

DARIUSZ WOJCIECH MAZURKIEWICZ¹, MICHAŁ KOBYLEC²,
BOGUMIŁA ZDANOWICZ³, ALINA MAREK⁴

Sexual disorders following ob-gyn surgeries

Abstract

It has been known for years that obstetric and gynecological surgeries, apart from bringing measurable health benefits, may also become a factor impairing or improving and sometimes changing patients' sexual attitudes and sensations.

Sexual disorders are a frequent phenomenon resulting from complications following ob-gyn procedures. It is manifested in sexual health anomalies and is corroborated by the prerequisites for the quality of life and intimate aspects of the partners' sexual life.

The development of surgical techniques, the specialization of their specific methods and the application of new materials are expected to minimize the risk of complications in that type of procedures, which should result in a decrease in post-operative sexual disorders.

Great significance is attached to therapy individualization, including hormone therapy, which should increase the efficiency of the existing sexual disorder treatment. Attention is also paid to the constructive way of taking the patient's history in the pre-operative and post-operative period as well as to the process of treatment and healing, by familiarizing the female with the surgical technique, therapeutic procedures and types of any possible complications, among other things.

Sexual disorders affecting the mental and physical sensations following obstetric and gynecological surgeries may impact both partners and – not uncommonly – may cause family dysfunctionality or partnership crisis and breakdown.

Keywords: episiotomy, vacuum extractor, Cesarean section (C-section), female sexual well-being, adjunctive treatment, modern urogynecological surgeries, radioactive techniques, sexual disorder diagnosis, hysterectomy and concurrent radiotherapy, post-operative castration and sexualism.

DOI: 10.12923/j.0044-2011/123-3/a.12

INTRODUCTION

The impact of almost routinely performed episiotomy at the time of physiological birth in the medial side or middle-line should not be underestimated. This treatment can cause worsening of sexual function. Bearing in mind the objectives of episiotomy (prevention of uncontrolled rupture of internal tissues, instability due to damage to the external anal sphincter muscle and urogenital diaphragm, to prevent damage to the forefront, especially of fetal head), attention is often reduced to the proper execution of incisions, which may result in deterioration in the quality of patient's sex life.

Episiotomy is unfavorable, as it can contribute to the occurrence of painful sexual intercourses or secondary vaginismus, preventing penetration. Literature data reports that patients without this treatment, with preserved anatomical physiological structure of perineum and with first degree perineal laceration – constitute much smaller proportion of women complaining of pain than those who underwent incision. Patients with performed perineum incision, feel less

satisfied with their sex life, their orgasms are weaker. In addition, these women experience decreased libido and poor lubrication within 12-18 months after birth [1].

It is also believed that the pain during intercourse within 3-6 months from the date of delivery should not be associated with episiotomy and/or other treatments of childbirth period.

Scientific reports mention about the lack of differences in sexual satisfaction among women who underwent episiotomy, and those without this treatment. The time to be taken into account in this analysis included the range of 6 to 18 months after birth [1].

Obstetric procedures, such as the use of forceps or cephalotriector cup affect deterioration of sex life, causing pain during intercourse, especially in the first trimester after birth.

Among women who experienced the need for instrumental obstetric intervention, there are observed significant differences, because they undertake sexual intercourse most quickly and without feeling pain [1].

¹ St. Mark's Place Institute for Mental Health, New York, USA

² Department of Perinatology and Obstetrics, University Hospital in Białystok, Poland

³ Department of Neonatology, Intensive Care, Obstetrics, The J. Śniadecki District Hospital in Białystok, Poland

⁴ St. Luke's-Roosevelt Hospital Center, Department of Psychiatry and Behavioral Health, New York, USA

The issue of sexual life of women should also be taken into account. It does not result only and exclusively from innate instinct, but is shaped by the whole life of a woman, based on previous sexual experiences. It is constantly evolving, and is the result of anatomical, physiological, health and social aspects. The woman's sexual wellbeing is influenced by maintaining good health and contraction of Kegel muscle, self-assessment, the assessment of sexual partner, the level of self-acceptance, situational emotionalism, and relationships resulting from the sharing of the hardships of everyday life with the sexual partner [2].

