 2018-2020 based on the Department of Obstetrics and Gynecology of SamGosMI. The study proved the effectiveness of surgical methods for restoring fertility, in addition, the chances of restoring natural fertilization with the normalization of body weight and MC, as well as drug support were assessed. Moreover, each of these methods had its advantages and disadvantages.

Keywords: polycystic ovary syndrome, hirsutism, infertility, restoration of fertility, hyperandrogenic state.

Relevance: An analysis of numerous publications devoted to the diagnosis and treatment of PCOS indicates significant variability in the clinical manifestations of the disease, despite the same principle for selecting patients - the presence of cystic ovaries. This problem is relevant both from the point of view of fertility and from the point of view of gynecological diseases. Most often, this disease affects women of reproductive age; according to various sources, the incidence in the population is from 10% to 16.6% [2,4,6]. About 70-75% of patients seeking treatment for infertility ultimately suffer from PCOS, according to examination data. Our country is taking large-scale measures for early diagnosis and prevention of diseases among the population, especially among women of reproductive age. Along with this, there is an unresolved problem in the healthcare system regarding the early detection and treatment of infertility in women associated with PCOS.

Aim of the study. We set ourselves the goal of developing modern methods of treating infertility in women with PCOS based on the study of clinical, anamnestic, laboratory parameters, some genotypic variants of gene polymorphisms and folate metabolism. The studies included a study of clinical and anamnestic data and analysis of laboratory parameters. Treatment of patients, that is, restoration of their fertility with this syndrome, was carried out sequentially in several stages.

Materials and methods of research. The work was performed in the gynecological department of the 1st clinic of SamMI in Samarkand. We studied 100 patients who were diagnosed with PCOS from 2018 to 2020. The research methods were: General medical and general clinical research methods (analysis of complaints, history of life and illness, body type, BMI, degree of hirsutism, examination of the mammary glands and thyroid gland, gynecological examination), biochemical markers of ovarian reserve on days 5-7 of the cycle and over time, study of homocysteine in dynamics, ultrasound of the pelvic organs with a vaginal sensor on days 5-7 of the cycle, hysteroscopy followed by diagnostic curettage of the endometrium and morphological examination of the endometrium (if indicated).

The methods of treatment were: at the first stage, normalization of body weight with diets and moderate physical activity, correction of metabolic disorders, at the second stage, restoration of the menstrual cycle (COC + folate, dexamethasone + folate) and stimulation of ovulation (clomiphene citrate, rFSH, menopur, AGnRH). The fourth stage involved surgical stimulation of ovulation (laparoscopy - wedge resection, drilling, stromal endocoagulation).

Results and discussion. All women had infertility, obesity and hirsutism. Of these: 35 women were with the ovarian form of PCOS, 25 women - with the adrenal form of PCOS, 40 women - with a mixed form of PCOS. Among 100 examined, clinical signs of hyperandrogenism were detected with the following frequency: obvious hirsutism - in 57% of patients; oily skin with acne - 35%.

Determination of body mass index (BMI) showed that 48% of women were overweight. "Pre-obesity" - a low risk of metabolic complications was observed in 30%; "obesity" of classes I and II - with an average risk of metabolic complications - in 23%. Visceral distribution of adipose tissue was present in 39% of women. Acanthosis nigroid was detected in 10%. All patients with this sign had a BMI over 30 and a visceral type of adipose tissue distribution.

In 63% of patients, when analyzing hormones, an increase in testosterone was observed, as well as an increase in the LH/FSH index of more than 2.5 in 51%. Correction of hormonal abnormalities was carried out under the supervision of endocrinologists. When studying the marker of endothelial dysfunction ET-1 (endothelin-1), an increase in its concentration occurred in 80% of women, while its content in the blood serum (on average $10.3 \pm 0.4 \mu\text{mol/l}$) exceeded ($p < 0.05$) average values of healthy women. In 45%, the level of homocysteine in the blood exceeded $10 \mu\text{mol/l}$ and averaged $11.3 \pm 1.6 \mu\text{mol/l}$. It follows that almost 50% of women with PCOS had hyperhomocysteinemia.

