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BIOLOGICAL AND PSYCHOSOCIAL ASPECTS THAT PERMEATE CARE ABOUT THE SEXUALITY OF THE ELDERLY PERSON

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Abstract: Aging brings together a wide combination of anatomical, physiological and behavioral variables in the face of a remarkable morphofunctional involution in the sexual level of life. Given this context, the objective of this work was to carry out a systematic review based on the concept of sexuality, its care and development during old age from the medical point of view. For this, a bibliographic survey was carried out with key words guiding the theme. The research carried out showed that the attention given to the elderly person must also value sexuality; given that it is an essential tool that needs to be cared for and developed with knowledge. Thus, validating the UN proposal of SDG 3 of the 2030 Agenda, which seeks to promote well-being, mainly, as advocated in goal 3.7, which has the expected configuration of universal access to sexual health services by the elderly. However, it was found that there are flaws in the integrated medical execution, such as the lack of information explored by professionals about the sexuality of the elderly person, given the delicate content that covers the reality of the same, as a sexual figure, permeating spheres of imprint. both biological and psychosocial.
Keywords: Care for the elderly, Aging, Sexual Health, Sexually transmitted diseases, Quality of life.

INTRODUCTION

Established by Law Number 10,741/2003, the Elderly Statute aims to guarantee the fundamental rights guaranteed to people aged over sixty years, creating conditions for the promotion of their autonomy, integration and participation in social contexts. Thus, preserving, by law and by other means, their physical and mental health (BRASIL, 2003).

Assuming that the sexuality of the elderly is part of their well-being, according to goal 3.7 of Sustainable Development Goal 3 of

the 2030 Agenda, it is necessary to reflect on the biological and psychosocial aspects that permeate medical care in this regard, as well as two complementary approaches to the concept itself, in order to explore the theme to the letter before the elderly (AGENDA 2030/17 ODS, 2019).

> Sexuality is a central aspect of being human throughout life; it encompasses sex, gender identities and roles, sexual orientation, erotica, pleasure, intimacy and reproduction. Sexuality is lived and expressed through thoughts, fantasies, desires, beliefs, attitudes, values, behaviors, practices, roles and relationships. Although sexuality can include all of these dimensions, not all of them are always lived or expressed. Sexuality is influenced by the interaction of biological, psychological, social, economic, political, cultural, legal, historical, religious and spiritual factors (WHO, 2006).

According to Brito (2012), sexuality is manifested through three dimensions: the "I", the "Other", and the mode of sexual practice. The first being a self-definition plan, having a clear view of itself on the gender issue; the second, a knowledge plan about your own gender or sex preference - sexual orientation; and, the third and last, a plan of the preferred mode of sex by the individual.

It can be seen that both the World Health Organization (WHO), in their discourse on sexuality, and Brito at no time discarded any age group as a non-integral part of their definition and scope. All people - each with their own levels of interest and motivation - have the right, by legislation, and the need, by physiology, to develop it. Therefore, it is crucial that sexual health is also present in old age (WHO, 2006; BRITO, 2012).

Furthermore, it is worth emphasizing the view of the elderly on the subject, since "the meanings we give to our bodies and their sexual possibilities become, in fact, a vital part of our individual formation, whatever the social explanations" (WEEKS, 1992, p. 48).

The view of the elderly about their own exercise of sexuality often conditions the abandonment of sexual practice. This reality is presented from the repression of the term, once stigmatized in contexts of family, religion and society, which leads the elderly person, repressed from their pleasures, to get used to a pattern imposed by archaic ideas that the older the human being, the less the carnal demand of his own body. This argument is denied by science, only in fact there is a natural decline in their abilities as a rule of aging itself, which must not be a reason for blocking. After all, the search for the development of their sexuality is positively relevant in the health of the elderly; while the opposite, only puts him in a movement of involution, already morphofunctional, and, now, sexual by choice (UCHÔA et al., 2016).