Based on the available scientific publications, it is concluded that most common cause of carrying out uro-gynecological surgery in women is urinary incontinence, and the treatment of choice is using drugs, physiotherapy and surgery. The problem of urinary incontinence affects from 17 to 46-60% of women who are in the menopause age. Etiopathogenesis of stress urinary incontinence is sought in gynecological and obstetric history, past labors and delivery, parity, hormonal state capacity, weight, age and the type and extent of gynecological operations experienced in the past. Urinary incontinence is not a life threatening illness but it is a chronic disease that causes a number of psychological responses to the problem of imperfection: shame, embarrassment, lack of objectivity in the underestimation of self-esteem, anxiety, depression. Therefore, very often stress urinary incontinence, is a severe impediment factor to the functioning of the female in almost all areas of her life, and above all, sexual and social areas. Surgical procedures aimed at correcting the disadvantages of uro-gynecological health problems, tend to be subject to further setbacks that influence woman's sex life [2].

Before any decision of surgery is taken for the treatment of urinary incontinence, supportive care is implemented through the pursuit to lose weight, minimizing excessive exercising, giving up smoking, the implementation of methods restoring the regularity of bowel movements, the use of pharmacotherapy for urinary tract infections, taking estrogens, use of alpha-sympathizer-agonists.

In surgery, depending on the urogynecological situation, transvaginal operational procedures are used, which include the anterior vaginal wall plasty, urethral suspension on fascial tapes (slings). When correcting the defects caused by urinary incontinence the laparoscopic, needle, tape procedures and transurethral injections are also used. Cases of artificial sphincter implantation are not rare.

The existence of such a large number (160-200) of methodological solutions of surgeries to correct inconveniences as a result of ongoing stress urinary incontinence may signal imperfectness of methods, their instability and the need for research in the search for more effective and efficient ways to carry out surgeries, that bring relief to the suffering women.

Female sexual dysfunction can be classified according to the guidelines of the American Psychiatric Association (DSM-IV, Diagnostic and Statistical Manual of Mental Disorders, fourth edition) as: disorder or lack of sexual desire, sexual arousal disorders, orgasm disorders, and sexual dysfunction associated with pain. Disorder of sexual desire - is the decreased libido in the range of 30-50%, due to permanent or recurrent absence of sexual fantasies and desires,

and in particular the desire for sexual activity. This group of dysfunctions includes sexual aversion and is defined as consistent or recurrent aversion and avoidance of sexual contact with the sexual partner. Sexual arousal disorder - is a partial or complete absence of physical markers of physiological arousal symptoms. Orgasm disorder - is transient or temporary recurrent dysfunction in obstructing, delay or inability to reach orgasm by using a sufficiently effective sexual stimulation. Orgasmic disorder affects about 10% women throughout their lives and in 50%, it is due to temporary or situational factors. Sexual dysfunction associated with pain is the result of dyspareunia (recurrent genital pain preceding intercourse during sexual intercourse or after) and / or vaginismus. Dyspareunia is classified:

- according to the taxonomy of location into: surface, middle vaginal and deep;

- according to the etiology of disease: type A (fixed dyspareunia), type B (situational dyspareunia), type C (organic dyspareunia, without a known source of origin or of psychogenic background) [3].

According to the nomenclature of Arentowicz and Schmidt of 1980, the lightest case of vaginismus is when there is a possibility of full penetration every time with painful symptoms sensation, and the most severe - the necessity of having a general anesthetic, to avoid defensive vaginal muscle contraction to conduct a pelvic examination through the vagina. The preliminary vaginismus type may also develop (vaginal muscle contraction occurs before an attempt to insert a penis) or a paroxysmal type that is characterized by vaginal muscle spasm attack during vaginal sexual intercourse [4].

