DOI: https://doi.org/10.32345/2664-4738.1.2024.01
УДК: 618.11/.13:612.01-085

MEDICAL-SOCIAL AUDIT OF REPRODUCTIVE AGE WOMEN WITH OVARIAN ENDOMETRIOMAS

Dyndar O.A. *https://orcid.org/0000-0002-0440-0410*
Dymarska O.Z. *https://orcid.org/0009-0006-7275-9405*

Bogomolets National Medical University,
MMH "Kyiv City Maternity Hospital No. 3", Kyiv, Ukraine

Dyndar@ukr.net

Background. Ovarian endometriomas account for 35% of all benign ovarian cysts and are identified in 17–44% of women with endometriosis. External genital endometriosis is diagnosed in 10–15% of women in the general population, 25–60% of patients with infertility, 80% of those with pelvic pain syndrome, and in cases of dysmenorrhea, it ranges from 40 to 60%. Priority issues include early diagnosis, management tactics, and preservation of ovarian reserve in women with ovarian endometriomas. However, risk factors contributing to the formation and progression of the disease are nonspecific, and the clinical presentation does not always correspond to the severity of the condition.

Aim. To determine the clinical and anamnestic features of women of reproductive age with ovarian endometriomas.

Materials and methods. A clinical and anamnestic examination was conducted on 120 reproductive-aged patients with ovarian endometriomas (main group) and 30 women without gynecological pathology (control group). The average age of the examined individuals was 29.5±1.3 years. The examination protocol included the assessment of objective and subjective data recorded in a specially designed questionnaire containing 300 questions. Statistical data analysis was performed using the computer program "Statistica 13.3.721."

Results. The main complaints of examined women with ovarian endometriomas include a dragging pain in the lower abdomen (82.5%), menstrual cycle disturbances (95.8%), dyspareunia (26.7%), impairment of adjacent organ functions (10.8%), periovulatory pain (12.5%), primary (30.8%), and secondary (19.2%) infertility. Early menarche was found in 48.3% of women, and late menarche in 15.8%. Dysmenorrhea was observed in 86.7%, hypermenorrhea in 73.3%, and acyclic bloody discharges in 12.5%. From the gynecological history, there is a 3.8 times higher frequency of inflammatory diseases of the appendages, a 4.1 times higher frequency of breast diseases, a 2.4 times higher frequency of abnormal uterine bleeding, a 2.3 times higher frequency of "functional" ovarian cysts and ovarian apoplexy. Endometriomas in 13.3% of patients were combined with adenomyosis, in 14.2% with uterine fibroids, and in 10.8% with intrauterine pathology.

Conclusion. The analysis of clinical and anamnestic data of women with ovarian endometriomas revealed the main complaints at the time of admission to the hospital, previous and concomitant extragenital pathology, identified the family history, status of menstrual and reproductive function, and gynecological diseases.

Key words: endometriosis, ovarian endometrioma, infertility, ovarian reserve, menstrual function, reproductive function.

Background. External genital endometriosis is diagnosed in 10–15% of women in the general population, in 25–60% of patients with infertility, and in 80% of those with pelvic pain syndrome [1, 2]. Endometriomas of the ovaries constitute 35% of all benign ovarian cysts and are diagnosed in 17–44% of all cases of endometriosis, with a prevalence of 2–20% among women of reproductive age, and up to 40–60% in cases of dysmenorrhea [3, 4]. A current issue in contemporary gynecology is the reduction of ovarian reserve in women with endometriosis. In one-third of cases, endometriomas are presented with bilateral localization, significantly worsening the prognosis of reproductive plans [5, 6, 7]. Early diagnosis remains a complex and priority issue, as per the International Association for Endometriosis, it is referred to as a "neglected" condition, given that an average of 7–8 years passes from the onset of symptoms to diagnosis [8, 9]. However, risk factors contributing to the formation and progression of the disease are nonspecific, and the clinical presentation does not always correspond to the severity of the condition [10].

Aim: To identify the clinical and anamnestic features of reproductive age women with ovarian endometriomas.