At the first stage of treatment, correction of metabolic disorders and reduction of body weight were carried out. Obese women were prescribed diet therapy in combination with dosed physical activity. Menstrual function returns to normal with a loss of 5 to 10% of body weight in 10% of women. When body weight and metabolic disorders were normalized, in other cases when the menstrual cycle was not normalized, drugs were prescribed to restore the menstrual cycle. For hyperandrogenism and to restore menstrual irregularities, COCs + folates were prescribed. At the same time, 31% of women regained menstrual function. It took about 6 months to achieve treatment results for acne and hirsutism with COCs.

After the second stage, spontaneous intrauterine pregnancy occurred in 17%. One of the patients had multiple pregnancy (twins). The proportion of ectopic pregnancy was 2%.

At stage 3, ovulation induction was carried out using clomiphene citrate (CC) in three (maximum) cycles for 5 days (from 5 to 9 days of the cycle) at a dose of 100 mg/day. The adequacy of the ovarian response was assessed from the 9-10th day of the cycle by determining the size of growing follicles and determining E2 concentrations in the blood. In patients with anovulatory infertility, when resistance to clomiphene citrate was detected, combinations of CC + rFSH were used to stimulate ovulation. At this stage, spontaneous intrauterine pregnancy occurred in 19% of patients.

The fourth stage included surgical correction - laparoscopy. It was used only in those women for whom the above steps did not produce results. During laparoscopy, wedge resection, drilling, and endocoagulation of the stroma were performed. Also, during the operation, chromopertubation was performed to assess the patency of the fallopian tubes. After endoscopic surgery, to prevent infectious complications, we prescribed broad-spectrum

antibiotics in the recommended daily and course doses. 65% of women were prescribed laparoscopy. They also had a second attempt at ovulation stimulation in three consecutive cycles. Inducers of folliculogenesis during repeated stimulation of ovulation in patients were started immediately after surgical endoscopy. As a result of repeated stimulation, intrauterine pregnancy occurred in 5% of patients, and ectopic pregnancy in 1 patient. If methods for restoring natural fertility are ineffective, so-called assisted reproductive technologies are used, in particular in vitro fertilization (IVF).

Conclusions. As a result, women of reproductive age with polycystic ovary syndrome need to study homocysteine to identify hyperhomocysteinemia and choose an effective and reasonable method of treatment. In women with PCOS, with rational treatment of infertility, it is possible to restore reproductive function naturally in 40% of cases. For patients with restored menstrual function, intrauterine pregnancy was achieved in 17%. For patients with the anovulatory function of the menstrual cycle, the effectiveness of infertility treatment after stimulation of ovulation with clomiphene citrate or CC + rFSH was 19%, which is determined by the possibility of correcting anovulation before laparoscopy. For patients who did not experience intrauterine pregnancy during the restoration of natural fertility, assisted reproductive technologies, including IVF, are recommended.

References:

1. Bukharin O.V., Chepalchenko O.E., Valyshev A.V. et al. Microflora of the large intestine in patients with connective tissue dysplasia. J. Microbiol. Epidemiol. Immunobiol. – 2003- №3. - P.62-66.
2. Gracheva O.N. Dysplasia connective tissue - prevention of gestational complications. Gin. Akush. and Perinatol. - 2010. - № 3, pp. 25-29.
3. Golovskoy B.V., Usoltseva L.V., Khovaeva Y.V. et al. Features of the clinical manifestation of connective tissue dysplasia in people of working age. J. Klin. honey. - M. - 2002 - No 80(12) - P.39-41.
4. Zakharyan A.L., Zakharyan E.L. Severity of varicose veins of lower limbs in various degrees of connective tissue dysplasia. G. wedge. Hir. – 2005. - No8 - P.42 - 44.
5. Zemtovskiy E.V. Dysplastic phenotypes [Dysplastic phenotypes]. Dysplastic heart. St. Petersburg: "Olga" - 2007. - P. 68-90.
6. Kazachkova E.A., Tukay KS. Connective tissue dysplasia syndrome and pregnancy. Moscow, 2007. – 79 p.\
7. Klemenov A.V., Tkacheva O.N., Vertkin A.L. Dysplasia of connective tissue and pregnancy (review). archive. - 2011. - № 11. - P.80-83.
8. Klemenov A. V. Undifferentiated dysplasia of connective tissue. Moscow, 2005. - 136 p. 129 ZBIRNIK NAUKOVYKH PRATS ASSOCIACII OBSTETRICIAN-GENECOLOGISTS OF UKRAINE Vipusk 1/2 (33/34) 2014 9. Komisarova L.M., Karachaeva A.N., Kesova M.I. Course of pregnancy and childbirth in connective tissue dysplasia. – J. Akush. and gin. - 2012. - No 3 - P.4-7.
10. Rudnikhina N.K., Vasilyeva A.V., Novikova I.M. et al. Cardiac arrhythmias in pregnant women with connective tissue dysplasia. – J. Akush. and gin. – 2012. - No.3. - P.97-100.
11. Torshin I.Yu., Gromova O.A. Dysplasia of connective tissue, cellular biology and molecular mechanisms of magnesium impact. – Zh. RMJ. - 2008.- Vol.16, No4. - P.3-11

12. Filipenko P.S., Malookaya Y.S. Rol' dysplasia connective tissue v formirovaniya prolapsa mitral'nogovalvea [The role of dysplasia of connective tissue in the formation of mitral valve prolapse]. J. Klin. honey. Moscow, 2006. - No84(12) - P.13-19.
13. Tsukanov Yu.T., Tsukanov A.Y. Varicose veins of lower limbs as a result of connective tissue dysplasia. J. Angiol. vessel. Hir. -2004 - №10 (2). - P.84 - 89.
14. Kisters K., Barenbrock M., Louwen F. И соавт. – Membrane intracellular and plasma magnesium and calcium concentrations in preeclampsia // Am. J. Hypertens. – 2000. - Vol.13. №7. - P. 765-769.
15. Dildora K., Zikiryayevna G., Zarnigor Y. PREGNANCY AND UNDIFFERENTIATED CONNECTIVE TISSUE DYSPLASIA //Central Asian Journal of Medical and Natural Science. – 2023. – Т. 4. – №. 6. – С. 1228-1232.
16. Khudoyarova D., Shodiklova G., Yunusova Z. RELEVANCE OF THE PROBLEM OF CONNECTIVE TISSUE DYSPLASIA IN OBSTETRICS //Естественные науки в современноммире: теоретические и практические исследования. – 2024. – Т. 3. – №. 1. – С. 13-16.
17. Adkhamjonovna Q. M., Zarnigor Y. Mathematical Quest as a Learning Activity //Journal of Pedagogical Inventions and Practices. – 2022. – Т. 9. – С. 35-38.
18. Nuralievna S. N., Maqsadovna Y. Z. Ortiqcha vaznibor ayollarda homiladorlik va tug'ruqning kechishi vaasoratlari //Ta'lim fidoyilari. – 2022. – Т. 22. – №. 7. – С. 429-438.
19. Maqsadovna Y. Z. Pregnant women with morbid obesity: pregnancy and perinatal outcomes //Eurasian Medical Research Periodical. – 2023. – Т. 16. – С. 72-77.
20. Khudoyarova D., Abdullaeva S. FETOPLACENTAL INSUFFICIENCY WITH HYPOTENSION IN PREGNANT WOMEN //Естественные науки в современном мире: теоретические и практические исследования. – 2023. – Т. 2. – №. 1. – С. 42-47.