The loop operation was the first urogynecological operation carried out in 1995 (hammock), involving the use of polypropylene tape beneath the urethra (TVT, tensionfree vaginal tape). The year 2001 brought the obturator access (TOT, trans obturator tape). Next, the TVT Secure solution consisted in using smaller tapes (slings) with specific, facilitated and safer entry and clamping mechanism.

Thanks to French scientists, since 2000 TVM (Trans Vaginalesch) has been used for treating urinary incontinence. Taking into account lowering of vaginal walls occurring in this illness, mesh technique for pelvic organ prolapse is used [2].

The phenomenon of sexual dysfunctions, as a result of gynecological treatments complication, is an important issue, as it affects more than 50% of postmenopausal women and about 50% (even of up to 68%) of women with stress urinary incontinence.

It seems that the statics disorder of the pelvic floor is the most important among the factors causing disturbances and sexual dysfunctions. However, satisfaction with sex life with regard to both groups is not different in any of them.

From sexological, gynecological, aesthetic and psychological point of view, a very important issue that affects up to 45% of women diagnosed with stress urinary incontinence is uncontrolled urination during genital penetration (in 70% of cases), during orgasm (about 20% of cases), or also in each of these situations. This phenomenon is all the more significant that it affects mostly women before the age of sixty years of age.

Contemporary diagnosis of sexual dysfunction in women is mainly based on the use of the classification of the American Foundation of Urologic Disease (AFUD) of 1998, in terms of disorders of libido, sexual arousal, orgasm and pain. In clinical terms, symptoms of this type of illness are expressed in the form of absence of positive thoughts and sexual fantasies or aversion to intercourse, lubrication disorders and vulvar swelling, difficulty in achieving orgasm, and dyspareunia or discomfort associated with sexual intercourse.

Objectivity of diagnosis can be confirmed by a clinical trial, in which the focus is on the flow in the blood vessels and in genitals. Also the assessment of the level of sensing dermatome 2S is made. The assessment criteria relate to sense of touch, body temperature and the state of vibration.

Controversy is aroused by conflicting results of research on sexuality of patients who underwent surgery because of urinary incontinence and for coexisting or spontaneous disorders of the pelvic floor statics, where the synthetic materials are used.

Some authors reporting on the impact of the tape surgeries of urinary incontinence (TVT and TOT) on the quality of sexual life show that they do not cause any changes in sexual function (in 72% of operated patients), enhance the sexual experience (5%) or weaken their nature (4%). However, other scientists confirm that the method applying these solutions is the cause of stopping of these problems with urinary incontinence during sexual intercourse in as much as 95% of the cured cases. There is also a group of researchers standing on the position of the impact of the use of tape to eliminate urinary incontinence, which in their opinion only undermines "the ability to achieve orgasm." In addition, there are not isolated TVT complications based on the perception of negative stimuli by the genitals, vulva humidity decrease, impaired lubrication, acting directly on the impairment of orgasm abilities, and often responsible for pain or the discomfort during intercourse.

It is suspected that irregularities in innervation of the clitoris are the cause of the orgasm disorders. This is due to the use of tapes in the course of operation. This disorder is explained by the minimum distance between the dorsal nerve of the clitoris crossing the bottom edge of pubic symphysis and the distance of the nerve from the tape amounting in TVT: 10.7 ± 4.8 mm.

Comparative studies have shown that carrying out the treatment of disorders of the pelvic floor through abdominal and vaginal route, speak in favor of the former, as there are noted disproportionate better results in achieving the improvement of wellbeing in the sphere of sexual function.

However, notwithstanding the use of biomaterial mesh in surgery of the anterior vaginal wall, it results in the sensation of pain during sexual intercourse.

Carrying out operations around external urethral sphincter, as an area particularly sensitive to sexual stimuli, also negatively affects sexual functions. In this case, the scar, or resection of the anterior vaginal wall is the cause of persistent feelings of vaginal dryness, and reduced sensations of sexual stimuli.

