# Dyspareunia as a sexual problem in women with endometriosis

GRAŻYNA JARZĄBEK-BIELECKA[1], DARIUSZ RADOMSKI[2], MICHAŁ PAWLACZYK[1], ZBIGNIEW FRIEBE[1], KATARZYNA BIEDERMANN[3]

**Abstract**

Dyspareunia is defined as tenderness felt during sexual intercourse without coexisting shrinkage of vulva and vagina. It is a common sexual disorder in women, which is sometimes caused by endometriosis. The aim of the study was to assess the influence of the type of endometriosis (peritoneal vs. endometrioid cysts) on the prevalence of dyspareunia. *Material:* The experimental group consisted of 28 women with chocolate cysts of the ovary without scattered foci of adenomyosis and 33 patients with peritoneal endometriosis. The control group included 60 women without gynecological problems. *Results:* Dyspareunia was observed 4 times as frequent in women with endometriosis as compared to healthy women. Moreover, the disease was 5 times more frequent in women with peritoneal focuses of endometriosis than in patients with endometrioid cysts. *Conclusion:* Discerning diagnosis of dyspareunia, after rejecting other causes of the disease, should lead to peritoneal endometriosis seeking. The association between peritoneal endometriosis and dyspareunia suggests that an intercourse pain could stem from inflammatory mediators or adhesions connected with peritoneal endometriosis.

**Key words:** dyspareunia, endometriosis, sexuology

Dyspareunia is a sexual dysfunction manifested as pain in reproductive organs before, during or soon after sexual intercourse. In spite of the fact that this disorder may be found in both genders, it is much more frequent in women. Cross-sectional epidemiological study on the population of sexually active Swedish women by Danielsson et al. has shown that 13% of the women suffered from dyspareunia. The investigators also observed that young women (aged 20-29) suffer from this disorder twice as often as older women (aged 50-60) [1].

In female patients dyspareunia is manifested by painful sexual intercourse without shrinking of the vulva and vagina (should be differentiated from vaginismus, which makes penetration impossible).

There are different classifications of dyspareunia which are presented below. Types of dyspareunia in accordance with location of pain:

- Shallow dyspareunia – pain located in vestibule of the vagina.
- Deep dyspareunia – pain in vaginal vault.
- General dyspareunia – pain located in entire vagina.

Types of dyspareunia according to chronology:

- Primary dyspareunia – present from first sexual contacts on.
- Secondary dyspareunia – caused by some other reason the presence of which should be found during interview.

Types of dyspareunia depending on the moment of its manifestation during intercourse:

- Early – appears in the beginning of intercourse and subsides after the intercourse.
- Late – appears at the end of the intercourse or even a few hours after it has been finished.

Dyspareunia may be continuous and take place at each intercourse or it may be sporadic (intercourse is painful only in certain intercourse positions, in some phases of sexual arousal – mainly during ovulation, particularly in women suffering from premenstrual syndrome).

Depending on the sexual partner, episodes of dyspareunia in the same patient may differ in severity. One should take into consideration that the disorder influences relations between partners and has psychological effects on the relationship.

The main causes of dyspareunia are:

- organic,
- psychogenic.

[1] Clinic of Gynecology of Department of Perinatology and Gynecology, Division of Developmental Gynecology and Sexuology of Department of Perinatology and Gynecology, University of Medical Sciences, Poznań, Poland

[2] Department of Prevention of Environmental Hazards, Warsaw University of Medical Sciences, Warsaw, Poland

[3] Department of Clinical Psychology, University of Medical Sciences, Poznań, Poland

Multi-factorial (found particularly in young women) Medical interview in dyspareunia patients should be characterized by deep empathy and gentleness. Yet, it should also be very precise so that one is able to find the characteristics of the disorder. In most cases pain is increasing depending on the intensity and duration of the intercourse [2].

As it was mentioned before, etiopatogenesis of dyspareunia may be multifactorial. Its causes include both organic dysfunctions of sexual organs and psychogenic disorders. Psychogenic etiological factors include: sexual abuse in childhood, excessive feeling of shame or guilt during sexual activity, intercourse anxiety or defloration anxiety and difficulties in achieving of sexual readiness. Main somatic causes of dyspareunia comprise inflammations of sexual organs, vaginismus and hyperesthesia of pudendal lip. Also, endometriosis belongs to a group of organic causes of dyspareunia. Moreover, dyspareunia may be one of the symptoms of endometriosis including pelvic pain and dysmenorrhea [3].

Among disorders connected with dyspareunia, endometriosis brings about greatest difficulty in diagnosis. Epidemiologic data show that it concerns about 10% of the women in reproductive age [4].

In literature on etiopatogenesis of endometriosis, authors often present an idea of three forms of adenomyosis – peritoneal endometriosis, rectovaginal septum endometriosis and endometrial ovarian cysts, which may differ in patophysiologic mechanisms [5]. Differences may concern clinical images which characterize certain form of endometriosis. The goal of the paper was to assess the relationship between the form of adenomyosis and frequency of endometriosis. We concentrated on two forms of endometriosis i.e. endometrioid cysts and peritoneal endometriosis.

## Materials and methods

The research group included 61 female endometriosis patients aged 23-43. All the study participants were sexually active. 28 women (45%) had endometrioid ovarian cyst, which was confirmed by histopatiologic examination without foci outside the gonads. Other 33 patients suffered from endometrioid foci scattered in peritoneal cavity which were fund in macroscopic examination during laparoscopy. The severity of peritoneal endometriosis was described by Lacosta system. This group included mainly patients with mild endometriosis. The control group consisted of 60 women aged 23-41 randomly selected from general population, who regularly participate in control gynecological examination. Endometriosis was ruled out by in – depth medical interview. All participants of control group were sexually active.

