Impact of endometriosis on the quality of sexual life of women of reproductive age in Poland

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Abstract

Aim. The aim of this study is to demonstrate the impact of endometriosis on the quality of sexual life of women in Poland, through a comparative analysis of a population of healthy women and those struggling with the condition.

Methods. The study was conducted using the validated FSFI questionnaire and the author's supplementary questions. Information about the survey was made available on social networks and groups for women with endometriosis, as well as to healthy women constituting a control group. The CAWI technique was used in the study. The survey consisted of questions divided into modules: metric data, having endometriosis and previous treatment, sexuality before and after possible treatment, and for healthy women - current assessment of the quality of sexual life.

Results. Endometriosis negatively affects the quality of sexual life of women of reproductive age in Poland. Decreased quality of sexual life occurring in women with endometriosis indicates the presence of clinically significant sexual dysfunctions. Dyspareunia (a type of sexual dysfunction that manifests itself as pain during intercourse (Lew-Starowicz, Lew-Starowicz, & Skrzypulec-Plinta, 2020)) is significantly more common in women with endometriosis than in healthy women in Poland. 69 percentage points more women indicate the presence of dyspareunia when suffering from endometriosis compared to healthy women. Treatment reduces pain symptoms in women suffering from endometriosis. 24 percentage points more women show no symptoms of dyspareunia after treatment, compared to women before treatment. The presence of endometriosis does not significantly affect women's sense of sexual attractiveness. Women with endometriosis, despite the presence of pain, engage in sexual activity as often as healthy women. Treatment of endometriosis, both pharmacological and surgical, increases the quality of sexual life of women of reproductive age in Poland.

Keywords. Endometriosis, quality of life, sexuality, dyspareunia, sexual attractiveness, sexual activity

Introduction

Endometriosis still remains the second most common (5-30%) gynaecological disease of reproductive women, including 50% of infertile women and 30% of women with chronic pelvic pain (Radowicki & Szyłło, 2016). There are 7 million women with endometriosis in the US and 70 million women worldwide (Pertyńska-Marczewska, 2018). Unfortunately, it is very often diagnosed several years late, when the disease is already in its late stages. There are two main treatments for endometriosis - surgical and pharmacological. Statistics also show that endometriosis is diagnosed much less frequently than it actually occurs, it is estimated that 20% of the female population may suffer from endometriosis asymptomatically (Wyderka, Zalewska, & Szeląg, 2011)(Basta, Brucka, & Górski, 2012).

Nowadays, the impact of individual disease entities on the patient's quality of life is of increasing interest to researchers. The patient's quality of life is a very important aspect assessed and examined during the treatment and diagnosis process of many diseases, especially chronic diseases. Endometriosis, as a condition that manifests itself in pain at times, certainly has an impact on the lives of patients who struggle with this condition. Of the many components of quality of life, the subject of this study will be quality of life, endometriosis patients related to sexuality.

Women with endometriosis rate their quality of life, including sexual functioning, lower than women without endometriosis, and also lower than women with other gynaecological conditions. In addition, they perceive their body negatively and distance themselves from it as a source of pain (Sroślak, Ziętalewicz, & Pyrcz, 2017).

However, studies indicate that both surgical treatment and pharmacotherapy are effective treatments for endometriosis and, by reducing pain symptoms, contribute to improving the sexual functioning of women treated for endometriosis (Sroślak, Ziętalewicz, & Pyrcz, 2017).

The available literature confirms the occurrence of impaired: physical, emotional, social and cognitive functioning in women diagnosed with endometriosis. Recent reports state that costs associated with the treatment of endometriosis are increasing worldwide. These are comparable to the expenses for the treatment of chronic diseases such as diabetes and bronchial asthma (Radowicki & Szyłło, 2016). This is often due to a diagnosis made too late, which is caused by many women downplaying their pain, treating it as a taboo subject. This has a huge impact on public health not only in Poland, but also worldwide. Therefore, there is a need to educate, increase women's awareness of this condition in order to speed up diagnosis and begin treatment of the disease at an early stage (Radowicki & Szyłło, 2016).