Rectocoele operations, subject to necessity of the application of biomaterials, involve modifications of plastics of the

rear and narrowing of central part of the vagina, leading to pain during intercourse. It is dictated by the requirement of putting stitches on the levator ani muscles.

Surgeries within the vaginal endometrium, and in particular its extensive removal of the rear wall and forming the edge in the front wall, is responsible for the dysfunction in the sensations during intercourse.

The authors of the research raise questions of mutual partner relations after uro-gynecological operations, focusing inter alia on: fear of consequences of sex relationships after treatment, premature ejaculation and / or painful intercourse in men as a result of vaginal dryness, or even occasionally reported (6.5 % of cases) penis abrasions due to erosion due to mesh used in the operation.

There are also highlighted sexology benefits resulting from early (in three weeks) taking up sexual intercourse after surgery of dysfunction of pelvic floor statics and the urinary incontinence.

It seems that the use of biomaterials contributes to the improvement of quality of the sexual function (21% of patients) or its deterioration (22%) [5].

Total hysterectomy (surgical removal of the uterus) or the supracervical hysterectomy (leaving the cervix) is one of the most commonly performed surgical procedures in gynecology, but also burdened with necessity of disruption of the continuity of neurons that are responsible for the functioning of the organs in the pelvic region. Supracervical hysterectomy is supported by such features as: reducing frequency of the risk of damage to the ureters, postoperative wound infections, hematoma, granulation maintaining in vaginal vault.

Some authors claim that supracervical hysterectomy is less invasive than the total hysterectomy, while other sources have reported no differences between the two methods in the context of their impact on the sexual experience and intimate life. The principle of intensification of vaginal moisturizing and the multiple orgasms, their quantitative exponent within a specified time and a decrease in frequency of painful feelings after performed hysterectomy during intercourses, have been proven.

There is conflicting data as to the frequency of intercourse, desire and ability to achieve orgasm after hysterectomy, where the type of the method of operation affects the maintenance or worsening of sexual dysfunction between individuals. Not without significance is the increase in the risk of hematomas, abscesses, various infections of vaginal stump and others, extending the period of recovery and the time taken to start sexual intercourse. It is known that supracervical hysterectomy is accompanied by an increased risk of bleeding, inflammation, vaginal discharge, loss the cervical stump, undoubtedly leading to deterioration in the varying degrees of the quality of sexual life.

It is estimated that in 13-37% of women after hysterectomy, deterioration of sexual sensations occurs, and above all, the anomalies in achieving orgasm due to vaginal orgasm disorders (as a result of the disruption of utero-vaginal plexus nerves during surgery), vaginal dryness (premenopausal surgery with the left - and right-ovariectomy causes estrogen deficiency, which affects the deficits in lubrication of the vagina). Other data support increased frequency of orgasms after hysterectomy by 9.2%, and subjects not reaching

orgasm before surgery (60%), could boast this ability within six months after surgery.

There is a group of researchers advocating the decrease in the frequency and intensity of orgasms after total hysterectomy. Causes are sought in vaginal stump scar that is responsible for pain during intercourse, sexual excitement exclusion as a result of the elimination of the cervix, which is a factor affecting the possibility of feeling vaginal orgasm, also referred to an internal orgasm. Well-being after hysterectomy is necessary for the proper sexual functioning. However, the data show that women with this type of surgery have low self-esteem, higher tendency to depression and depressive states, undervalued feelings of femininity. It all does not bring fertile ground for sensing positive sexual relationships. The characteristic feature in these women is so-called sexual maladjustment syndrome, resulting in mediocre or even total deficit in sexual satisfaction. Psychosexual disorders exacerbate the feelings of looseness in the vagina and uncoordinated climax and orgasm in both sexual partners.

In the case of patients treated for diagnosed gynecologic malignant tumor, attention should be paid to the relationship between the quality of sensing sexual experiences and emotional ties and relationships with a partner, the age of both of them, satisfaction with current sexual life and methodological solutions of the chosen method of surgical treatment. The disparity in sexual functioning between women who only underwent hysterectomy and patients after this type of surgery and concomitant radiotherapy is noticeable. The first group of women is characterized by less intense orgasms, while radio therapeutic support of the therapy process causes zero satisfaction resulting from the failure to intimate contacts or restrictions due to ongoing disease process.