MATERIALS AND METHODS

The study involved the selection of clinical and anamnestic indicators that could be used to identify risk factors for the development of ovarian endometriomas in 120 reproductive-aged patients (main group) and 30 women without gynecological pathology (control group). The subjects in the control group had a history of two or more deliveries and sought medical attention at the Municipal Maternity Hospital No. 3 in Kyiv, which serves as the clinical base for the Department of Obstetrics and Gynecology No. 3 at the Bogomolets National Medical University. The average age of the examined women was 29.5±1.3 years and was comparable between the main and control groups.

Inclusion criteria for the main group were reproductive age (22 to 41 years), the presence of histologically confirmed ovarian endometriomas, and a cyst size or total cyst size of at least 3 cm. Exclusion criteria included patients with a history of surgical interventions on the uterus and its appendages, presence of systemic diseases, radiation or chemotherapy, pregnancy or lactation period, and psychiatric disorders.

The examination protocol for patients included the assessment of objective and subjective data: complaint collection, study of anthropometric, clinical and anamnestic data (menstrual, reproductive and sexual functions, previous gynecological and somatic diseases, surgical interventions, assessment of the duration of the disease, heredity), recorded in a specially designed questionnaire containing 300 questions. Statistical data analysis was performed using the "Statistica 13.3.721" computer program. The significance of the difference in parametric data was assessed using Student's t-test. The study results are presented as means ± standard error/standard deviation (M±SE/SD). A difference between groups was considered significant at $p<0.05$.

RESULTS AND DISCUSSION

Analysis of clinical and anamnestic data revealed that 23 (19.2%) patients in the main group had not visited an obstetrician-gynecologist and had not undergone ultrasound examination for three or more years, unlike women in the control group who regularly attended medical appointments in accordance with the standards of obstetric-gynecological care organization (2021) and the Order of the Ministry of Health of Ukraine No. 1437 dated 09.08.2022.

Analysis of anthropometric data of the examined women showed that the average height of patients in the main group was 166.3±6.2 cm, and in the control group – 165.8±6.4 cm; average body weight – 60.5±7.5 kg and 60.2±7.4 kg, BMI – 22.4±0.7 kg/m^2 and 22.3±0.8 kg/m^2, respectively, between groups ($p>0.05$). All patients had a normal body build.

The reason for hospitalization of respondents in the main group was the presence of a volumetric formation in the area of the uterus appendages, detected either during complaints or during preventive examinations at the antenatal clinic. When assessing the complaints of patients upon admission to the hospital, their nonspecific nature was noted (Table 1).

Our data indicate that 82.5% of women with ovarian endometriomas experience constant background pulling abdominal pain, often independent of the menstrual cycle phase. The pain syndrome takes on the character of acute pain 1-2 days before the expected menstruation or in the first 2 days of the menstrual cycle. This fact can be explained by the microperforation of the endometrioid cyst capsule with partial evacuation of its contents into the abdominal cavity. Among the dysfunctions of adjacent organs observed in 11.7% of patients, pain during defecation and a tendency to constipation during menstruation were more common, associated with the presence of partial involvement of the pararectal and uterorectal spaces by the adjacent endometrioma infiltrative form, and as a result, the development of adhesion processes. Menstrual function disorders occurred in 95.8% of women and manifested mainly as dysmenorrhea. Periovulatory pain was

Table 1

Characteristics of Complaints in Examined Women (abs.nom., %)

Characteristics of Complaints	Groups of Women			
	Main group, n=120		Control group, n=30	
	Abs.	%	Abs.	%
Abdominal pain – Dull – Periodically Acute	 99 100	 82,5 83,3	 1 1	 3,3** 3,3**
Abdominal Distension	4	3,3	1	3,3
Periodic Weakness	4	3,3	1	3,3
Dizziness	3	2,5	1	3,3
Dysfunction of Adjacent Organs	14	11,7	1	3,3*
Menstrual Dysfunction	115	95,8	1	3,3**
Temperature Response	5	4,2	0	0
Periovulatory Pain	15	12,5	1	3,3**
Dyspareunia	32	26,7	1	3,3**
Absence of Complaints	5	4,2	22	73,3**

Note: ** - significance established when comparing between the control and main groups (p<0.001)
*** - significance established when comparing between the control and main groups (p<0.05).**

noted in 12.5% of patients, and sexual dysfunction in the form of dyspareunia was observed in 26.7% of respondents. In the control group, sexual and menstrual function disorders were rare (p<0.05).