Definitions

Endometriosis - the presence of active glands and lining of the endometrium, or endometrium, in locations other than the uterine cavity (Brębborowicz, 2020).

It is a chronic, progressive and oestrogen-dependent condition most likely of inflammatory origin. Ectopic epithelium is localised in areas such as the ovaries, uterine myometrium, pelvic peritoneum, uterine ligaments, sinus of Douglas, vagina, terminal ileum, urinary bladder or surgical scars (especially after caesarean section). Hormones of the hypothalamic-pituitary-ovarian axis act on abnormal foci of the endometrium in the same way as on the normal membrane in the uterine cavity. This results in cyclical growth and exfoliation of the endometrium (Radowicki & Szyłło, 2016).

Health-related quality of life (HRQL) - includes elements of personal assessment of physical, emotional, social and cognitive functioning and subjective perception of overall well-being. It is an individual's perception of his or her place in life, conditioned by the culture and value system the individual follows with respect to goals, expectations, norms and interests (WHO) (Wilson & Cleary, 1995).

Quality of women's sexual life - a concept at the intersection of medicine and the social sciences, denoting the achievement of sexual satisfaction and the occurrence of possible disorders in this sphere running at different levels. It also includes a sense of attractiveness and defines the sexual needs of the individual (Skrzypulec-Plinta, Zborowska, & Parka, 2019) Reproductive age - the age at which a woman is (biologically) capable of giving birth to a child. In Poland's temperate climate zone, the age of childbearing is considered to be 15-49 years (Holzer, 2006).

Material and methods

Research issues.

- Does and how does endometriosis affect the quality of sexual life of women of reproductive age in Poland?
- By how many percent is dyspareunia (a type of sexual dysfunction that manifests itself as pain during intercourse) more common in women suffering from endometriosis compared to healthy women in Poland?
- Do women suffering from endometriosis find themselves as sexually attractive as healthy women?
- What is the frequency of sexual intercourse among women with endometriosis compared to healthy women?
- Does the treatment of endometriosis positively improve the quality of sexual life of women with this condition?

Research hypotheses

- The occurrence of endometriosis significantly affects the quality of sexual life of women of reproductive age in Poland. Women suffering from this disease show a lower quality of sexual life.
- Women with endometriosis are more likely to indicate the occurrence of dyspareunia compared to healthy women.
- Women with endometriosis consider themselves less sexually attractive than healthy women.

- Healthy women engage in sexual activity on average 1-2 times per week, while women with endometriosis indicate engaging in sexual intercourse 1-2 times per month or less frequently (avoiding intercourse).
- Women who have received treatment indicate an increase in the quality of sexual life compared to before treatment.

Study sample

Sample selection

The sampling used in the study is purposive.

Sample size and sample characteristics

The study sample - 11 women with newly diagnosed endometriosis and 54 women who had undergone a minimum of 6 months prior pharmacological and/or surgical treatment (the women are members of Facebook groups for people suffering from this condition) and the control sample - 70 healthy women - without diagnosed endometriosis. A total of 135 women - of Polish origin - took part in the study.

The survey questionnaire was aimed at women of reproductive age, i.e. from 15 to 49 years old. After analysing the results of the questionnaire, the youngest of the respondents was 21 years old and the oldest 49 years old. The average age of all female respondents was 32 years. The age distribution of the patients was 24% women aged 15-25 years (39 respondents - 33 healthy and 6 sick), 47% women aged 26-37 years (64 women - 25 healthy and 39 sick) and 24% women between 38 and 49 years (32 respondents - 12 healthy and 20 sick). The mean age of healthy female respondents was 25 years (MIN. 21 years, MAX. 49 years). The mean age of the women with endometriosis who took part in the study was: 34 years (MIN. 22 years, MAX. 49 years).

