ANAMNESTIC FEATURES AND CLINICAL COURSE OF "SMALL FORMS" ENDOMITRIOSIS IN WOMEN WITH INFERTILITY

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Abstract: The article presents the results of an assessment of clinical and anamnestic factors in the development of minor forms of endometriosis in women with infertility. It was found that patients with endometriosis-associated infertility more often indicated an early onset of menarche and longer menstruation, often combined with primary dysmenorrhea, endometrial hyperplasia, pelvic inflammatory diseases due to STIs, gastrointestinal diseases, allergic reactions, surgical interventions on the small organs pelvis The complaints were dominated by abnormal uterine bleeding in the form of heavy menstrual bleeding, intermenstrual spotting, pain, and hyperprolactinemia.

Keywords: endometriosis, early diagnosis, risk factors, infertility

Endometriosis is characterized by a high prevalence among women of reproductive age, significantly reduces the quality of life of patients, and has a significant negative impact on physical, mental and social well-being. This disease is often an obstacle to obtaining an education, performing work duties, and can cause tension in family relationships [1, 10].

One of the first steps in reducing the adverse consequences of this disease is its early diagnosis. Yet, year after year, endometriosis is talked about as a "missed" disease, with diagnosis delayed by 8–10 years. This problem is global and also occurs in countries with high levels of healthcare [3,8].

It is reported that one of the reasons for the delayed diagnosis of endometriosis is the lack of non-invasive research methods, which creates certain difficulties for clinicians [2, 4, 6]. Delayed diagnosis of endometriosis can be facilitated by failure to comply with the recommendations of the clinical protocol for endometriosis, lack of awareness of doctors of other specialties about the clinical symptoms characteristic of

endometriosis, risk factors for its development and spread, requiring timely correction [7, 9].

In this regard, every obstetrician-gynecologist, especially those working in the outpatient setting, is tasked with assessing risk factors and timely identifying patients at high risk of developing genital endometriosis. It is necessary to pay maximum attention to the early clinical manifestations of this disease. Timely diagnosis of endometriosis and adequate treatment will help prevent disease progression, reduce endometriosis-associated infertility and the risk of developing central sensitization and chronic pelvic pain [4, 8].

The purpose of the study is to assess clinical and anamnestic factors for the development of minor forms of endometriosis in women with infertility.

Materials and methods of research: the study was based on examination data of 200 women, of which 55 practically healthy women of fertile age without reproductive dysfunction, who made up the control group and 145 women with endometriosis-associated infertility (main group).

During the examination, 109 (75.2%) were diagnosed with minor forms of endometriorsis (stages I – II), which made up 1 subgroup; 36 women with stage III - IV endometriosis - subgroup 2.

The diagnosis of “Endometriosis” was made on the basis of the clinic in combination with additional non-invasive diagnostic methods (ultrasound, MRI). Endometriosis stages were determined according to the American Fertility Society (r-AFS) classification [6].

Statistical data processing was carried out using Microsoft Office 2017 programs, built-in functions in Excel, taking into account the calculation of the average and standard deviation. Differences at $P < 0.05$ were considered statistically significant.

Research results: The age range of women who took part in the study ranged from 18 to 35 years. The average age in the main group was 28.9±1.2 years, in the control group – 29.8±1.5 years. The duration of infertility in women of the main

group varied from 1 to 12 years, averaging 3.2±0.3 years; this parameter was absent in the control group.

Among women in the main group, primary infertility was significantly more common than secondary infertility (81.4±2.8% versus 18.6±2.8%; P<0.05). The data obtained are consistent with the results of other authors [5].

From the anamnesis it was established (Table 1) that the analysis of the data did not establish reliable data on the age of menarche in relation to the control group (P>0.05). However, there is a significantly significant identification of women with untimely formation of the menstrual cycle in the main group ($\chi 2$=6.88 (0.88-51.39); p=0.03; OR=6.88), especially in subgroup 2 ($\chi 2$= 7.21 (0.91-53.5); p=0.03).

Table 1

Anamnestic assessment of menstrual function of examined women

Parameters	Control group, n=55	Main group, n=145		
		Total	1 subgroup	2 subgroup
Average age of menarche, years	12,9±1,3	13,5±1,	13,5±1,4	13,6±1,5
Untimely menstrual cycle formation	0 (0,0%)	9 (6,2%)	5 (4,6%)	4 (11,1%)*
Average length of menstrual cycle	28,2±1,3	28,6±1,5	28,5±1,6	28,4±1,4
Average duration of menstrual cycle	4,6±0,8	5,1±0,6*	4,9±0,5	4,9±0,5

Note: * - reliability of data compared to the indicators of the control group (P<0.05).

Analyzing the reproductive status, it was revealed that in the main group, 18.6% of women (27 out of 145) had timely births, while in the control group, all women (100%) had births recorded.

The average number of pregnancies in women in the control group was 1.9±0.04, while in the main group it was only 0.19±0.003 (P<0.001). I would like to

note that in subgroup 1 of women, the average number of pregnancies was significantly higher than in subgroup 2, i.e. in women with severe endometriosis (P<0.01)

An analysis of the incidence of extragenital pathology among women with endometriosis showed (Table 2) that in minor forms of this pathology, gastrointestinal (GIT) diseases and allergic reactions (P<0.01) were significantly more common compared to the control group, and to subgroup 2 (P<0.05).