Regarding the male/female and male/female dichotomies, since the 1970s, "the term 'sex' has been used to refer to the biological division between male and female"; while "'gender' was used to refer to the social role assigned to a person based on apparent sex and/or other contingent factors" (BRITO, 2012, p. 20).

According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), mental disorders are commonly correlated with significant distress that affects social, professional, and interpersonal activities. Thus, with late treatment or lack of exploration of health status, these clinical conditions can become chronic, generating stress in the elderly. Thus, given their experiences throughout their lives, endowed with prejudiced paradigms, a view on sexual and gender differences through genetics is crucial for a more accurate understanding of the subject.

> In terms of nomenclature, sex differences are variations attributed to an individual's reproductive organs and the XX or XY chromosome complement. Gender

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> differences are variations that result from both the biological sex and the individual's self-representation, which include psychological, behavioral and social consequences of perceived gender. (DSM-V, 2014, p. 15)

When a person's designated gender, the one assigned after birth to the individual given his biological sex, does not coincide with that expressed by the person throughout his life, suffering can occur. This has been described as "gender dysphoria" and is diagnosed with this discrepancy itself when it is perceived as the opposite of what they were told. As much as "this incongruity does not cause discomfort in all individuals, many end up suffering if the desired physical interventions through hormones and/or surgery are not available". (DSM-V, 2014, p. 451-452)

Given this context, Primary Health Care aims to maintain and strengthen the physical and mental potential of the elderly, preventing diseases and injuries, and reducing risks through behaviors that preserve as much as possible the functional capacity of each individual. Among its health promotion and prevention procedures - sometimes organized with other sectoral policies -, there is that of providing guidance on sexual health and sexuality to the elderly.

However, there are still difficulties in organizing actions for the elderly in order to provide their comprehensive health. Among these: the lack of multidisciplinary teams trained on aging; the insufficiency of home care structures; the poor distribution of access to the health care network. Such a scenario implies differentiated demands that require increasingly specialized management. In view of the context, the present study had as its objective the theme of sexuality of the elderly, as an object of integrative review in a multidisciplinary context and target of changes in patterns throughout this natural process. This focus will be presented as an integral part of the life cycle, based on the following areas of knowledge: Infectious Agents, Applied Biochemistry, Physiology, Humanities, Medical Immunology, Semiology, Primary Health Care and Functional Anatomy.

METHODOLOGY

This article was elaborated from analyzes and interpretations of studies about the sexuality of the elderly in the face of their own aging process. It was based on a narrative review of the literature based on books and articles, obtained through the LILACS, PubMed and SciELO electronic databases, carried out in the first half of 2021. Official documents such as the Elderly Statute Law, such as as views of the Ministry of Health, the United Nations and the World Health Organization on the subject. The descriptors "elderly care", "aging", "sexual health", "sexually transmitted diseases" and "quality of life" were used, including texts in Portuguese and English, which adequately addressed the proposed theme, without restriction on publication time, but that they were made available in full, excluding duplicate articles, those made available in the form of abstracts and those that did not directly address the proposal studied. After the selection criteria, the documents were subjected to a thorough reading to collect information on the topic addressed and the results were presented in a descriptive way.

RESULTS AND DISCUSSION

ANATOMY AND PHYSIOLOGY OF THE GENITAL SYSTEM

In order to obtain a concrete knowledge about sexuality, knowledge of Anatomy and Physiology of the genital system becomes essential.

The female genital apparatus is formed by the internal genitalia, composed of the uterus, fallopian tubes, vagina and ovaries;

and through the external genitalia, the vulva. The ovaries are the female gonads in which eggs are developed. In addition, the ovaries have a fundamental endocrine role in the maintenance of the genital tract and also systemic, as they are responsible for the production of female sex hormones, estrogen and progesterone. Thus, we will highlight the Anatomy and Physiology of this organ (MOORE, 2019).