Time, place and course of the survey, construction of the questionnaire

The study was conducted from May 2023 to July 2023. Each female respondent (both representative of the control and research group) completed a voluntary, anonymous questionnaire - FSFI (Female Sexual Function Index) - together with additional questions from the study author. This allowed answers to the research questions to be compiled.

The CAWI (Computer Assisted Web Interview) technique was used to carry out this empirical study, allowing respondents to complete the online form voluntarily and anonymously.

The questionnaire began with a metric to verify the respondent's past history (healthy, sick untreated, sick treated), her age and, if the patient indicated that she had been treated, the method of treatment. The questionnaire was based on the validated FSFI (Female Sexual Function Index), which contains 19 questions divided into 6 domains. These focus on: desire (questions 1-2), arousal (questions 3-6), lube (questions 7-10), orgasm (questions 11-13), sexual

satisfaction (questions 14-16) and complaints of pain related to sexuality (questions 17- 19). Respondents in each question marked answers on a scale from 0/1 to 5. After counting the marked values, we determined the scores on a scale from 0-6 for the respective domain and summarised the overall assessment of sexual functioning on a scale from 2 to 36 points, where a score lower or equal to 26 points indicates the presence of significantly clinical sexual dysfunctions. Further questions, prepared by the authors, concerned the frequency of sexual activity per month, as well as the respondents' sense of sexual attractiveness. Women who had started treatment or undergone surgery a minimum of six months earlier were asked to complete a questionnaire on the current situation regarding quality of sexual life, as well as a retrospective return to the state before treatment, in order to be able to compare the post- treatment and pre-treatment state, as well as to illustrate the quality of sexual life of women suffering from endometriosis without implemented pharmacological or surgical management.

Results of own research dyspareunia and pain complaints

To investigate the frequency of dyspareunia (a type of sexual dysfunction that manifests itself in pain during intercourse), the questionnaire asked female respondents three questions, the scores of which, according to the premise of the questionnaire, should be converted by a factor of 0.4, thus obtaining a scale of 0-6. The higher the score, the better the functioning in a given domain. The following questions were asked:

- 'How often did you experience discomfort or pain during penetration during sexual intercourse?',
- 'How often did you experience discomfort or pain during penetration and throughout sexual intercourse until the end?',
- 'How would you describe the degree of discomfort or pain during penetration and the entire sexual intercourse up to its completion?'.

In the group of healthy women (n=70), the results show that pain during sexual activity is never or almost never in 39 respondents, which is 56%. Based on the results of the question: 'How often did you experience discomfort or pain during penetration and throughout sexual intercourse until the end?'

The average score on a scale of 0-6, where 6 means no pain is 4.98, showing that in healthy women the phenomenon of pain occurs occasionally, more often at the beginning than during the entire intercourse. Based on the three questions above. [Fig. 1.]

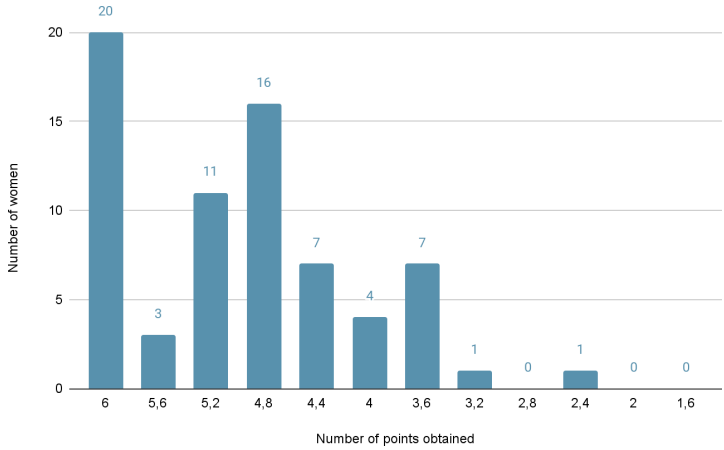

Figure 1
Healthy women - incidence of pain related to sexuality (6 - no complaints, 0 – no attempts to have intercourse)

Assuming that the value for which we can call sexual functioning related to the absence of pain satisfactory is 4.4 (obtaining a total of a minimum of 11 points in questions 17-19, based on the average calculated from the FSFI questionnaire, where 26/36 is the threshold for the quality of women's sexual life), we note that 57 out of 70 healthy women (81%) fall into this group.

