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Sexual dysfunction in elderly men and women

Paulina Trawka[1], Beniamin Szmelcer[1], Daria Zaborna[1], Marlena Kontowicz[1],

Martyna Goljat[1], Mateusz Porada[1], Klaudia Kwiatkowska[1], Marcin Falkowski[1],

Agnieszka Nawrocka[1], Joanna Sarnowska[1], Kornelia Kędziora-Kornatowska[1]

1. **Faculty of Health Sciences, Department and Clinic of Geriatrics, Nicolaus Copernicus University, Bydgoszcz**

Abstract:

Background: The aging process of the body is inexorable and affects all areas of geriatric patient's life, including the quality of his sex life. In this case, however, also psychological and environmental problems must be taken into account in the case of diagnostics. The sexuality of elderly patients has been neglected by the medical community for many years, and even recognized by some doctors as unnecessary or bad. Currently, there is a slow change in this position, also due to the patients themselves who are looking for help in specific situations.

Material and methods: Analysis of available literature, articles in the Google Scholar and PubMed database using keywords: Sexuality, Geriatrics, Dysfunctions

Results: Statistics on the sexuality of the elderly give a clear picture of how great a problem this sphere of life is. The main risk factors for sexual dysfunction of the above-mentioned patients include, among others, abnormal lifestyle and urinary tract infections. In the patients' lifestyle the most important aetiological factors are incorrect diet or lack of physical activity. Men of all ages are exposed to problems, however, in the epidemiology of this dysfunction, a drastic jump after the age of 50 is noticed. It is connected with the weakening of the function of the nervous system and microcirculation in the urinary tract and the reduction of the number of hormones responsible for the functioning of sexual organs. In women, this menopause is the period that most destructively affects the quality of sexual life. Here, as in the case of men, a reduced amount of hormones has a negative effect, among others, by a reduced sexual desire or the presence of pain during intercourse. In the treatment of the above-mentioned disorders, mainly pharmacology has the largest field of action. In the treatment of sexual dysfunction, we mainly use 2 compounds and these are sildenafil and tadalafil.

Conclusions: Human sexuality, especially in the case of older people, can not be a neglected subject, and dysfunctions and problems of patients treated like any other. The need to integrate interdisciplinary mode in dealing with this type of problems is more necessary. All this is connected with the fact that there is a definite deficit in publications and research on this subject, which creates a wide range of possibilities for the medical community.

Key words: Sexuality, Geriatrics, Dysfunctions

Introduction

The decrease in sexual activity is usually associated with the ageing process in the andro- and menopause [1].

Sexuality of elderly people was treated as a taboo subject due to the fact that it is intimate and that in older patients these interests should naturally disappear [2].

In old age, sexual development in both women and men is conditioned by biological,

psychological and social factors. Social factors include retirement, social isolation and widowhood. In the biological dimension, we mainly distinguish between changes in appearance, the occurrence of diseases and a reduction in physical fitness. The psychological point, on the other hand, draws attention to those physiological processes that affect the image of older people, such as physical appearance, loss of self-confidence, reduced self-esteem, low self-esteem, forgetfulness, problems with concentration, fatigue and difficulties in making decisions [1, 2, 3].

Defining the threshold for old age is difficult in medicine, since it is believed that old age begins at the moment of retirement [2]. Sexual disorders include erectile dysfunction, orgasm in both sexes and ejaculation in men, pain during intercourse and lack of pleasure during sex [4].

Sexual disorders are less frequently discussed in specialists by women than by men. However, physicians may not be able to make a functional assessment in this area during a sex conversation, because of the fear of patient’s embarrassment or too insistent response to the questions [5].

The aim of this article is to learn about epidemiology, aetiology, risk factors, sexual disorders after menopause and erection in aging men. It is important to know the exact cause of sexual disorders in older people and to take appropriate measures to help.

The weight of the problem – epidemiology

Sexuality is an essential part of every man's and woman's life. Sexual activity of the elderly is special for this group, because these people face many disorders. Disorders in this area grow with age. It is estimated that more than 30% of older people have a problem in this area, but about 60% declare that they want to be sexually active [6, 7].