At present, there is no clear evidence of the impact of hysterectomy on interfering sexual satisfaction and the ability to experience orgasm.

The fact is that literature addresses the problem of the effectiveness of uro-gynecological surgery in urinary incontinence, and many publications simply ignore the impact of those operations on female sexual functioning and intimate partnerships. Especially vaginal surgeries are reported to affect and be responsible for the unfavorable changes in perception of sexual stimuli. Certainly, surgical procedures correct pathological urinary incontinence and vaginoplasty may embolden women to return to sexual relationships. In statistical terms the unchanging factors influencing the decision of undergoing the surgery /or not are the ability to feel orgasm, desire, vaginal moisture.

The main side effects of uro-gynecological surgery are: loss of desire, orgasm dysfunction and genital pain felt during intercourse, resulting in a reluctance to sexual contacts, or even avoiding them.

Some authors have reported that the operations to correct the causes of urinary incontinence, can eventually have impact on increasing the activity and the extent of sexual experience and feeling the resulting satisfaction in women.

However, other researchers support the idea that the surgery of retropubic suspension changes sensitivity of vagina as a result of the need to cut neurons in this area. The weakening of vaginal sensitivity becomes a cause of sexual

dysfunction of psychological background, which manifests itself mainly by painful sexual intercourses and irregularities in the sensing and achieving orgasm. Vaginal incision and disruption of nerves and vessels of anterior vaginal wall and clitoral area can result in disorders of orgasm and sexual arousal.

There are reports indicating the absence of any changes in arousal, orgasm, or pain during intercourse after such urogynecological surgeries among 72% of women who have undergone this type of surgery, and 14% of respondents noticed a decrease in libido. A larger proportion, 35% of women complaining of decreased libido after surgery, was among those patients, who underwent surgery due to concomitant disease, which was lowering of reproductive organ [6].

The research carried out in the Clinic of Urology, Medical University of Gdansk and the Department of Urology of Specialist Hospital in Wejherowo, including 153 surgical procedures performed because of stress urinary incontinence, has shown that surgical treatment with the use of tape is the gold standard, however burdened with the risk of impaired sexual functioning in women. The study involved 84 women who were supposed to respond the questionnaire, which assumed to reflect the patients' feelings from 6 to 24 months after surgery. The research results were the following: 81% of patients reported improvement in their standard of living as a result of surgery; 19% of women responded negative, as to improvement of quality of life after surgery, because of the lack of success of the operation, feeling pain, feeling sudden pressure, application of a catheter after surgery (straight after surgery); 74% of patients reported improvement in holding urine after surgery; 61% of women had sex before surgery; 42 patients started intercourse after the procedure, and therefore every fifth respondent resigned spontaneously from the intercourse because of feeling pain in the postoperative sector, due to fear of breaking the tape during intercourse and/or unspecified complications, divorce or lack of a partner. The performed surgery had no beneficial effect on patients who had not had intercourse before surgery. Thirty three per cent of patients reported no increased interest in sexual intercourse; 13% of respondents were in favor for a decrease in their interest in sexual intercourse; 4% of patients have greater sexual needs after surgery than before and have sex more often; 30% of sexually active women before surgery reported a decrease in the desire to intercourse after surgery; 7% of women were in favor of improving orgasm and feeling orgasm and increase in the related issues; 8% of women began to feel pain during intercourse, which had never experienced before the operation; 25% of women claimed that the sex life improved after surgery [2].

The use of tapes in the treatment of stress urinary incontinence is not a clear indicator of the improvement or deterioration in the quality of sexual function before or after surgery, and patients have the right and should be forewarned about the negative aspects of the operation on their sex life.