Comparing this situation with women with endometriosis who have not yet started treatment, we find that a value of 4.4 or higher is obtained by only 13 out of 65 women (13 %). [Fig. 2.]

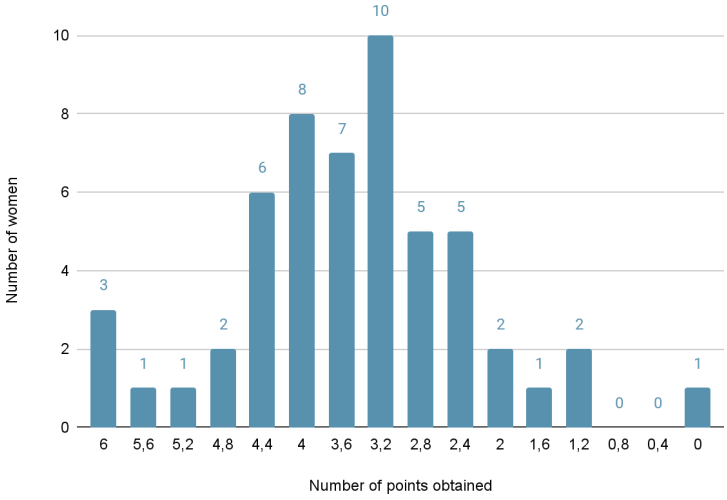

Figure 2
Sick women untreated- incidence of pain related to sexuality (6 - no complaints, 0 - no attempts to have intercourse)

This means that 69 percentage points more women indicate experiencing dyspareunia and pain when they have endometriosis, compared to healthy women.

One of the salient components of sexual life is whether intercourse is painful. As can be seen from the above, women with endometriosis struggle with pain during sexual intercourse. In the treatment of endometriosis, it is also extremely important to treat and minimise pain, including that associated with sexual activity. According to the analysis of the respondents' answers, after treatment, 25 out of 54 women (46.3 %) improved by scoring higher in the questions related to its occurrence. 14 women observed no change in the context of pain during sexual intercourse after treatment (26%, n=54). In 15 respondents, a worsening of the condition and an increase in pain was observed (28%, n=54). After treatment, a value of 4.4 (the threshold for dysfunction is obtained by 20 out of 54 women (37%), in comparison, only 13 per cent of untreated women obtained a score of 4.4 and higher, showing that 24 percentage points more women treated for endometriosis do not show sexual dysfunction due to dyspareunia compared to untreated women.

Sense of sexual attractiveness

The study asked both healthy and ill women about their feelings of sexual attractiveness. The scale used in the question was qualitative. For the question 'Do you feel sexually attractive', the possible answers to be ticked were: definitely yes, yes, hard to say, no, definitely no.

Among healthy women, 44 out of 70 respondents find themselves attractive (63%), while among women with endometriosis, not yet treated and those who retrospectively answered this question, 41 out of 65 find themselves attractive (63%). This shows that women with endometriosis do not show a reduced sense of sexual attractiveness. [Fig. 3.]

