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THE ROLE OF LAPAROSCOPY IN THE DIAGNOSIS OF ENDOMETRIOSIS-ASSOCIATED STERILITY AND ITS TREATMENT IN THE KHORAZM REGION

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✓ ***Resume***

Relevance of the topic: Undoubtedly, infertility is one of the main problems of modern gynecology and reproductive medicine. Despite the great achievements of assisted reproductive technologies (ART), the number of infertile couples is not decreasing even in developed countries. One of the main causes of female infertility is external genital endometriosis (EGE). According to information provided by various researchers, endometriosis is detected in 25-40% of women who apply for infertility.

Key words: infertility, external genital endometriosis (EGE), laparoscopy, assisted reproductive technologies (ART), in vitro fertilization (IVF), fertility index.

XORAZM VILOYATIDA ENDOMETRIOZ-ASSOTSIRLANGAN BEPUSHTLIKNI DIAGNOSTIKASI VA UNI DAVOLASHDA LAPAROSKOPIYANING O'RNI

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Kalit so'zlar: bepushtlik, tashqi genital endometrioz(TGE), laparoskopiya, yordamchi reproduktiv texnoligiyalar(YRT), ekstrakorporal urug'lantirish(EKU), fertillik indeksi.

ЭНДОМЕТРИОЗ-АССОЦИРОВАННОЕ БЕСПЛОДИЕ В ХОРЕЗМСКОЙ ОБЛАСТИ: РОЛЬ ЛАПАРОСКОПИИ В ДИАГНОСТИКЕ И ЛЕЧЕНИИ

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✓ ***Резюме***

Актуальность темы: Бесплодие, несомненно, является одной из основных проблем современной гинекологии и репродуктивной медицины. Несмотря на большие достижения вспомогательных репродуктивных технологий (ВРТ), число бесплодных пар не уменьшается даже в развитых странах. Одной из основных причин женского бесплодия является наружный генитальный эндометриоз (ОГЭ). По данным различных исследователей, эндометриоз выявляют у 25-40% женщин, обращающихся по поводу бесплодия.

Ключевые слова: бесплодие, наружный генитальный эндометриоз (ИГЭ), лапароскопия, вспомогательные репродуктивные технологии (ВРТ), экстракорпоральное оплодотворение (ЭКО), индекс фертильности.

Relevance

According to the definition of the World Health Organization, endometriosis is a benign disease defined by the presence of tissue morphologically and functionally similar to endometrial tissue outside the uterine cavity. Modern to the classification according to endometriosis internal (IGE) and external genital to endometriosis (EGE) . is divided . External genital in endometriosis endometrium heterotopias vagina , uterus in the neck , ovaries , uterus in flutes and belly on the curtain will be located . Internal genital endometriosis is represented by the term "adenomyosis" as an independent disease. Also, some researchers believe that retro cervical endometriosis should be considered as a separate form of endometriosis [1]. A characteristic symptom of endometriosis is pelvic pain before menstruation, during menstruation and several days after menstruation. Small forms of endometriosis alone often cause infertility [1].

According to various authors, the frequency of endometriosis in women of reproductive age is determined from 6 to 10%, and the annual incidence rate is 0.1% [2]. At the same time, the true prevalence of endometriosis remains unknown [3]. Because of this, the gold standard for diagnosing endometriosis is visualizing endometriosis ectopias during laparoscopy and conducting a histological examination of the obtained pathological sample [4]. But the lack of possibility to take a biopsy from tissues affected by endometriosis does not exclude the presence of the disease [5]. However, laparoscopy is an invasive and expensive procedure and is not always used in patients presenting with chronic pain or infertility, which makes it impossible to determine the true prevalence of endometriosis in the general population.

Endometriosis can be a cause of infertility due to the adhesion process in the abdominal cavity and disruption of the anatomy of the small pelvis [6].

Treatment of patients with EGE is a complex problem, aimed at relieving pain, preventing disease progression and recurrence, and eliminating infertility [5].