Frequently performed perineoplasty is a measure of improving satisfaction in sexual life of partners. Drama begins, however, where there is a very radical operational vaginal shortening and/or narrowing of the vaginal opening and/or lumen, combined with forming a scar due to unforeseen complications in healing. In such cases, sexual

intercourse is no longer happy between the two close to each other people, but it becomes unpleasant coercion, the reason for misunderstandings and conflicts and looking for alternative solutions to achieve sexual satisfaction by the healthy and non-operated partner.

Surgery of the adnexa is also an important theme in sexology.

This is due to "post-operative castration", due to the removal or damage to the ovaries. Termination of ovarian hormonal properties translates into the sphere of sexual feelings, libido, and reactions of patients. "Post-operative castration" is a particular burden in girls in case of its performance before puberty begins. In this group of patients, it becomes the cause of asexuality, characterized by a lack of feeling sexual desire. Morphological changes of sexual organs and guilt encoded in the psyche, combined with undervaluation, are the consequences of this type of surgery, and they affect mainly those women who have suffered decreased sexual drive while being at full puberty on the day of surgical intervention.

It is known that the "post-operative castration" results in decreased libido, inappropriately reduced sexual sensation, and often becomes a reason to the inhibition and abandonment of sexual life.

In the opinion of the women themselves and their sexual partners, undergoing gynecological surgery, is frequently the cause of decline in attractiveness. "Castration complex" affects especially those couples who have experienced a subvaginal resection of corpus uteri or uterine muscle removal (applying Freud or Wertheim method). The complex also applies to women burdened with mastectomy.

Vesico-vaginal fistulas resulting from gynecologic operations cause an increase in complications during sexual intercourse, and may even be the cause of the cessation of intimate sexual relations with a partner. This happens because, among other things, the operations of closure of fistulae do not guarantee a cure and improvement in the quality of life.

The extent of gynecological surgery is one of the main elements in favor of adverse consequences of its performance, in particular, leading to functional disorders. In most cases, this is the result of post-operative hormonal disorders, and/or disruption of neurons, and/or blood vessels. Research confirms that women after performed laparoscopic hysterectomy, six weeks after surgery constituted this group of women who returned to sexual intercourse the earliest, and assessed the quality of their physical condition the highest.

Other research on the dysfunction reports a decrease in sexual satisfaction on the one hand and, on the other hand – minimal impact on sexual experiences depending on the fact of leaving uterine muscle or lack thereof. This was proved in the analysis carried out six months after the date of application of sacro-spino-fixation or transvaginal hysterectomy in the treatment of uterine muscle prolapse.

The same study also included psychological aspect of the fear of pain, recurrence of the disease and reluctance in taking intercourse undertaken after gynecological surgery. The five-year observation after this type of surgery has provided arguments that gynecological conservative surgery complications include vaginal dryness, as well as the pain felt during intercourse, and functional irregular menstruation.

However, performed vulvectomy and its consequential healing of the wound by granulation method, and then appending scarring and fibrosis, become perpetrators of neuropathy, which results in sensory dysfunctions within the vulva and vestibule of vagina.

The study aimed to determine the incidence of dyspareunia, as a complication of gynecologic operations, confirmed in 38% by withdrawal from sexual relations, especially by those women who had been subjected to operations arising from the issue of the posterior wall with the combined uretropexy by Burch colpo-suspension method. Women after operations in the front and rear wall anomalies in 31% decided to discontinue sexual intercourse. The main reason for this decision is feeling the pain caused by narrowing of the vagina [7].