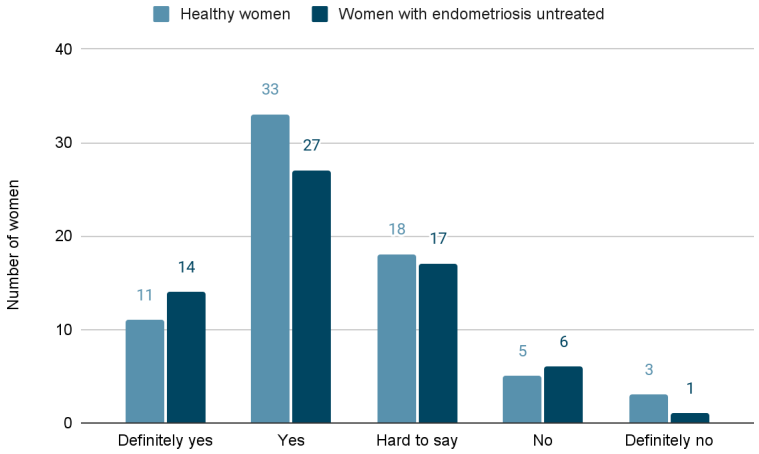

Figure 3

Sense of sexual attractiveness in healthy women and women with endometriosis before treatment

Sexual activity

Another question asked in the questionnaire concerned the frequency of sexual activity among female respondents. The response scale was as follows: 0 times/month, 1-2 times/month, 3-4 times/month, 5-8 times/month, more than 8 times/month.

The most common answer given by healthy women (22 out of 70 healthy women) is to engage in activity between 3-4 times/month (corresponding to less than 1 sexual intercourse per week) (31.43%). In contrast, women with endometriosis were most likely (23 out of 50 women) to indicate an answer of more than 8 times per month (35.38%). Comparing healthy women and women with endometriosis, we notice that engaging in sexual activity at least once a week (5 or more times a month), is practically at the same level - 52.86% of responses in healthy women and 56.92% in women with endometriosis, we can conclude that despite the presence of pain during intercourse, women with endometriosis do not give up sexual activity. [Fig. 4.]

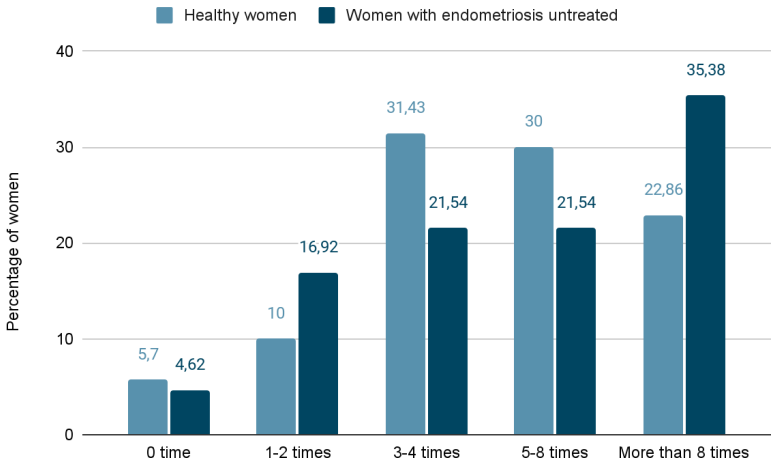

Figure 4

Frequency of sexual activity per month expressed as a prcentage

Overall quality of women's sexual life, with a focus on comparing untreated and treated women

The average quality of sexual life of healthy women is 28.6 points on a 36-point scale. The minimum indicated value is 15.8 points and the maximum is 35 points. 52 out of 70 healthy women (74 %) have no significant clinical sexual dysfunctions (score above 26 points). The remaining 24% of respondents are women who, according to the questionnaire, show dysfunctions in the functioning of their sexual life. It would be important for such patients to be referred to both a gynaecologist and a sexologist in the future in order to improve the quality of sexual life, which is so important for everyone.