Complaints of abdominal distension, weakness, and periodic dizziness were infrequently reported in women from both observation groups. These complaints were mild, did not significantly impact the quality of life, and were not the primary reason for seeking medical attention at the women's consultation clinic. The absence of complaints was noted in only 4.2% of patients with ovarian endometriomas, among whom hospitalization occurred as part of routine examination due to the detection of pathology.

In collecting the familial history, it was found that among the mothers of the women examined, 17.5% had experienced ovarian and breast tumors, 15.8% had uterine fibroids and intramural pathology, 31.7% of second-line relatives had a history of endometriosis, 23.3% had manifestations of polycystic ovary syndrome and infertility, 21.7% had menstrual cycle disorders, and 14.2% had thyroid gland pathology. The social status of all participants was assessed as satisfactory and comparable between the groups.

Analysis of the past and concurrent extragenital pathology indicates that diseases of he respiratory system (chronic obstructive bronchitis), gastrointestinal tract (chronic gastritis, peptic ulcer disease, chronic colitis), cardiovascular system (hypertension, neurocirculatory dystonia, varicose veins), hepatobiliary system, and childhood infectious diseases did not significantly differ in frequency and structure between respondents in the main and control groups (p>0.05) (Table 2).

Among urinary system diseases, which occurred in 13.3% of patients in the main group, chronic pyelonephritis and cystitis predominated, occurring twice as often as in women in the control group (p<0.05).

No significant differences were found between women in the main and control groups regarding the frequency and types of surgical interventions (p>0.05).

In assessing menstrual function in the examined patients of the main group, various disturbances in the establishment and course of the menstrual cycle were identified. It is worth noting

Table 2

Frequency and Structure of Extragenital Pathology in Examined Women (abs.nom., %)

Extragenital Pathology	Groups of Women			
	Main group, n=120		Control group, n=30	
	abs.	%	abs.	%
Respiratory System	11	9,2	3	10,0
Gastrointestinal Tract	17	14,2	4	13,3
Cardiovascular System	19	15,8	5	16,7
Urinary System	16	13,3	2	6,7*
Hepatobiliary System	7	5,8	2	6,7
Childhood Infectious Diseases	34	28,3	8	26,7

Note: * - significance established when comparing between the control and main groups (p<0.05).

Table 3

Characteristics of Menstrual Function in Examined Patients (abs.nom., %)

Characterization of Menstrual Function	Main group, n=120		Control group, n=30	
	abs.	%	abs.	%
Menarche:				
-early	58	48,3	2	6,7**
-timely	43	35,8	27	90*
-late	19	15,8	1	3,3*
Menstruation				
-regular	112	93,3	28	93,3
- hypomenorrhea	5	4,2	2	6,7
- opsomenorrhea	5	4,2	1	3,3
- hyperpolimenorrhea	88	73,3	2	6,7**
- dysmenorrhea	104	86,7	2	6,7**
- acylic bloody discharges	15	12,5	1	3,3*
- normomenorrhea	5	4,2	28	93,3**

Note: ** - significance established when comparing between patients in the control and main groups p<0.001).
- significance established when comparing between patients in the control and main groups (p<0.05).

that early menarche was characteristic of almost half of the patients with ovarian endometriomas (48.3%), timely menarche was noted in 35.8%, and late menarche in 15.8% of respondents, in contrast to women in the control group (p<0.05) (Table 3).

For patients with ovarian endometriomas, disturbances in the menstrual cycle, such as dysmenorrhea (86.7%) and hyperpolimenorrhea (73.3%), were characteristic compared to women in the control group (6.7%) (p<0.001). A regular menstrual cycle was observed in the majority (93.3%) of respondents in the main group. The duration of the menstrual cycle ranged from 23 to 31 days (29.2±0.5 days), and the average duration of menstrual bleeding was 6.5±0.2 days (3–7 days). These parameters did not differ significantly from those of women in the control group (p>0.05).

