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PECULIARITIES OF GENITAL ENDOMETRIOSIS ASSOCIATED WITH INFERTILITY

The aim of the study – to conduct a comparative retrospective analysis of the medical histories of patients with endometriosis associated with infertility and patients with tubo-peritoneal factor infertility

Materials and Methods. A retrospective analysis of 485 patient's medical histories, who applied to the medical centre "Yuzko Medical Center" regarding infertility for the period 2019–2022 was conducted. The main group (I) consists of 435 women with infertility, associated with endometriosis. The control group (II) consists of 50 women with tubal-peritoneal infertility factor. The obtained results were processed by the method of variational statistics.

Results and Discussion. It has been founded that women with infertility associated with endometriosis, pain syndrome is noted for 305 patients (70.2 %). The dependence of the pain syndrome on menstruation was noted for 60.2 % of cases. Primary infertility was detected in 40.3 % of patients of group I and 84.6 % of group II, secondary infertility was diagnosed in 38 % of patients group I and 21 % of patients of group II. According to the results of the cytological examination, it was found that type II – 320 women (73.6 %) predominates and 10 women (21.3 %) of the control group. Type I – 114(26.4 %) women of the main group and 42 women (84.6 %) of the control group.

Conclusions Thus, modern medicine should continue to study in detail the diseases that cause infertility. Scientists should investigate the causes of infertility formation in order to their further prevention and successful treatment. According to repeated ultrasound data, internal genital endometriosis is not suspected, therefore, it is not possible to rely on ultrasound data as an additional research method, and this requires the discovery of new diagnostic methods.

Key words: endometriosis; adenomyosis; infertility.

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ОСОБЛИВОСТІ ГЕНІТАЛЬНОГО ЕНДОМЕТРІОЗУ, АСОЦІЙОВАНОГО ІЗ БЕЗПЛІДДЯМ

Мета дослідження – провести порівняльний ретроспективний аналіз історій хвороби хворих на ендометріоз, асоційованих з безпліддям, і пацієнток із трубно-перитонеальним фактором безпліддя.

Матеріали та методи. Проведено ретроспективний аналіз історій хвороби 485 пацієнтів, які звернулися до медичного центру «Юзко Медікал Центр» впродовж 2019–2022 рр. з приводу безпліддя. Основну групу (I) склали 435 жінок з безпліддям, пов'язаним з ендометріозом. Контрольну групу (II) склали 50 жінок із трубно-перитонеальним фактором безпліддя. Отримані результати оброблено методом варіаційної статистики.

Результати дослідження та їх обговорення. Встановлено, що у жінок з безпліддям, пов'язаним з ендометріозом, більший синдром відмічали в 305 пацієнток (70,2 %). Залежність більшого синдрому від менструації відмічено в 60,2 % випадків. Первинне безпліддя виявлено у 40,3 % пацієнток I групи та 84,6 % II групи, вторинне безпліддя діагностовано у 38 % пацієнток I групи та 21 % пацієнток II групи. За результатами цитологічного дослідження встановлено, що переважає II тип – 320 жінок (73,6 %) та 10 жінок (21,3 %) контрольної групи. I тип – 114 (26,4 %) жінок основної групи та 42 жінки (84,6 %) контрольної групи.

Висновки. Таким чином, сучасна медицина повинна продовжувати детальне вивчення захворювань, що викликають безпліддя. Вчені повинні дослідити причини формування безпліддя з метою їх подальшої профілактики та успішного лікування. За даними повторного УЗД не підозрюється внутрішній генітальний ендометріоз, тому покладатися на дані УЗД як на додатковий метод дослідження не можна, а це вимагає розробки нових методів діагностики.

Ключові слова: ендометріоз; аденоміоз; безпліддя.