Information about dyspareunia was received during medical interview including questions on quality of patient's sex life. Opportunity ratio was used to estimate the relationship between presence of endometriosis and dyspareunia.

Statistical relevance for opportunity ratio was calculated chi$^2$ by at $\alpha = 0.05$. The values of opportunity ratios were presented with 95 percent confidential limit.

## Results

The analysis has confirmed that endometriosis is an import ant risk factor of dyspareunia: OR= 6.22 (2, 62-14, 96). In the group of dyspareunia patients endometriosis was diagnosed in every 4$^{th}$ patient (table 1).

Table 1. The relationship between endometriosis and dyspareunia OR = 6.22 (2, 62-14, 96) at $p < 0.001$

| Endometriosis: | Dyspareunia | |
|---|---|---|
| | Present | Absent |
| Present | 32 (78.05%) | 29 (36.25%) |
| Absent | 9 (21.85%) | 51 (63.75%) |

The analysis of influence of the form of adenomyosis on prevalence of dyspareunia has confirmed highly relevant statistical dependence between them. Dyspareunia is 5 times more likely to accompany peritoneal endometriosis than endometrioid ovarian cysts (table 2).

Table 2. The relationship between the form of endometriosis and dyspareunia ($p < 0.001$)

| The form of adenomyosis | Dyspareunia | |
|---|---|---|
| | Present | Absent |
| Peritoneal endometriosis | 27 (84.38%) | 6 (20.69%) |
| Endometrioid cyst | 5 (16.62%) | 23 (79.31%) |

## Discussion

Despite the fact that dyspareunia is a frequent sexual disorder in females, its relationship to coexisting gynecological problems has rarely been as subject of research. Our study has revealed that endometriosis is an important risk factor of dyspareunia. The results of our study are consistent with observations of other authors e.g. Eskanazi et al. [6, 7], who have confirmed that if endometriosis is diagnosed, positive prognostic value of dyspareunia amounts to 40%.

Unfortunately, according to what we know, in literature there are no reliable data concerning the assessment of the relationship between the form of endometriosis and dyspareunia. One might find it reasonable to mention an attempt by a group of Italian researchers but one should not forget that due to errors in statistical reasoning the conclusions have not been confirmed by the results. Nevertheless, the results of that study also point to higher incidence of dyspareunia in female patients with peritoneal endometriosis as compared with women with endometrioid cysts of the ovary. Ferraro et al. have been the first who tried to assess selected elements of quality of sex life of women with endometriosis. They have proven that most severe dyspareunia had been reported by women with endometrioid foci located in uterosacral ligaments [8]. In view of current state of knowledge, one cannot clearly explain the mechanisms leading to pain in women with endometriosis. Adhesions, which are often associated with endometriosis, remain one of its possible causes because they may impede physiologic change in static of the reproductive organ during intercourse,

Also, it has been suggested that inflammation mediators in peritoneal liquid may be responsible for pain associated with endometriosis [9].

Additionally, it is suggested that synthesis of post-inflammatory cytokines is much greater in women with peritoneal endometriosis than in patients with chocolate cysts of the ovaries, which may explain the observed relationship between dyspareunia and the form of adenomyosis.

Summing up, the results of our study point to the fact that precise diagnosis of endometriosis in patients in whom other etiological factors of dyspareunia have been excluded. In case of peritoneal endometriosis one may consider recommending that patients temporarily reduce the frequency of sexual intercourses until endometriosis has been cured to avoid secondary psychogenic vaginism.

## References

[1] Danielsson I., Sjoberg I., Stenlund H., Wikman M. (2003) *Prevalence and incidence of prolonged and severe dyspareunia in women: results from a population study*. Scand. J. Public Health 31(2): 113-8.

[2] Jarząbek G. (2005) *Wybrane zagadnienia z „seksuologii ginekologicznej"* Wydawnictwo Naukowe Akademii Medycznej Poznań: 55-60.

[3] Morris E., Mukhophaydyay (2003) *Dyspereunia in gynaecological practice*. Curr. Obst. Gynec. 13: 232-238.

[4] Haghpeykar S.H., Poindexter A.N. (1995) *Epidemiology of endometriosis among parous women*. Obstet. Gynec. 85(6): 983-992.

[5] Nisolle M., Donnez J. (1997) *Peritoneal endometriosis, ovarian endometriosis, and adenomyotic nodules of the rectovaginal septum are three different entities*. Fertil. Steril. 68(4): 585-96.

[6] Eskenazi B., Warner M., Bonsignore L. et al. (2001) *Validation study of nonsurgical diagnosis.* Fertil. Steril. 76(5): 929-35.

[7] Gruppo Italiano per lo Studio dell'Endometriosi (2001) *Relationship between stage, site and morphological characteristics of pelvic endometriosis and pain*. Hum. Reprod. 16(12): 2668-71.

[8] Ferrero S., Esposito F., Abbamonte L.H. et al. (2005) *Quality of sex life in women with endometriosis and deep dyspareunia.* Fertil. Steril. 83(3): 573-9.

[9] Radomski D. Marcyniak M. Milewczyk P. et al. (2002) *Immunologiczne i genetyczne aspekty patofizjologii endometriozy*. Ginek. Pol. 73(1): 68-73.

✉ G. Jarząbek-Bielecka
Department of Perinatology and Gynecology
University of Medical Sciences
Polna 33, 60-535 Poznań, Poland