

Original Article

Assessment of quality of life in women with combined gynecological pathology

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Abstract

Despite the centuries-old history of studying various aspects of endometriosis, this disease remains a central medical and social problem. Endometriosis is a widespread pathology that affects 10 to 30% of reproductive-aged women, causing reproductive function failure, invalidism, and inferiority complex. The aim of this study is to determine the level of quality of life in women with combined gynecological pathology. The clinical part of the work was carried out at the Ternopil regional clinical perinatal center “Mother and Child”. The study included 102 patients with genital endometriosis, aged from 27 to 45 years. Adenomyosis and fibrocystic mastopathy diagnosis was based on complaints, medical history, objective data, gynecological examination, and instrumental examination. The research groups were formed taking into account the polymorphism of genes in the detoxification system. Group I included 75 individuals with GSTT1del and GSTM1del. Group II consisted of 27 individuals who did not have deletions in both phase II detoxification system genes. According to our observations, these diseases significantly determine the indicators of the quality of life of sick women, which requires new approaches to the treatment of such patients in order to reduce the reproductive potential of the nation.

Keywords: genital endometriosis, fibrocystic mastopathy, quality of life.

Introduction

The issue of reproductive system diseases is one of the highest priorities in modern medicine. Genital endometriosis is a condition that leads to impaired fertility and persistent loss of working capacity, resulting in decreased quality of life and social adaptation for patients [1]. Among the leading pathologies of the reproductive system today is endometriosis, the frequency of which in the female population ranges from 10% to 30%. According to global observations [2, 3], we have learned that the processes occurring in the breast are closely related to the reproductive system's function. It is known that the breast is not only a target organ for steroid hormones but also for pituitary hormones, thyroid hormones, adrenal glands etc. This significantly increases the likelihood of breast pathology develop-

ment in patients with hormonal-dependent gynecological pathology.

According to the literature [4–6], fibrocystic mastopathy occurs in 15–25% of women of reproductive age and in 76–98% of patients with gynecological diseases. Worldwide, over 650,000 cases of breast cancer are registered each year, and in Ukraine, over 16,000 cases. Benign breast diseases are a precondition for the development of oncopathology. Thus, breast cancer occurs 3–5 times more frequently against the background of benign breast diseases. Over the past years, in all economically developed countries worldwide, the concept of “quality of life” has gained widespread use. However, until recently, this term has not had a clear, universally accepted definition. According to the World Health Organization, quality of life is defined as “an individual's perception of their position in life in the context of



the culture and value systems in which they live and in relation to their goals”. As of today, this definition has somewhat evolved and is now articulated as follows: “Quality of life is an individual’s perception of their life situation within the context of the culture and value systems in which they exist, in relation to their goals, expectations, standards, and interests” (Table 1).

The diagnosis and treatment of genital endometriosis are important aspects of women’s health, and these aspects are highlighted in the scientific works of authors such as A.V. Boychuk, O.P. Hnatko, and I.Z. Gladchuk.

However, it is important to note that the assessment of the quality of life of women with adenomyosis and fibrocystic mastopathy is another important aspect of women’s health that is not yet fully systematized and requires further study. Quality of life assessment can help understand how these conditions impact patients and their physical and mental well-being and can contribute to the development of more effective treatment and support strategies.

Research in this area can help improve our understanding of the impact of adenomyosis and fibrocystic mastopathy on women’s quality of life and develop individualized treatment and support strategies for each patient.

The purpose of the study is to determine the level of quality of life in women with combined gynecological pathology.

Material and methods

Study design and patients

The clinical part of the work was carried out on the basis of the Ternopil regional clinical perinatal center “Mother and Child”. The laboratory diagnostics were carried out in the interdepartmental scientific clinical laboratory of “I. Horbachevsky Ternopil National Medical University”. The study included 102 patients with genital endometriosis, aged from 27 to 45 years. The

bioethics commission of “I. Horbachevsky Ternopil National Medical University” found violations of ethical norms in research. All patients had written informed consent was obtained for venous blood and used for scientific work. For medical genetic research, 3–5 ml of venous blood was taken from v. cubitalis under standard conditions in the morning, fasting in a special vacuum system – 3% EDTA (ethylenediaminetetraacetic acid). The polymerase chain reaction investigated the frequency of polymorphic variants of genes GSTT1 and GSTM1. DNA extraction from peripheral blood was performed using the test system “AmpliSens” according to the instructions, which are attached. Identification deletion polymorphism in the genes GSTT1 and GSTM1 (glutathione-S-class transferases T1 and M1) was performed by PCR, LPB “Neogen”, Kyiv [7, 8].

During the clinical examination, we investigated complaints and detailed their manifestations in the dynamic development of the disease. We took into account the data from obstetric and gynecological history and individual characteristics of the endocrine and reproductive functions of the female body. We also paid attention to previously performed surgical interventions on the uterus and appendages for gynecological pathology and diseases of the pelvic organs, the use of oral contraceptives, and concomitant somatic pathology.

Special attention was paid to complaints such as dysmenorrhea, the presence of dyspareunia, dysfunction of adjacent organs, intermenstrual bloody discharge from the external genitalia, and disturbances in the psychoemotional state [9]. The severity of pain was assessed using the method of C. M. Mac Lavery and R. W. Shay (Table 2).