INTRODUCTION. The problem of infertility has an important medical and social value, which is conditioned by a sharp decrease of birth rate in the conditions of the modern crisis. According to WHO data 15–20 % of families in the whole world suffers from infertility, in Ukraine it's about 120–150 thousand couples [1]

Endometriosis is a benign, multi factorial gynaecological disease characterised by the presence of endometrial tissue outside the uterine cavity and a systemic inflammatory response, usually associated with pelvic pain and female infertility [2–8]. Heterotopias in endometriosis are only similar to endometrial tissue, but due to their molecular genetic defects, they are characterized by apoptosis disorders, infiltrative growth, the absence of a connective tissue capsule, and the

possibility of metastasis. These features make it possible to compare them with the tumour process.

In Ukraine, the trend of the incidence of endometriosis is characterised by growth [9,10]. Endometriosis causes infertility in the vast majority of patients and is considered the second most frequent factor among factors causing reproductive disorders, and, according to various authors, is observed in 25–50 % of women with infertility [11]. In particular, genital endometriosis is associated with infertility in 25–50 % of cases, and the peritoneal form is accompanied by infertility in 60–80 % of cases [12]. In addition, endometriosis is found in 25–47 % of teenage girls who were operated on for pelvic pain [13].

In particular, genital endometriosis is associated with infertility in 25–50 % of cases, and the peritoneal form is ac-

accompanied by infertility in 60–80 % of cases [12]. In addition, endometriosis is found in 25–47 % of teenage girls who were operated on for pelvic pain [13]. The frequency of infertility in all localizations of genital endometriosis is approximately 3–4 times higher than the rate in the population, and the frequency of spontaneous abortion ranges from 10 to 50 % [14–16]. However, it is extremely difficult to estimate the true frequency of endometriosis, since in some patients it passes with unexpressed symptoms, and modern diagnostic methods confirm this disease already at the stage of laparoscopic intervention [17–19].

THE AIM OF THE STUDY: to conduct a comparative retrospective analysis of the medical histories of patients with endometriosis associated with infertility and patients with tubo-peritoneal factor infertility.

MATERIALS AND METHODS. A retrospective analysis of 485 patient's medical histories, who applied to the medical centre "Yuzko Medical Center" regarding infertility for the period 2019– 2022 was conducted. The main group (I) consists of 435 women with infertility, associated with endometriosis. The control group (II) consists of 50 women with tubal-peritoneal infertility factor. The obtained results were processed by the method of variational statistics.

RESULTS AND DISCUSSION. The age of the patients ranged from 20 to 42 years in both groups. The average age of patients in group I was 29 ± 0.3 years, group II – 27 ± 0.4 years, respectively.

During the analysis of menstrual function, it was noted that the average age of menarche in the I group was $15,3 \pm 0,8$ years, in the II group – $13,4 \pm 1,2$ years.

When analyzing the clinical and anamnestic indicators, we found that the main complaint of the patients of the I group was pain syndrome, which was 70.2 % (305 patients) and 8 (15 %) of the women of the II group ($p < 0.05$). It should be noted that often the pain of patients of group I was constant - it accompanied the entire menstrual cycle or was felt both before and after menstruation. 261 (60.2 %) women with endometriosis associated with infertility, complained of the pain syndrome with the onset of menarche and progressed over the years. In the majority of women of the I group, the dependence of the pain syndrome on menstruation was noted – 404 women (93 %) compared to the patients of the II group – 2 (4 %) – ($p < 0.05$). Dyspareunia was also noted in patients of the I group – in 306 (70.5%), pain during physical activity – in 43 (10.1 %), pain during defecation – in 13 (3.2 %), and bloating – in 74 (17.1 %), which was not observed in patients of the II group, respectively, ($p < 0.05$). 65 (15 %) women of group I and 19 (38 %) patients of group II ($p < 0.05$)

started early sexual life (before the age of 18), which is closely correlated with TORCH infections in the anamnesis – in 30 (60 %) female patients ($p < 0.05$).