Acylic bloody discharges from the genital tract were noted in 12.5% of patients in the main group, whereas in women in the control group, they occurred in only one case (3.3%) (p<0.05). This situation necessitated the performance of hysteros-

copy with subsequent hysteroscopic resection in 13 (10.8%) patients with ovarian endometriomas. During this procedure, glandular hyperplasia was detected in 4 (30.8%) women, glandular-cystic hyperplasia of the endometrium in 5 (38.5%), and endometrial polyps in 4 (30.8%). The excised material underwent histological verification. About 35% of women in the main observation group reported serous bloody discharges appearing a few days before menstruation, indicating a mucous nature.

The clinical picture significantly depends on the duration of the disease, the spread of the pathological process, and the psychoemotional characteristics of the woman. The duration of the disease ranged from 2.1 to 4.4 years, calculated from the onset of the first complaints in patients. The number of patients with a disease duration of 2.1 to 2.5 years was 45 (37.5%), while those with a duration of 2.6 to 4.4 years were 75 (62.5%).

An analysis of the reproductive function of women with endometrioid cysts of the ovaries

Table 4

Characteristics of the reproductive function of the examined patients (abs., %)

Characteristics of the reproductive function	Main group, n=120		Control group, n=30	
	abs.	%	abs.	%
Pregnancies	41	34,2	30	100*
Childbirth	15	12,5	30	100*
- Full-term	12	10,0	29	96,7*
- Preterm	3	2,5	1	3,3*
Induced abortions	13	10,8	1	3,3*
Miscarriages	8	6,7	1	3,3*
Non-viable pregnancy	7	5,8	1	3,3*
Using contraception	21	17,5	26	86,7*
Infertility:	47	39,2	0	0
- primary	30	25,0	0	0
- secondary	17	14,2	0	0

Note: * - significance established when comparing patients in the control and main groups (p<0.05).

Table 5

Frequenc and Structure of Gynecological Disorders in Examined Women

Gynecological diseases	Main group, n=120		Control group, n=30	
	abs.	%	abs.	%
Cervical diseases	22	18,3	11	36,7*
Adenomyosis	16	13,3	0	0
Uterine fibroids	17	14,2	2	6,7*
Diseases of the endometrium	13	10,8	1	3,3*
Abnormal uterine bleeding	19	15,8	2	6,7*
Inflammatory diseases of the uterine appendages	45	37,5	3	10,0*
"Functional" cysts	9	7,5	1	3,3*
Ovarian apoplexy, painful form	14	11,7	1	3,3*
Breast gland disorders	33	27,5	2	6,7*

Note: * - significance established when comparing patients in the control and main groups (p<0.05).

revealed that 39.2% suffered from infertility, of which 63.8% had primary infertility, and 36.2% had secondary infertility (Table 4).

As our data demonstrate, primary infertility occurred 1.8 times more often than secondary infertility ($p<0.05$), indicating that external genital endometriosis is, to some extent, an independent factor for infertility. In the medical history, 41 (34.2%) patients in the main group had pregnancies, but only 15 (36.6%) ended with childbirth. In 10.8% of women in the main group, pregnancies ended with artificial abortions, in 6.7% – spontaneous abortions, and in 5.8% – pregnancies that did not develop, in contrast to patients in the control group ($p<0.05$).

In the analysis of the gynecological conditions, significant differences were found between women in the main and control groups (Table 5). A notable observation is the high frequency of inflammatory diseases of the appendages of the uterus (37.5%) in patients in the main group, exceeding the indicator in women of the control group by 3.8 times ($p<0.05$). Cervical diseases diagnosed as erosion, leukoplakia, ectropion occurred twice as often in patients in the control group compared to the main group, possibly associated with parity of pregnancies and childbirth ($p<0.05$). At the same time, fibrocystic mastopathy was present in 4.1 times more women in the main observation group (27.5%), compared to the control group (6.7%) ($p<0.05$).

According to the survey data, 15 (12.5%) patients with ovarian endometriomas had previously received hormonal therapy with progesterone preparations from the 16th to the 25th day of the cycle for 3 months. Among them, 4 (26.7%) noted a partial short-term positive effect, such as a reduction in pain, regression, or the absence of growth of formations, while in 11 (73.3%), hormonal therapy was ineffective.