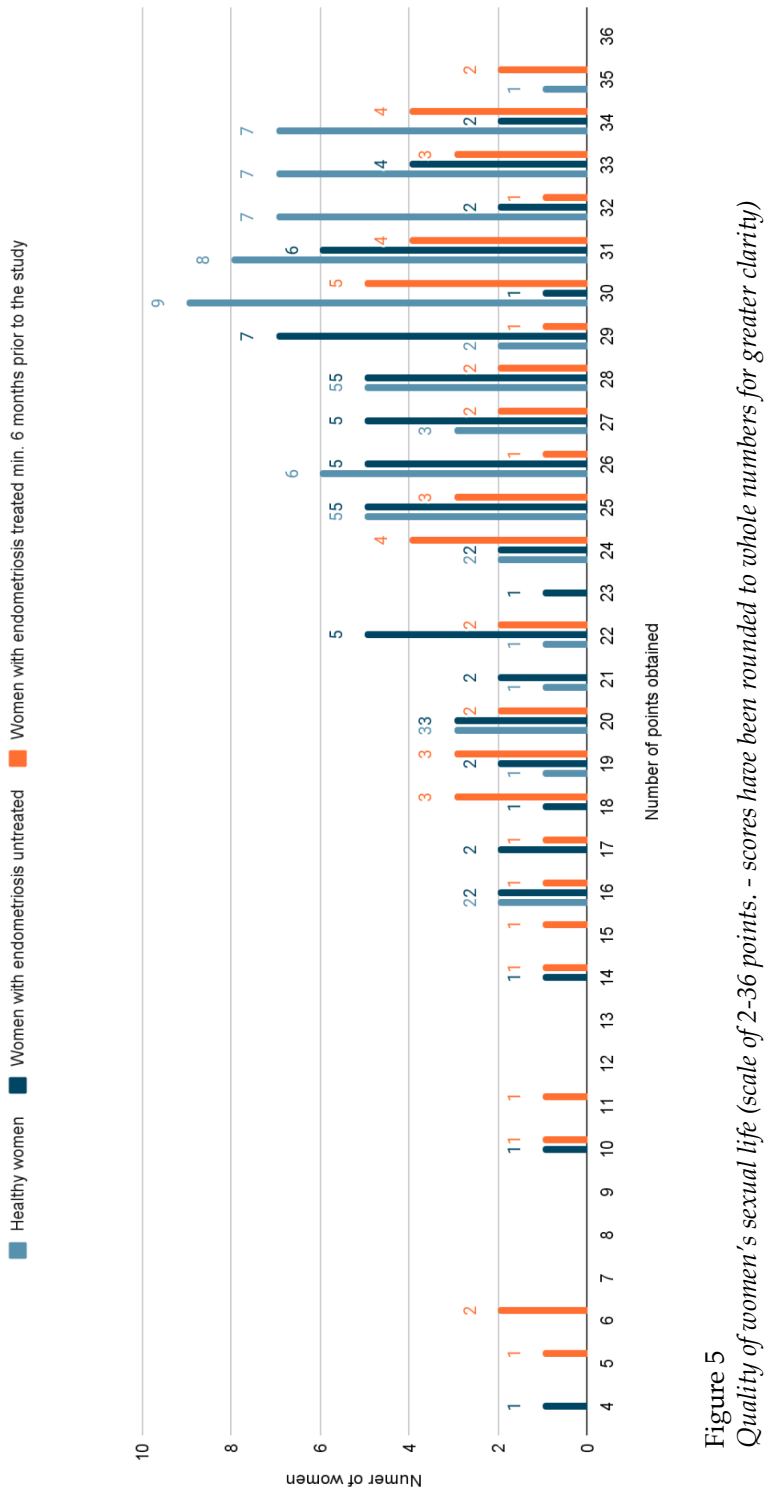

Figure 5
Quality of women's sexual life (scale of 2-36 points. - scores have been rounded to whole numbers for greater clarity)

Female patients who have not undergone treatment, or those who retrospectively answered the question about the time before treatment, show a significantly lower quality of sexual life. Their scores are between 3.6 and 34.2 points, with a mean of 25.4 points, which is already below the threshold for the presence of dysfunction. A value greater than or equal to 26 points was obtained by 33 out of 65 women, representing 50.8% of the respondents. Compared to healthy women, this is 23.2 percentage points less.