A popular problem among men is erectile dysfunction, which affects up to 75% of people over 70 years of age. The reason for sexual dysfunction in older people is various types of diseases. A large part are heart and vascular diseases. They cause men to have erection problems. In 38-78% of people diagnosed with coronary heart disease, erectile dysfunction is found, and in men with diagnosed hypertension, this problem occurs in more

than 2/3. Erection problems can be caused by testosterone deficiency. In the conducted studies, it was noted that at the age of 60-69, this problem afflicted about 20% of men and had an increasing tendency. At the age of 70-79, testosterone deficiency was already observed in 30% of men, and over 80% in over 80%. All this makes men feel discomfort and fear [6, 7, 8].

In women, there is a reduction in estrogen levels after the menopause, which has numerous negative effects. This phenomenon occurs even in 80%. This is one of the main causes of sexual dysfunction [9].

Etiology and risk factors of sexual dysfunction in elderly

In public opinion it is said that older people no longer want to have sex, but only 17% men and 23% women identify with this sentence. Sexual dysfunctions in the elderly may be affected by both individual physical or psychological changes of aging and same changes of aging on the part of the partner. The risk of developing sexual dysfunction, both male and female, increases with numerous risk factors. Interestingly the prevalence of female sexual dysfunction (FSD) is higher than erectile dysfunction (ED) [10].

More and more research proves that the lifestyle have a significant impact on the sexual activity of a human being. Inappropriate habits correlate with an increased risk of cardiovascular disease, diabetes and depression, which in turn leads to some sexual dysfunctions, especially in the elderly. The other important disease is lower urinary tract symptoms. Diseases affect the tolerance to physical activity by reducing sexual desire. Even inappropriate diet may lead to the dysfunction, by causing obesity, which is one of risk factors. The most important is to maintain healthy vascular and neurologic systems, which are necessary for normal arousal in women and normal erections [10].

Erectile dysfunction consists of the inability of achieving and maintaining an erection sufficient to allow a satisfactory sexual intercourse. It may result from psychological, hormonal or neuronal disorders and comorbidities, such as hypercholesterolaemia, cardiovascular disease or hypertension. The association between depression, stress, schizophrenia and ED are very strong. Neuronal diseases, such as Parkinson’s, Alzheimer, which are typical in the elderly, may decrease libido or prevent the initiation of an erection as sensory involvement is essential for maintaining an erection. According to hormonal system,

androgen deficiency leads to ED too. Most important problem of ED seems to be cardiovascular factor, as changes of blood flow and blood pressure are necessary for erection. On the other hand, smoking may lead to blood flow dysfunction like penile venous leakage. Even drug abuse and chronic alcoholism may affect male sexual activity. It should be mentioned that the prostate cancer has an impact on sexual dysfunction in men [10, 11, 12].

In postmenopausal women the prevalence of sexual dysfunction is between 68% and 86.5% and it is said that the lack of estrogen might be a main cause. On the etiologic ground lay the lower frequency of sexual activities and decreased libido, but also dyspareunia and partner's sexual problems. The reason of these might be loss of sexual desire, low arousal, orgasm difficulties, painful intercourse and decreased attractiveness. While the anorgasmia is caused by psychological issues (like depression), alcohol use and drugs, the reason for dyspareunia can be infection, surgery and inflammatory disease. When it comes to diseases, important impact have cardiovascular disease, diabetes, hypertension, arthritis, lower urinary tract symptoms and many other chronic diseases. Giving a birth by vaginal delivery also may cause listed symptoms as well as it affects on sexual relationship with partner and give perineal pain [9, 13, 14].

Erectile dysfunction in aging men

Erection problems affect many men over 50, but there are also cases of such disorders in young men. It can be recognized when a man is unable to achieve or maintain an adequate erection that would allow sexual intercourse [15]. They do not threaten life, but they have an impact on well-being and social interactions. It has been shown that the frequency of sexual activities decreases with the age of a man. In the age ranges: 57-64 years of sexually active are 73% of men, 56-74 years, this number falls to 53%, while 75-84 years only 26% of men show sexual activity [16].

Erection is a complex process that depends on the proper functioning of the autonomic nervous system, the cardiovascular system and local neurotransmitters [16]. To make penile erection valid, penile vessels must be dilated, smooth muscles relaxed and increased blood supply to the corpora cavernosa [18]. With the man's age, gonadal steroid hormones (including testosterone), nerve conduction and vascular microcirculation are reduced [17]. The aging process also contributes to increasing the amount of collagen in relation to the

elastic fibers found in the penile bodies. With the decrease in testosterone level, it causes fibrosis of the corpora cavernosa, which in turn leads to erectile dysfunction [18].