The literature focuses on the role of surgery in the treatment of endometriosis-associated infertility. The 2019 Clinical Guidelines for Female Infertility (Modern Approaches to Diagnosis and Treatment) recommend laparoscopy as the final step in diagnosis and treatment for all patients with suspected endometriosis [4]. The factors that cause infertility in endometriosis are: chronic inflammation and an anti-inflammatory biochemical environment in the small pelvis, adhesions in the small pelvis, as a result of which the anatomy of the pelvic organs is disturbed, egg cells and embryos in the fallopian tube difficulty in movement, decrease in ovarian reserve, disturbance of endometrial implantation [3,7].

There are conflicting views in the literature regarding the necessity of surgical treatment of endometriosis prior to IVF. In the study of Vassilopoulou et al., in mild endometriosis, laparoscopic excision of endometrioid heterotopias, separation of adhesions improves ART outcomes, including fertility rates [8]. However, if the diameter of the endometrioma is greater than 3 cm, there is no reliable data that cystectomy before ART increases the chance of pregnancy [9]. guidelines indicate that endometrioma removal increases the chance of pregnancy (level of confidence 2A), while guidelines state that recurrent endometriosis cysts are at increased risk of decreased ovarian reserve when operated (level of confidence 1A) [4].

After surgical removal, the recurrence rate of endometrioma can reach 50% within 5 years [10]. The reasons for the recurrence of cysts are not fully understood. Mikhaleva LM et al showed that foci of recurrent ovarian endometriosis are formed from cells with high proliferative potential and low apoptosis [11]. The use of medical therapy is effective in reducing the recurrence of endometrioma [10, 12, 13]. However, long-term postoperative ovarian suppression is not indicated in infertile patients due to lack of benefit in increasing pregnancy rates [14,15]. In patients with disseminated forms of endometriosis, in the late reproductive age, when recurrence of the disease is observed, ART should be used in time.

Thus, today, patients with endometriosis-associated infertility have the following indications for surgery: mild and moderate endometriosis, to open the way for transvaginal puncture of oocytes, to remove hydrosalpinxes to improve the results of IVF, for personal, cultural or religious reasons. couple's refusal of IVF [16].

In EGE-associated infertile patients, surgical treatment not only increases the frequency of pregnancy, but also provides an opportunity to calculate the fertility index (FIC). FIK is a simple and reliable clinical tool and is the only studied classification system with prognostic value. With its help, it predicts the observation time of pregnancy after laparoscopy, the strategy of waiting in patients with a

positive prognosis, and the use of assisted reproductive technologies in patients with a negative prognosis.

Research goal: to improve the effectiveness of the restoration of reproductive function in women of Khorezm region in infertility associated with external genital endometriosis (EGE).

Materials and methods:

To solve our problems, the research was carried out in 2 stages. In the first phase (control group), the prevalence of external genital endometriosis (EGE) was evaluated in women with infertility and the effectiveness of infertility treatments in women who underwent laparoscopy was studied. The clinical part of the work is based on the results of analysis, examination and treatment of patients with endometriosis-related infertility. 641 infertile patients who underwent laparoscopy from January 2020 to December 2021 participated in the study. 115 of the infertile patients had EGE, which was 18% of the total number of patients. . Comparison groups were patients with tubal peritoneal infertility (TPI) - 67, ovarian genesis infertility - 146, mixed infertility - 254, uterine pathologies - 83, uterine myoma - 54. Patients observed at the clinical base of the Urganch branch of the Tashkent Medical Academy (Sarvinoz medservis clinic) (chief physician NMMuratova) were included in the study. This stage included 115 patients. Patients were again grouped according to the type of infertility. According to the results, primary infertility was 65.2%, secondary infertility was 34.8%.

The second stage of the study (main group) was devoted to the determination of the fertility index (FIK) and the development of prognostic criteria in infertile women associated with endometriosis during laparoscopy.

The second phase of the study included 50 patients with endometriosis-related infertility. At this stage, patients were also grouped according to the type of infertility. According to the results, primary infertility in the main group was 66%, secondary infertility was 34%.