It is necessary to note that in 13.3% of patients with ovarian endometriomas, there was a combination with adenomyosis, in 14.2% with uterine fibroids, and in 10.8% with intrauterine pathology, unlike women in the control group, where isolated cases of uterine fibroids (6.7%) and endometrial disease (3.3%) were found, occurring 2.1 and 3.3 times less frequently, respectively ($p<0.05$).

Abnormal uterine bleeding was characteristic for 15.8% of patients in the main group, exceeding the indicator of the control group of women by 2.4 times ($p<0.05$). "Functional" ovarian cysts were present in the medical history of 7.5% of women in the main group, which is 2.3 times higher than the indicator in the control group. 11.7% of patients in the main observation group sought help for the painful form of ovarian apoplexy, unlike the control group, where this pathological condition occurred in one case (3.3%) ($p<0.05$).

CONCLUSION

1. The main complaints of reproductive-aged women with ovarian endometriomas include: persistent lower abdominal pain (82.5%), menstrual cycle disturbances (95.8%) ($p<0.001$), dyspareunia (26.7%), dysfunction of adjacent organs (10.8%), periovulatory pain (12.5%), primary (30.8%), and secondary (19.2%) infertility ($p<0.05$).
2. The analysis of menstrual function revealed early menarche in 48.3% of women with ovarian endometriomas and late menarche in 15.8% ($p<0.05$). Menstrual cycle disturbances included dysmenorrhea (86.7%) and hypermenorrhea (73.3%) ($p<0.001$), along with acyclic bloody discharges in 12.5% ($p<0.05$).
3. Among the transferred gynecological diseases in women with ovarian endometriomas, there is a notable 3.8 times higher frequency of inflammatory diseases of the appendages of the uterus, a 4.1 times higher occurrence of diseases of the mammary glands, a 2.4 times higher incidence of abnormal uterine bleeding, a 2.3 times higher occurrence of "functional" ovarian cysts, and ovarian apoplexy ($p<0.05$). Additionally, 13.3% of patients with ovarian endometriomas were combined with adenomyosis, 14.2% with uterine fibroids, and 10.8% with intrauterine pathology.

Acknowledgments: we would like to thank the management of MNE KCMH №3 for the opportunity to examine and treat patients of reproductive age with ovarian endometriomas.

Conflict of interests. The authors of this man-

uscript claim that there is no conflict of interest during the research and writing of the manuscript.

Sources of funding. The execution of this study and the writing of the manuscript were accomplished without external funding.

REFERENCES

1. Zondervan KT, Becker CM, Koga K, Missmer SA, Taylor RN, Viganò P. [Endometriosis.NatRev Dis Primers]. 2018; 4 (1): 9. DOI:10.1038/s41572-018- 0008-5.
2. Gruber TM, Mechsner S. [Pathogenesis of Endometriosis: The Origin of Pain and Subfertility]. Cells. 2021; 10 (6): 1381. DOI: 10.3390/cells10061381
3. Pakharenko LV, Basiuha IO, Zhurakivskyi VM, Lasytchuk OM, Kurtash NYa. [The importance of the microflora of the genital tract in the development of endometriosis]. Women's reproductive health .2023; (2): 21–25. [In Ukrainian]. DOI:10.30841/2708-8731.2.2023.278155 .
4. Symons LK, Miller JE, Kay VR, Marks RM, Liblik K, Koti M, et al. [The Immunopathophysiology of Endometriosis]. Trends Mol Med. 2018; 24 (9): 748- 62. DOI: 10.1016/j.molmed.2018.07.004.
5. Tolstanova G [A differentiated approach to the treatment of external genital endometriosis as a prevention of relapses, a woman's productive health]. Women's reproductive health. 2022;(2):66–72. [In Ukrainian]. DOI:10.30841/2708-8731.2.2022.261813.
6. Prescott J et al. A prospective cohort study of endometriosis and subsequent risk of infertility. Hum. Reprod. 2016. 31: 1475-1482. DOI: 10.1093/humrep/dew085
7. Farland L. V. et al. Associations among body size across the life course, adult height and endometriosis. Hum. Reprod. 2017; 32: 1732-1742. DOI: 10.1093/humrep/dex207.
8. Medvedyev MV, Pokrovenko DA. [A modern view of the etiology, pathogenesis and diagnostic possibilities of external genital endometrios]. Cited: Medicni perspektivi. 2019; 24 (1): 21-30. [In Ukrainian]. DOI:10.30841/2708-8731.2.2022.261813.
9. Derzhavnyy ekspertnyy tsentr MOZ Ukrayiny IOZU https://www.dec.gov.ua › mtd. Unifikovanyy klinichnyy protokol pervynnoyi, vtorynnoyi (spetsializovanoyi) ta tretynnoyi (vysokospetsializovanoyi) medychnoyi dopomohy. Taktyka vedennya patsiyentok z henital'nym endometriozom.
10. Genital endometriosis. Available on: https://www.dec.gov.ua/mtd/genitalnyj-endometrioz/
11. Beniuk VO, Dyndar OA, Usevich IA, Govseev DO, Honcharenko VM, Kovaluk TV, Hychka NM [Alhorytmy v akusherstvi i hinekolohiy]. Kyyiv, biblioteka "Zdorov'ya Ukrayiny". 2019: 540 [In Ukrainian]. ISBN 978-617-7100- 47-7.