There have been many studies on the risk factors of these disorders. It has been proved that men with diabetes, atherosclerosis, coronary heart disease and other cardiovascular diseases more often have erection problems [19]. Seniors with erectile dysfunction who want to be sexually active seek safe ways to deal with this problem. Oral pharmacological treatment is the most recommended. Inhibitors PDE5 (phosphodiesterase type 5 inhibitor) is a compound increasing the amount of cGMP to relax smooth muscle, then dilates the vessels increasing blood pressure in the body causing erection of the penis [18].

It is therefore recommended for use in men with erectile dysfunction. It is important to undertake psychosexual therapy to improve sexual performance in combination with a pharmacological treatment. Therapy is individual for every senior, because the source of anxiety varies between patients. Seniors who struggle with this problem should regularly engage in physical activity and avoid a hypercaloric diet.

Sexual problems among postmenopausal women

Menopause introduces many changes into the life of a woman, in the physical, psychological, emotional and also sexual sphere. In a study conducted by Jamali et al. [20], as many as 80% of menopausal women surveyed reported sexual dysfunction. The biggest problem in this group was dyspareunia [21].

Disorders reported by women are mainly: problems with sexual arousal, painful intercourse, decreased sexual desire. As a result of hormonal changes, the mammary glands also decrease [9, 21].

During the last menstrual period, there is a very large drop in estrogen in the blood. During this period, women experience small sexual arousal. The orgasm they feel is also smaller. The reduction of the quality of life of women in the menopause, in addition to hormones, is also influenced by the perception of the woman by herself - the woman often feels less attractive and has poor self-confidence. Characteristic for this period, such as: hot flushes or sleep disorders also negatively affect the sexuality of women during this period [9].

One of the problems in this period is dyspareunia, the pain experienced by a woman during sexual intercourse. According to research, this dysfunction occurs in 25-50% of women. The reason for this is: hormonal changes, emotional problems. Decreased concentration of hormones during menopause causes the vaginal walls to become less moisturized, which may cause discomfort [22].

Another sexual dysfunction that can be observed in postmenopausal women is the loss of libido, which is also called HSDD (hypoactive sexual desire disorder). This disorder is manifested by a lack of sexual fantasies. It is affected by both general health, medications and hormone deficiencies [22].

In the study [23] conducted among women in the perimenopausal period - sexual contacts were important for 60% of respondents. As many as 65% of respondents reported a smaller sexual life in this period. In turn, the most common complaint in women was dryness within the vagina - reported by 30% of respondents.

Sexual problems among postmenopausal women are a significant problem - they affect the quality of life as well as interpersonal relations. It is important for women to take the treatment, in connection with sexual dysfunctions occurring after the menopause.

Treatment of sexual disorders among elderly

Sexuality is a very important element of the intimacy of men and women. Sexual disorders increase their intensity with age. About a third of the elderly population has one complaint about sexual dysfunction. There are several additional changes that accompany sexual dysfunction among older people. These are: reduced muscle mass, reduced bone density, visceral obesity [10].

In the treatment of sexual dysfunction, we use: sildenafil and tadalafil. They are selective inhibitors of the cyclic GMP-specific type 5 phosphodiesterase, dominating the isozyme metabolizing cyclic GMP in the corpus cavernosum. During sexual stimulation, nitric oxide activates guanylate cyclase, which increases the amount of cyclic guanosine monophosphate (cGMP). cGMP is then broken down into the corpus cavernosum, mainly by type 5 phosphodiesterase (PDE5). Inhibition of PDE5 activity results in increased cGMP concentration, and consequently, relaxation of smooth muscle in the corpus cavernosum,

inflow to the corpus cavernosum and erection [24].

Alternative treatment for patients who do not respond to type 5 phosphodiesterase inhibitors are intracavernous injections, vacuum devices, or penile prosthesis implantations. When it comes to injections, alprostadil is used, which fills the blood vessels of the corpora cavernosa causing an erection. Compared with sildenafil, sexual arousal is not required, erection is completely artificially induced [25].

The addition of testosterone may improve the action of phosphodiesterase type 5 inhibitors, so the doctor should know about this possibility. Testosterone deficiency disrupt the cell signaling pathways causing pathological vascular changes in the penis and precisely in the penile corpora of the penis leading to erectile dysfunction [26].