According to statistics, patients with the following diagnoses according to the International Classification of Diseases (ICD) 10 were selected: No. 80.1 endometriosis of the ovaries, No. 80.2 endometriosis of the fallopian tube, No. 80.3 endometriosis of the pelvic peritoneum , No. 80.4 Endometriosis of the rectovaginal barrier and vagina, No. 80.5 Endometriosis of the intestine. A study to determine the prevalence of EGE in patients with infertility was anovulatory infertility No. 97.0, tubal infertility No. 97.1, uterine infertility No. 97.2, polycystic ovary syndrome U28.2.

All patients consented to the processing of their personal data, as well as to the use of biological material obtained during the operation. Clarification of complaints, collection of somatic, obstetric and gynecological anamnesis, objective and gynecological examination, determination of hormonal profile, ultrasound and CT of pelvic organs, hysterosalpingography, and operative laparoscopy after a detailed examination including indications done. Some laboratory and instrumental diagnostic methods were performed depending on the patient's suspected pathology. Ultrasound examination (transabdominal and transvaginal) was performed on Voluson V8 expert-class devices. Evaluation of ovarian reserves includes determination of AMH, FSH levels, as well as ultrasound parameters (ovary size, number of antral follicles, presence of a dominant follicle). Ovarian reserve was estimated to be reduced based on predictors developed by TA Nazarenko. and Krasnopolskaya KV (2013).

Laparoscopy was performed using "KARL STORZ®" endoscopic equipment and instrument set. The operation was performed under spinal anesthesia with mandatory monitoring of saturation and hemodynamics.

Result and discussions

Based on the tasks of the research, the only prognostic significance of the fertility index was determined during laparoscopy in endometriosis-associated infertile patients (n=50). Fertility index was evaluated on a score system from 1 to 10, waiting tactic for 1 year in patients with ≥ 5 and IVF was recommended for patients with ≤ 4. The relationship of the fertility index to the levels of EGE was studied. According to it, it was determined that all patients with EGE level II had a fertility index ≥ 5. Fertility index ≥ 5 was observed in 90% of EGE III patients, and ≤ 4 was observed in only 10% of patients. Fertility index ≥ 5 was observed in 48% of EGE IV patients, and ≤ 4 in 52%. It can be seen that as the level of EGE increases, the indicator of the fertility index decreases. There were 15 patients with EGE III and EGE IV fertility index ≤ 4, 30% of all patients, all of whom were recommended IVF.

Treatment outcomes for women with EGE-associated infertility

Research stage		Pregnancy with a natural cycle		Pregnancy with IVF		Pregnancy was not observed		Total pregnancy		Total
		abs	%	Abs	%	abs	%	abs	%	
Control group	Primary infertility	18	24.0	12	16.0	45	60.0	30	40.0	75
	Secondary infertility	10	25.0	5	12.5	25	62.5	15	37.5	40
Main group	Primary infertility	13	39.4	6	18.2	14	42.4	19	57.6	33
	Secondary infertility	6	35.3	2	11.8	9	52.9	8	47.1	17
Total		47	28.5	25	15.2	93	56.4	72	43.6	165

Total of 165 women with EGE-associated infertility, 43.6%, or 72, became pregnant. Pregnancy was observed in 40% of women with primary infertility and 37.5% of women with secondary infertility in the control group, compared to 57.6% of women with primary infertility and 47.1% of women with secondary infertility in the main group. Pregnancy was observed in %. Pregnancy with a natural cycle averaged 24.5% in the control group and 37.4% in the main group.

Women in the control group received only progestogen drugs continuously for 3-6 months after the surgery . In this group of patients, pregnancy was observed with a natural cycle and with the help of IVF. Total pregnancy was 39.1%, 24.3% of patients with natural cycle and 14.8% of patients with IVF were pregnant. Pregnancy with a natural cycle decreased with increasing EGE levels.