Menstrual cycle disorders were detected in 55 % of patients of group I with infertility associated with endometriosis and in 16 % of patients of group II ($p < 0.05$). Women with endometriosis complain of there was an increase in the duration of menstrual discharge (up to 6.8 ± 0.8) days compared to the II group – (4.2 ± 0.9) days. The proportion of adenomyosis fluctuated significantly and, on average, coincided with the data of the literature with the frequency of detection of endometriosis (ranged from 10 % to 16 %). In a significant part of patients, adenomyosis occurred against the background of another gynecological pathology - uterine fibroids, inflammatory processes of the genitals, abnormal uterine bleeding or was generally an accidental finding during hysteroscopy.

The distribution of clinical forms according to the ICD-10 classification was as follows:

Primary infertility was found in 40.3 % of patients of group I and 84.6 % of group II, secondary infertility was diagnosed in 38 % of group I and 21 % of patients of group II. Group I patients with a history of secondary infertility underwent surgical interventions: caesarean section (5.2 %), abortions (9.0 %), scraping (14.0 %), diathermocoagulation + diathermoexcision – (3.4 %). Analysis of gynecological morbidity revealed that women of group I had a history of cervical pathology – 124 (28.6 %) women, uterine fibroids – 84 (19.5 %) patients.

Table 2 shows the distribution of nosological forms according to hysteroscopy and laparoscopy data of patients in the main group.

According to the results of laparoscopy, multiple endometrioid heterotopias occur in 365 cases, which is 84.1 %.

The most common type of surgical intervention in the anamnesis of examined women with tubo-peritoneal factor of infertility were operations on fallopian tubes, including for ectopic pregnancy.

Women of group I, on whom operations for cystic formations of the ovaries were performed twice as often as in group II ($p < 0.05$). It should be noted that according to hormonal homeostasis data, it was found that there were no significant deviations from the norm of hormonal indicators.

According to the results of the cytological examination, it was found that type II predominates – 320 women, which is 73.6 % (main group) and 10 women (21.3 %) of the control group.

Type I – 114 (26.4 %) women of the main group and 42 women (84.6 %) of the control group. Therefore, the predominance of type II indicates an inflammatory process,

Table 1. Distribution of disease histories of women with genital endometriosis by clinical forms according to the ICD-10 classification

Clinical form	Number Abs.	%
Adenomyosis	34	7.9
Widespread (external-internal) endometriosis	317	73.1
Endometriosis of the appendages (fallopian tubes)	6	1.5
Vaginal endometriosis	6	1.5
Cervical endometriosis	6	1.5
Ovarian endometriosis, endometrioid cyst	48	11.1

Table 2. Distribution of nosological forms according to hysteroscopy and laparoscopy data

Detected	Number of women (abs.number)	Number of women (%)
Two-horned uterus	27	6.3
Saddle-shaped uterus	27	6.3
Complete uterine membrane	7	1.6
Endometrial hyperplasia	20	4.7
Polyp of the uterine body	117	26.9
Polyp of the cervical canal	13	3.2
Endometriosis of the pelvic peritoneum	365	84.1
Ovarian endometriosis	73	16.8
Infertility	36	8.5
Retarded proliferation of the endometrium	15	3.6
Early endometrial proliferation	16	3.8
The uterine cavity is reduced in size	11	2.6
Cicatricial deformation of the uterus	11	2.6

which is confirmed by the data of bacteriological and bacterioscopic research.

The determination of tumor markers (CA 125) is important in the diagnosis of endometriosis, as it is considered one of the sensitive non-invasive tests and is recommended for the diagnosis of endometriosis.

However, in the case of the studied patients (group I), its increase was found only in 25.8 % of cases among all those studied by this parameter.

CONCLUSIONS. Thus, modern medicine should continue to study in detail the diseases that cause infertility. Scientists should investigate the causes of infertility formation in order to their further prevention and successful treatment. According to repeated ultrasound data, internal genital en-

Table 3. The level of tumor markers in the blood serum of women with infertility associated with endometriosis

The name of the tumor marker	Normal value Absolute/relative values (%)	Above reference values Absolute/relative values
CA 125	111/82.3	34/25.8
HE4	135/100	0.0 %

dometriosis is not suspected, therefore, it is not possible to rely on ultrasound data as an additional research method, and this requires the discovery of new diagnostic methods.

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