The deterioration of the sexual life is recorded among women undergoing treatment of neoplasm of the reproductive organ, in which the radioactive techniques, such as: external beam radiation therapy and intracavity brachytherapy are used. Both of these techniques are characterized by a common feature of the administration of radioactive sources into the vagina or uterus. The results of studies on lifestyle after brachytherapy of reproductive organ, performed on 100 randomly selected female patients between the ages of 41 to 74 years, who are in the ambulatory care of Opole Clinic Cancer Center, show deterioration in the quality of life of these women, in its various aspects. The dominant complaint was the need for frequent and nighttime voiding. Despite the fact that only 9 cases reported pharmacological need to take painkillers, this ailment has proven to be painful. The authors of the research believe that the lack of discomfort on the part of the bladder function in 28 surveyed patients, confirms a lack of side effects in the treatment with ionizing radiation, because according to the physicians the patients took liquids in quantities of 2-3 liters/day. Agitation, anger, aggression (4 patients) were the recorded response of patients to disease process and treatment, which resulted in irritability (50 patients), irritation, impatience, fatigue (39 women), anger and hostility, apathy (21 women) and guilt (7 patients). It is believed that the long-lasting treatment and the associated need for intervention in intimacy of women and, in many cases, ignoring the symptoms by a woman, and consequently too late diagnosis of disease, trigger reactions reported in the study. Another fact increasing negative reactions, which is the anxiety about their own lives, should not be excluded either. This feeling is intensified by social attitudes since opinions are often heard about the lack of effectiveness of radiotherapy treatment. Emotional instability has become a cause of bad relations with the medical staff and the family of some female patients.

It is believed that the disorder of the main triad of sexual feelings: desire, arousal, and orgasm, develops very rarely. Attention was drawn to the fact of the influence of the sexual relations on prevention of depressive states and depression itself. Data from this study clearly confirms negative impact of cancer treatment on female sexuality, because in 65 cases, women do not have sex, in 17 patients, interest in sex has been considerably shallower. Others mention a partial reduction in their sexual activity (11 cases), and the remaining patients have not felt any differences. However, it is

indisputable that, because of feelings of anxiety, emotional upset caused by the disease and treatment, all women after brachytherapy should be included in the holistic care, including psychological care. Based on research in the eighties, it was confirmed that 75% of patients after gynecological surgeries (and/or in whom radiotherapy was used) manifested symptomatic fear of pain, dyspareunia, failure associated with dysfunction of vaginal lubrication, sexual arousal reduction, and the risks and fear of bleeding during sexual intercourse. However, 33% of women cease genital intercourse [8].

One should realize the fact of a much higher incidence of complications caused by radiotherapy implemented in the treatment of vaginal cancer, compared with treatment of cervical cancer, which certainly interferes with female sexuality, sensations and the desire to make genital contact with sexual partner. Radiation reactions (of bladder, rectum), vaginal stenosis, and focal necrosis are common complications encountered in 35% of patients. However, 10-18% of women undergoing radiotherapy treatment experience side effects in the form of severe complications such as fistula (vesico-vaginal, vesico-vaginal-rectal, urinary-vaginal). Urethral stenosis is also common and rectal strictures are not isolated cases. In the same group 10-18% are not cases of complications manifested by the obstruction of the small intestine, or cases of acute after-radiation rectal inflammation. Perforation of the intestinal wall and hemorrhagic cystitis are also serious side effects of radiotherapy. It is also important that the increase of these complications and the use of radiotherapy occurs in the treatment of the following combination ("surgery-radiation") of therapy model and the risk of complications intensity is directly proportional to the severity of the cancer and the degree and extent of radical operations [9].

Another study, from the nineties, shows additional consequences of cancer disease and the applied medical procedure. Taking up active sexual life after treatment, did not allow to get rid of fears about the recurrence of the disease, pain, and bleeding in half of the women; a quarter of patients decided to stop sex life due to these factors.

The progress in the development of more intensive operation techniques, the use of new materials and specialization of specific methods of operations, probably minimize the risk of complications from this type of treatment, which should translate into a decrease in postoperative sexual dysfunction [10].

Undoubtedly, the implementation of a holistic approach to the issue of rehabilitation after surgery and radiation therapy will allow for faster return to social functioning in most cases, improve the quality of personal life, and return to normal sexual relations and self-acceptance in the role of women.