Sildenafil was also well tolerated in postmenopausal women with impaired hydration and sensitization of erotic sites. It was found that after treatment the vaginal hydration was improved and the clitoris become more sensitive. The role of sildenafil in the treatment of sexual dysfunctions in various groups of women remains to be determined [27].

Depressive states are also often the cause of sexual dysfunction of the elderly, therefore the treatment of depressive episodes is very important. Impotence and other sexual dysfunctions resulting from the use of antidepressants are still less pronounced than during untreated depression [28].

Hormone replacement therapy may be effective in the treatment of some sexual dysfunctions such as reduced sexual appetite, orgasm or dyspareunia. The best results have been obtained by treatment with ethinyl estradiol. In addition, increased vaginal hydration and feeling of pleasure were also noted. [29]

Discussion

Sexuality is an important issue in older adults' society. Our study shows that the problem increases with age and depends on coexisting diseases and difficulties, which are effects of the aging. According to the other researches, the physical and mental health are the main factors in the perception of own elderly's sexuality [30, 31]. There is no difference

between the level of interest in sexual sphere of life in elderly people, especially with chronic diseases, compared to the younger adults or people without health problem [30]. The lifestyle, like alcohol consumption, has a positive impact on women's sexuality. The problem with sexual experience, in both women and man, is connected to the low frequency of sexual relations [31].

Research indicate the difference in understanding concepts related to sexuality. The older adults do not speak plainly, rather use metaphors to describe the sexuality. Seniors put an equal sign between the terms 'sexual activity' and 'sexual intercourse'. Interpretation of the 'sexual health' was also slightly different, mainly as not having venereal diseases [30].

Pursuant to data for the 2001-2002 period, agreed with the statement that the elderly are unwilling to sex was 23% of women and less, because 17 percent of men. 75% of men over 70 years old had erectile dysfunction [10].

Our study shows that medical treatment is very helpful and there are few alternative ways to improve sexual disorders. According to sources, 60% of elderly women and 68% of elderly men advocated to using medical solutions [10]. However, it is important to estimate a sexual dysfunction to choose a suitable treatment. To diagnose women, a biopsychosocial model, which include not only physical examination but also a sexual history, becomes helpful. The PLISSIT model is also used [32] .

Uncomfortableness and an aversion are the reason why older people do not want to raise the subject of their sexuality, the research said [30].

Conclusions

Sexual dysfunction in the elderly is a common problem, although often underrated. Both man and women usually do not talk about it because they think of it as a natural process and that nothing can be done. It is estimated that even three-quarters of elderly man, especially those with heart disease, have erectile dysfunction. Women start having sexual inconvenience after menopause.

Contrary to what society thinks, older man and women still care about their sexual life. Lifestyle plays an important role because lack of physical activity, unhealthy diet and a

lot of stress lead to obesity and chronic diseases such as diabetes and cardiovascular problems, which significantly affect sexual functions. Also neurological diseases like Alzheimer and Parkinson decrease libido. The low concentration of testosterone in men and estrogen in women is the basic reason of reduced sexual tension.

Men's sexual activity lowers with age and so most of them do not have sex at age 75. Erectile dysfunction is caused by lack of hormones, negative reconstruction of penis' vessels and accumulation of collagen in penile bodies. On the other hand, most of women after menopause experience dyspareunia and vaginal dryness due to estrogen deficiency. Both sexes have loss of libido, which may be frustrating to them. The quality of their sexual life worsen because of personal and psychological issues, like low self-esteem and poor confidence because of their aging body, which they cannot accept.

To treat problems with erection in men PDE5 inhibitors like sildenafil and tadalafil are used, commonly known as Viagra. Thanks to them penis' smooth muscles relax and the vessels dilate so the blood flow is effective enough to cause erection. The treatment of coronary heart disease, diabetes or hypertension is also crucial to improve sexual experiences. Antidepressants also give good results when dysfunction has psychological origin. Hormone replacement therapy used in postmenopausal women can increase their libido and reduce dyspareunia.

To conclude, sexual dysfunction is a wide problem among elderly, but it mostly can be solved, so they should not be embarrassed to talk about it and seek help. There are many studies aiming to improve patients' sex life quality so the issue is still being examined to propose new methods of treatment.

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