A visual analog scale (VAS) by Likert was used to assess the intensity of mastalgia. To evaluate the patients’ pain sensations, a scale ranging from 0 to 10 was presented. Women marked a number that best corresponded to the strength of their pain sensation. The grading is based on the presence of boundaries in pain severity categories, where qualitative and quantitative changes in the impact of pain on the patient’s quality of life occur.

Table 1: Criteria and components of human quality of life.

Criteria	Components
Physical	Strength, energy, fatigue, discomfort, sleep, rest
Psychosomatic reactions	Emotionality, anxiety
Vegetovascular reactions	Tachycardia

Table 2: Assessment of Pain Syndrome by C.M. Mac Lavery, R.W. Shay.

The cause of pain	Pain intensity	Points
Pelvic pain not associated with sexual intercourse or menstruation	Absence of pain sensations	0
	Mild pain, occasional discomfort or pain before menstruation	1
	Moderate pain and noticeable discomfort throughout the menstrual cycle	2
	Severe pain throughout the entire menstrual cycle	3
Dysmenorrhea	Absence of pain sensations	0
	Mild pain, with reduced ability to function	1
	Moderate pain; patient stays in bed for several hours	2
Dyspareunia	Severe pain, patient stays in bed for the entire day	3
	Absence of pain sensations	0
	Mild of pain sensations	1
	Moderate pain that causes interruption of sexual intercourse	2
	Severe pain that leads to avoidance of sexual intercourse	3

Results

At the stage of the prospective study, it was found that the average age of the examined patients ranged from 27 to 45 years, corresponding to the most active period of a woman's reproductive function. Among the patients examined with adenomyosis, urban women predominated at 88.0%, and 70.0% were engaged in demanding intellectual work. Analyzing the family history of first-degree relatives, we found that 73.5% had a significant gynecological history: familial endometriosis in 52 (51.0%), uterine leiomyoma in 8 (7.8%), pelvic organ tumors in 21 (20.6%), and dyshormonal breast diseases in 64 (62.7%). According to the calculations of the Odds ratio, the risk of developing genital endometriosis in women with a significant family history of this condition was increased by 2.8 times.

The diagnosis of adenomyosis and fibrocystic mastopathy was based on complaints, medical history, objective data, gynecological examination, and instrumental examination. The research groups were formed taking into account the polymorphism of genes in the detoxification system. Group I included 75 individuals with GSTT1del and GSTM1del. Group II consisted of 27 individuals who did not have deletions in both phase II detoxification system genes.

We analyzed the intensity of pain syndrome in women from the studied groups, and it was found that chronic pelvic pain of varying severity was observed in 71 (94.6%) patients of the first group and 24 (88.9%) patients of the second group. Dysmenorrhea was di-

agnosed in 70 (93.3%) women of the first group and 19 (70.4%) women of the second group. Menstrual dysfunction was detected in 27 (36.0%) women of the first group and 7 (25.9%) women of the second group. Dyspareunia was diagnosed in 42.6% and 40.7% of patients in the respective groups. Regarding gastrointestinal disorders, genital endometriosis manifested with dyschezia in 38.6% of individuals in the first group and in 22.2% of patients in the second group. According to the examination results, mastalgia was observed in 48 (64.0%) women in group I and in 12 (44.4%) patients in group II.

Among the psychoemotional and vegetative-vascular symptoms (Table 1) in women from both study groups, the most frequently noted were fatigue (group I – 73.5% and group II – 48.0%), sleep disturbances (group I – 77.3%, group II – 33.3%), irritability and mood swings (85.0% and 62.9% respectively), and tachycardia (73.5% of patients in group I and 62.9% of women in group II).

Discussion

Endometriosis remains one of the most enigmatic and challenging issues in modern gynecology, ranking third among gynecological disorders. Given that in the current socio-economic conditions increased the percentage of women who maintain relevant reproductive function at the age of over 40 years, which encourages further study of the etiology and pathogenesis of endometriosis, which is a growing problem in Ukraine both

in scientific and practical terms [10, 11]. In recent years, the concept of “quality of life” has gained wide application in all economically developed countries of the world, but until now, this term has not had a clear, universally accepted definition. Health is the most important value not only for an individual but also for society as a whole. Therefore, organizing measures aimed at timely diagnosis and prevention of diseases of the reproductive system in women of active reproductive age remains a pressing medical and social issue that requires resolution at the state level [12]. Benign conditions of the reproductive system significantly reduce the physical and psychological quality of life indicators in affected women, which necessitates new approaches to the management of such patients in order to preserve the reproductive potential of the nation.

Conclusion

According to our observations, we found that women with combined gynecological pathology exhibited significant psychoemotional anxiety, including irritability, frequent mood swings, and rapid fatigue, which leads to an increased focus on somatic sensations such as mastalgia, dyspareunia, dyschezia, and others. Thus, benign diseases of the reproductive organs significantly reduce both physical and psychological quality of life for affected women, which requires new approaches to the management of such patients to preserve the reproductive potential of the population.

Conflict of interest

The authors declare no conflict of interest.

Ethics approval

The approval for this study was obtained from the Ethics Committee of the Ternopil National Medical University, Ternopil, Ukraine (approval ID: protocol No. 81, dated October 12, 2023).

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