МЕДИКО-СОЦІАЛЬНИЙ АУДИТ ЖІНОК РЕПРОДУКТИВНОГО ВІКУ З ЕНДОМЕТРІОМАМИ ЯЄЧНИКІВ

Диндар О.А., Димарська О.З.

Національний медичний університет імені О. О. Богомольця,
КНП «Київський міський пологовий будинок №3», Київ, Україна

Dyndar@ukr.net

Актуальність. Ендометріоми яєчників складають 35% від усіх доброякісних кіст яєчників та виявляються у 17 – 44% жінок з ендометріозом. Зовнішній генітальний ендометріоз діагностується у 10–15% жінок із загальної популяції, у 25–60% пацієнток з безпліддям, у 80% хворих з синдромом тазових болей та у разі дисменореї – від 40 до 60%. Пріоритетними є питання ранньої діагностики, тактики ведення та збереження овариального резерву у жінок з ендометріомами яєчників. Разом з тим, фактори ризику, що сприяють формуванню і прогресуванню хвороби є неспецифічними, а клінічна картина не завжди відповідає тяжкості захворювання.

Ціль: визначити клініко-анамнестичні особливості жінок репродуктивного віку з ендометріомами яєчників.

Матеріали та методи. Проведено клініко-анамнестичне обстеження 120 пацієнток репродуктивного віку з ендометріомами яєчників (основна група) та 30 жінок без гінекологічної патології (контрольна група). Середній вік обстежених склав 29,5±1,3 роки. Протокол обстеження пацієнток включав оцінку об'єктивних та суб'єктивних даних, що заносили до спеціально разробленої анкети, яка містить 300 запитань. Статистична обробка даних виконана з застосуванням комп'ютерної програми «Statistica 13.3.721».

Результати. Основні скарги обстежених жінок з ендометріомами яєчників: тягнучий біль внизу живота (82,5%), порушення менструального циклу (95,8%), диспареунія (26,7%), порушення функцій суміжних органів (10,8%), периовуляторний біль (12,5%), первинне (30,8%) та вторинне (19,2%) безпліддя. У 48,3% жінок з ендометріомами яєчників виявлено раннє та у 15,8% пізнє менархе, дисменорея (86,7%), гіперполіменорея (73,3%), ациклічні кров'янисті виділення (12,5%). Із гінекологічного анамнезу у обстежених жінок має місце в 3,8 рази більша частота запальних захворювань додатків матки, в 4,1 рази захворювань молочних залоз, в 2,4 рази аномальних маткових кровотеч, в 2,3 рази «функціональних» кіст та апоплексії яєчників, у 13,3% пацієнток ендометріоми яєчників поєднувались з аденоміозом, у 14,2% – з міомою матки, у 10,8% - з внутрішньоматковою патологією.

Висновки. Проведений аналіз клініко-анамнестичних даних жінок з ендометріомами яєчників виявив основні скарги на момент поступлення в стаціонар, перенесену та супутню екстрагенітальну патологію, визначив спадковий анамнез, стан менструальної та репродуктивної функції, гінекологічну захворюваність.

Ключові слова: ендометріоз, ендометріома яєчника, безпліддя, овариальний резерв, менструальна функція, репродуктивна функція.