35 patients after laparoscopy and other procedures in the main group were prescribed pregravid preparation. The goal of the therapy was to reduce the level of estrogen and normalize the level of hormones, to develop the vascular network of the endometrium and myometrium, to improve the blood flow from the main vessels to the terminal arterioles in the uterine artery system, and to normalize the parameters of the coagulogram. The therapy was complex and included several components.

Patients with II degree EGE were prescribed norethisterone 5 mg in the morning and in the evening continuously for 3 months. Patients with grade III-IV EGE were prescribed dienogest (Janin, Visanna) 2 mg/day continuously for 3 to 6 months to reduce estrogen levels. To correct the deficiency of the lutein phase, progestogens in the lutein phase of the menstrual cycle (micronized progesterone - utrogestan) 200 mg per day or dydrogesterone (duphaston) 10 mg x 2 times a day). Also, pre-pregnancy preparation was supplemented with the appointment of vitamins: Omega-3 1 capsule per day, drugs containing vitamins and trace elements (Vitrum, Elevit), iodomarin 200mg and iron preparations 1 or 2 times a day depending on the level of anemia, recommended done. Low molecular weight heparins (LMWH) - enoxaparin (Clexan) sodium (0.4 ml once a day) were given during the 1-2 menstrual cycles in the lutein phase when there was no visualization of the spiral arteries in the endometrium on ultrasound examination, as well as an increase in blood clotting ability.

Pregravidar preparation lasted 4-6 months until pregnancy, and then the doses of drugs were selected individually. Consultation with a reproductive specialist was recommended for patients who did not become pregnant within a year after laparoscopy . IVF was recommended to 15 patients with endometriosis-related infertility.

In the main group of patients, pregnancy was observed with a natural cycle and with the help of IVF. Total pregnancy was 54%, 38% of patients with natural cycle and 16% of patients with IVF became pregnant. Natural cycle pregnancies decreased with increasing EGE levels. A comparative comparison of control and main groups of women with infertility associated with EGE with a natural cycle showed that prepregnancy preparation reduced the number of women who became pregnant with a natural cycle by 13.7% compared to the number of women who did not receive prepregnancy preparation. increased to When studying the relationship between pre-gravid readiness and pregnancy rate, the following was found: in women with EGE

II level, the pregnancy rate increased by 43%, and in women with EGE III level, the following was found: indicator increased by 17.5%, pregnancy rate increased by 19.1% in women with EGE IV level.

In the main group of women with EGE-associated infertility, when the association between EGE, FI and pregnancy was studied, **FI ≥ 5** was found in 19 of 35 women, i.e. 38%, including EGE grade II. 4 of 5 patients, i.e. 80% of all women, had **FI ≥ 5** and 9 of 18 patients, i.e. 50% of all women, had EGE III grade **,** 12 with EGE IV grade It was found that 6 patients, i.e. 50% of the total number of women, were pregnant with a natural cycle. 8 out of 15 women (16%) referred to IVF with FI ≤ 4 became pregnant, both of 2 patients with FI ≤ 4 and EGE III grade, i.e. 100%, from FI ≤ 4 low, it was found that 6 out of 13 patients with EGE IV level, i.e. 46.1%, became pregnant by IVF method.

Conclusion

1. EGE was detected in 115 (17.9%) of 641 infertile women in group I who underwent laparoscopy. Fertility index was found to be 5 or higher in 35 (70%) of 50 women with EGE in the main group, and 4 or lower in the remaining 15 (30%).
2. 45 (39.1%) of 115 infertile women in the control group underwent laparoscopy. pregnancies were observed, of which 28 (24.3%) were pregnant with a natural cycle, 17 (14.8%) with IVF.
3. 19 (54%) of 35 infertile women in the main group who underwent pre-pregnancy preparation after laparoscopy pregnancy was observed.
4. in 50 main groups of women with infertility associated with EGE, and pregravid preparation was given to 35 women with an index of 5 or more. was conducted and a 2-fold increase in treatment efficiency was achieved.

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