CONCLUSIONS

1. Each ob-gyn surgery is a cause of temporary or long-term sexual dysfunction, affecting the quality and level of satisfaction with marital intimate life of partners; it can also be the cause of the crisis or the collapse of the partnership and family.
2. Medical staff and midwives/obstetricians take the same degree of responsibility for the preparation of the patient and the partner(s) for surgery, using available methods,

including sexology consulting and education concerning the specificity of the procedure, its consequences influencing the well-being of women after surgery and the relationship between the partners.

3. There is a need for interdisciplinary cooperation of ob-gyn medical staff with clinical psychologists, social workers, and specialists in other disciplines, including psychiatry, to help the woman and her partner to adapt quickly to a new situation arising from the operation, and take the consequences and continuation of family and social roles at a level not lower but the better, or at least comparable to the pre-operative period.
4. Improvement of techniques and methods of surgeries in gynecology and obstetrics, should be a priority on par with a holistic approach to the problem of women's sexuality before and after such treatment. The measure of the effectiveness of the success of perfected techniques and methods should be the increased sexual satisfaction for both partners and a decrease in the proportion of breakdowns of family relationships or partnerships because of the lack of success or deterioration in health in intimate sphere of life of both partners.

REFERENCES

1. Matusiak-Kita M, Zdrojewicz Z. Seksualność kobiet w ciąży, w okresie poporodowym i karmienia piersią. *Przegl Seksuol.* 2010;9:12 PM-8.
2. Bagińska J. Ocena wpływu, operacyjnego wysiłkowego nietrzymania moczu z użyciem taśm, na życie seksualne pacjentek. *Przegl Seksuol.* 2008;13:11-4.
3. Skrzypulec V. Życie seksualne kobiet po operacjach uroginekologicznych. *Seksuol Pol.* 2006;1:16-20.
4. Lew-Starowicz Z. Podstawy seksuologii. Warszawa: PZWŁ; 2010. p.189.
5. Baszak-Radomańska E, Paszkowski T, Rechberger T. Zaburzenia seksualne u kobiet po operacjach uroginekologicznych z zastosowaniem biomateriałów. *Uroginekologia Praktyczna.* Lublin: BiFolium; 2007. p.93-5.
6. Matusiak-Kita M, Zdrojewicz Z. Orgazm po zabiegach ginekologiczno-urolologicznych. *Przegl Seksuol.* 2009;19:5-9.
7. Poręba R, Kuczera B, Rechberger T. Zaburzenia czynnościowe układu moczowo-płciowego i pokarmowego po operacjach ginekologicznych. *Uroginekologia Praktyczna.* Lublin: BiFolium; 2007. p. 339-41.
8. Knihańska-Mercik Z. Styl życia kobiet po brachyterapii narządu rodowego. *Onkolog Pol.* 2006;9(4):137-40.
9. Kulikowski M, Terlikowski SJ, Markowska J, Mądry R. Ginekologia onkologiczna-wydanie kieszonkowe. Wrocław: MedPharm Polska; 2008. p. 100-1.
10. Śpiwankiewicz B. Powikłania pooperacyjne w ginekologii. Warszawa: PZWŁ;2009. p.12-3.

Informacje o Autorach

Mgr DARIUSZ WOJCIECH MAZURKIEWICZ – położny, St. Mark's Place Institute for Mental Health, New York; dr n. med. MICHAŁ KOBYLEC – Klinika Perinatologii i Położnictwa, Uniwersytecki Szpital Kliniczny w Białymstoku; mgr BOGUMIŁA ZDANOWICZ – Oddział Neonatologii, Intensywnej Terapii i Położnictwa, SPZOZ Wojewódzki Szpital Zespolony, im. J. Śniadeckiego w Białymstoku; lek. med. Alina Marek – St.Luke's-Roosevelt Hospital Center, Department of Psychiatry and Behavioral Health, New York.

Corresponding Author

Dariusz Wojciech Mazurkiewicz
St. Mark's Place Institute for Mental Health, New York
57 St. Mark's Place,
New York, N.Y. 10003, USA
E-Mail: DWMazurkiewicz@aol.com