The survey also asked women who had started treatment a minimum of six months previously. Of the 54 respondents, 14 women had received only pharmacological treatment, seven had received only surgical treatment and the remaining 33 patients had received both pharmacotherapy and a minimum of one surgical procedure in the course of their disease. Analysis of the respondents' answers shows that a well-chosen therapy is effective. After a minimum of six months after starting pharmacological therapy and/or undergoing surgery, women show a change in their quality of sexual life. The distribution of scores indicative of women's quality of sexual life, divided into healthy women, before and after treatment, is shown in Figure 5. [Fig. 5.]

Improvements in quality of life were achieved by 30 patients (56%, n=54). The largest increase that was obtained was 10.5 points, raising the quality of sexual life from 19.3 (dysfunction) to 29.8 points - no dysfunction. This patient had received both pharmacotherapy (minimum 6 months prior to the study) and 1 treatment in the 3-6 months prior to the study. The minimum quality of life improvement score was 0.3 points, obtained in 3 women. The average number of points by which the women's sexual quality of life increased was 2.7 points. 28 women out of the 54 patients studied (51.85%) obtain a quality of life score of more than 26 points after treatment, which is one less (29 women - 53.7%) compared to the same 54 women. However, when comparing the percentages with the whole group of patients - there, 50.77% of the women show a satisfactory quality level, thus it can be concluded that more women suffering from endometriosis after treatment show a level of sexual quality of life not indicating deficits.

Unfortunately, the remaining 24 respondents indicated a decrease in their quality of life. The average decrease was as much as 6.3 points. The deterioration of women's sexual quality of life after treatment took on values ranging from 0.2 to as much as 17.9. The greatest decrease was observed in the respondent after 2 surgical procedures and with the inclusion of pharmacological treatment.

Summary of research

In conclusion, although the treatment was successful in more than half (56%) of the women, the mean quality of life in all treated women dropped from 25.4 points to 24.6. Unfortunately, the research method did not include collecting from the respondents their contact details to elaborate on the history and to clarify the specific preparations used by the patients. Most importantly, we also did not know the severity of the patient's disease. This was due to the aim of the

study, which was to assess the impact of endometriosis on the quality of sexual life of women of reproductive age in Poland.

The reasons for the decrease in quality of life after endometriosis treatment could be found in the treatment methods - 8 out of 14 women using only pharmacology achieved an improvement in quality by an average of 3.2 points (MAX 9.5, MIN 0.3). The decrease in quality of life after treatment may be the result of poorly selected pharmacotherapy or an incorrect treatment method. However, according to the researchers, all drugs show similar efficacy in terms of reducing the intensity of pain associated with endometriosis and the duration of improvement after treatment (Bacz, 2017). It seems plausible that the remaining six women with a mean decrease of 2.9 points (MAX 11.1, MIN 0.3), should either change the type of drug therapy or undergo surgery to remove the foci. Nevertheless, the overall mean change in quality of life in this group is an improvement of 0.6 points. Nevertheless, the effectiveness of pharmacological treatment alone, gave an improvement in 57% of the patients (n=14). Used, 4 out of 7 patients achieved an improvement in quality of life. The mean improvement was 2.1 points (MAX 4.6, MIN 0.9), the mean decrease was 3.6 points (MAX 2.6, MIN 0.4). In the case of the greatest improvement and the greatest decrease, patients underwent two treatments, in the other cases 1 treatment. The overall change in quality, after surgery, shows an improvement of 0.7 points, with a success rate of 57% (4 women n=7). If there is no improvement with this method, it is worth considering a second treatment or pharmacological therapy.

The last group of women analysed are those who underwent both surgery - from 1 to more than 5 - and drug therapy. 18 of the 33 women improved, with a mean of 2.6 points (MAX 10.5, MIN 0.3). The quality of sexual life of the remaining women deteriorated by an average of 8.7 points (MAX 17.9, MIN 0.2). Overall, the method although effective in 55 per cent, the average change in quality shows a deterioration of 2.5 points.