Table 2

Prevalence and nosological structure of extragenital pathology among examined women

Pathology	Control group, n=55		Main group, n=145					
			Total		1 subgroup		2 subgroup	
	abs	%	abs	%	abs	%	abs	%
Gastrointestinal diseases	3	5,4±2,5	19	13,1±2,9*	15	13,8±2,2*	4	11,1±3,9*
Presence of allergic reactions	3	5,4±2,5	30	20,7±3,2**	25	22,9±3,8	5	13,9±4,3*
Inflammatory diseases of the pelvic organs (IDPO)	8	14,5±3,6	53	36,6±4,2**	43	39,4±4,4	10	27,8±5,2*
Hyperprolactinemia	0	0,0±0,0	14	9,7±2,4	12	11,0±1,9	2	5,6±2,4^
Endometrial hyperplasia without atypia	0	0,0±0,0	42	29,0±3,2	18	16,5±3,1	24	66,7±1,8^^
Chronic endometritis	0	0,0±0,0	12	8,3±1,7	8	7,3±1,7	4	11,1±3,9^
STI	14	9,7±2,7	44	30,3±3,3	29	26,6±3,9	15	41,7±4,6**
Surgical treatment of endometriosis	0	0,0±0,0	21	14,5±2.8	12	11,0±1,9	9	25,0±3,9
Surgical treatment of ovaries	1	1,8±2,1	8	5,5±1,3*	3	2,8±1,5	5	13,9±4,3*^

Note: * - reliability of data to the indicators of the control group (* - P <0.05; ** - P < 0.01); ^ - reliability of data for indicators of subgroup 1 (^ - P <0.05; ^^ - P < 0.01)

It was found that surgical interventions on the ovaries, such as cystectomy, ovarian resection, increase the risk of developing common forms of endometriosis compared to the control group ($p<0.01$) and "minor" forms of endometriosis ($p<0.01$). Women with "minor" forms of endometriosis were significantly more likely, compared to the control group, to have PID ($p < 0.001$) with STIs detected ($p < 0.001$), regardless of the stage of the disease.

It is important that in our study, women with endometriosis-associated infertility were significantly more likely to report previously diagnosed genital endometriosis confirmed laparoscopically ($p<0.05$), and in subgroup 2 relapse of this disease was observed more often than in subgroup 1 ($P<0, 05$) despite adjuvant hormonal therapy.

During the examination, patients in subgroup 1 were significantly more likely to have hyperprolactinemia in the absence of micro- and macroprolactinoma (according to MRI data) compared to the control group, where this pathology was not recorded.

In histological examination of the endometrium of patients from subgroup 2, the incidence of simple endometrial hyperplasia without atypia was significantly more frequent compared to subgroup 1 ($P<0.01$). The frequency of detection of chronic endometritis in the group of "minor" forms of endometriosis was significantly higher than that in subgroup 2 ($P<0.05$).

An assessment of the clinical manifestations of endometriosis in women with infertility showed that, regardless of the stage of this pathology, they had abnormal uterine bleeding (AUB) compared with data from the control group (Table 3).

AUB was characterized by the presence of AMC and MMC or a combination of them, while in women in subgroup 1 these clinical manifestations were recorded significantly lower in relation to the indicators of subgroup 2 ($P<0.05$).

Women in the main group significantly more often complained of pain in its various manifestations compared to women in the control group ($P<0.01$). The pain syndrome was characterized by the presence of dysmenorrhea and dyspareunia ($P<0.01$).

Table 3

Complaints and clinical manifestations of endometriosis in examined women in a comparative aspect

Clinical symptoms	Control group, n=55		Main group, n=145					
			Total		1 subgroup		2 subgroup	
	abs	%	abs	%	abs	%	abs	%
HMB or IUB	1	1,8±2,1	50		31	28,4±3,5**	19	52,8±4,7**^
Dysmenorrhea	9	16,4±3, 3	91	62,8±1,4**	61	56,0±3,9**	30	83,3±3,9**^
Dyspareunia	0	0,0±0,0	31	21,4±3,2	14	12,8±2,1	17	47,2±4,7^^
Dyschezia	0	0,0±0,0	5	3,4±1,3	3	2,8±1,5	2	5,6±2,4^

Note: OMC – heavy menstrual bleeding, MMK – intermenstrual uterine bleeding; * - reliability of data compared to the indicators of the control group (* - P <0.05; ** - P <0.01); ^ - reliability of data for indicators of subgroup 1 (^ - P <0.05; ^^ - P < 0.01)

At the same time, dysmenorrhea was significantly more common among women of subgroup 2 compared with patients of subgroup 1 (p<0.05). Dyschezia was significantly more often observed in women of subgroup 2 in contrast to patients of subgroup 1 (P<0.05).

Conducting an ROC analysis using clinical and anamnestic data allowed us to identify risk factors for the development of “minor” forms of endometriosis: untimely onset of menstruation (OR 1.34, 95% CI 1.17–1.53); history of allergic reactions (OR 1.35, 95% CI 1.2–1.5), pelvic inflammatory diseases (OR 1.33, 95% CI 1.19–1.49), surgical interventions on the abdominal organs cavities (RR 1.31, 95% CI 1.16–1.48) and the presence of bacterial and viral infection (RR 1.31, 95% CI 1.17–1.47).

Conclusions:

1. The key clinical sign of endometriosis is pain in its various manifestations, which can serve as an indicator of this disease. The second most important clinical manifestations of genital endometriosis are AUB of the AUB type and/or MMK.

2. According to ROC analysis, factors such as untimely onset of menstruation, allergic reactions, pelvic inflammatory diseases, surgical interventions on the abdominal organs, and the presence of bacterial and viral infection increase the risk of the formation of "minor" forms of endometriosis.

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