Unfortunately, in the questionnaires analysed, there was no correlation between the number of procedures performed in a given patient or the period of time that had passed since the operation and the change in the quality of sexual life. In this case, the doctors dealing with each patient should consider changing the pharmacological treatment and/or performing an additional procedure, preceded by thorough imaging examinations, as the most important thing in the treatment of endometriosis is the individual approach to each patient.

Conclusions

Although endometriosis is sometimes asymptomatic and is often diagnosed at a follow-up gynaecological examination, it is a chronic disease that is extremely difficult to treat, impairing the working activity and daily life of millions of women worldwide. It is also often the cause of infertility. The condition affects not only women of childbearing age, but also those in menopause, as well as even young girls. The main symptom of endometriosis is pain in the pelvic area.

It should always be a 'red flag' for both the patient and, above all, the doctor, because delayed diagnosis and treatment may result in the rapid progression of the disease, exacerbation of changes in the uterus and nearby organs and, above all, lead to infertility. Due to the high percentage of recurrence of endometriosis after treatment, which ranges from 5% to 30%, researchers are still searching for the ideal way to cure the condition. (Szczepańska & Skrzypczak, 2007)

Endometriosis negatively affects the quality of sexual life of women of reproductive age in Poland. Decreased quality of sexual life occurring in women with endometriosis indicates the presence of clinically significant sexual dysfunctions.

Dispareunia is much more common in women with endometriosis than in healthy women in Poland. 69 percentage points more women indicate the presence of dyspareunia when suffering from endometriosis compared to healthy women.

Treatment reduces pain symptoms in women with endometriosis. 24 percentage points more women show no symptoms of dyspareunia after treatment, compared to women before treatment.

The presence of endometriosis does not significantly affect women's sense of sexual attractiveness.

Women with endometriosis engage in sexual activity as frequently as healthy women despite the presence of pain.

Treatment of endometriosis, both pharmacological and surgical, improves the quality of sexual life of women of reproductive age in Poland.

Due to the limited number of Polish publications, it is certainly necessary to broaden the research topic on the quality of life of women with this condition in the near future, in order to isolate differences due to socio-economic aspects and their impact on the overall psycho- physical functioning of women with endometriosis in Poland (Radowicki & Szyłło, 2016).

The review by Rossi at all aimed at analyze literature about endometriosis-associated pain and quality of life, sexual health, and quality of the relationship, assessing the role of the bio- psycho-social factors involved and the women's pain experience, showed that:

- Endometriosis is associated with impairing all women's quality of life domains, and pain appears to be the most influential variable.
- Women's sexual health is also impaired, and patients report dyspareunia, sexual dysfunctions, dissatisfaction, and distress.
- Partners' sexual well-being is compromised as well. Endometriosis negatively influences relationship quality, and the illness burden affects both couple members.
- A multidisciplinary team using a couple-centered and a biopsychosocial approach is crucial to provide appropriate treatment for endometriosis-associated pain.
- A better comprehension of all bio-psycho-social aspects implicated in women's well- being and pain experience needs more research (Rossi, Tripodi, Simonelli, Galizia, & Nimbi, 2021).

According to (Della Corte, et al., 2020) endometriosis the quality of life is strongly influenced by Endometriosis: women suffer from dysmenorrhea as well as chronic pelvic pain and this affects work, leisure, and social and love relationships. Pain-related to endometriosis also affects the psychological aspect, compromising the quality of sleep, making women anxious and depressed.

The impact of endometriosis on sexual life is huge: dyspareunia is one of the cardinal symptoms of the pathology. This symptom reduces the frequency of sexual intercourse, worsens the QoL and the SQoL with a negative impact also on the couple's life. The costs of endometriosis should not be underestimated, both in terms of treatment and loss of productivity of the woman due to the disease.

It can be concluded that endometriosis is a pathology that affects all aspects of women's lives and that thus, it must be treated with a multidisciplinary vision that includes not only a medical approach but also psychological, work, and economic support (Della et al., 2020).

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