The ovaries are paired organs, with an apparent chestnut shape and an approximate size of 5 cm. They are located in the pelvic cavity, with each ovary suspended by a short peritoneal fold or mesentery, the mesovarium. The mesovarium is a subdivision of a larger mesentery of the uterus, the broad ligament. (MOORE, 2019).

The ovaries are often found laterally between the uterus and the side wall of the pelvis during a manual or ultrasound examination of the pelvis. As the ovary is suspended in the peritoneal cavity and its surface is not covered by peritoneum, the oocyte expelled at ovulation passes into the peritoneal cavity. However, its intraperitoneal life is short because it is usually trapped by the fimbriae of the fallopian tube infundibulum and carried to the ampulla, where it can be fertilized (MOORE, 2019).

The reproductive life linked to the menstrual cycle and the release of eggs begins around 12, 13 years after menarche, first menstruation, in which it occurs after the ovaries cyclically increase the production of female hormones. The hormonal spike that occurs around the 14th day of the cycle, causes the ovaries to release an egg (changing the ovaries each month), a process called ovulation. If the fertilization process occurs, the hormones synthesized in the ovaries keep the endometrium (inner layer of the uterus) intact. However, if there is no fertilization, the ovaries decrease the synthesis of sex hormones, causing the endometrium to shed, a process called menstruation (SANTOS et al, 2012).

Women are born with all eggs stopped in meiosis, and during their reproductive period, these eggs become mature, and one by one, they are released monthly, thus, the gamete stock decreases over the years. Therefore, the female gametes are depleted through ovulation or atresia of the other ovarian follicles that have also started their maturation process. The increasing decrease in the number of eggs generates a lower secretion of inhibin B, decreasing the negative feedback of the ovary on follicle-stimulating hormone (FSH). Therefore, this reproductive cycle has a duration, being the end of the menstrual and ovulatory cycles known as menopause (Moore, 2019).

Menopause is a unique moment in a woman's life and is characterized as the interruption of spontaneous menstruation for a period of 12 months. On average, menopause occurs between the ages of 49 and 52, so it is calculated from the average life expectancy that these women will spend approximately 40% of their life in the post-menopause period, which demonstrates the importance of this topic. Despite being a natural cycle, some factors can influence early menopause. Among these factors, smoking, lower body mass index, nulliparity and lower level of education can be highlighted. Although menopause is characterized by the cessation of menstruation for 12 months, the definitive installation of this phase can take years (DE LORENZI et al, 2006).

Toward the end of the reproductive cycle, the increasing increase in FSH level leads to more follicular recruitment and more accelerated follicular loss, with preservation of estradiol levels at the beginning of the menopausal transition. Occasionally, follicle depletion results in variability in the ovarian

response to FSH, widely fluctuating estrogen levels, and loss of menstrual cycle. Finally, when all the ovarian follicles are depleted, the ovary is unable to respond to the high levels of FSH and estrogen levels decrease. Thus, the characterization of the postmenstrual period is given by a high level of FSH (TAKAHASHI & JOHNSON, 2015).

After menopause, an atrophy of the ovary is observed, observed in imaging tests, such as ultrasound, becoming non-palpable. In addition to the ovaries, it is also possible to observe, in older women, a vulvovaginal atrophy. The vagina is a muscular canal, which contains mucus-producing glands along its entire length. With the decrease in the synthesis of hormones by the ovary, the vulvovaginal tissue also undergoes changes, the vaginal epithelium undergoes atrophic changes due to the flattening of the vaginal wrinkles, and consequently the thinning of the epithelium occurs. Therefore, the vagina starts to show a pale, thin and friable appearance, in addition to showing loss of wrinkles and possible fissures and erythema appearing, which will result in less mechanical sensitivity during sex, thus reducing the stimulation of pleasure; more episodes of dyspareunia and orgasm tends to have a shorter duration due to less tenacity of the muscles which perform fewer and fewer vaginal contractions (HOFFMAN et al, 2014).

The uterus, an inverted pear-shaped fibromuscular organ located in the pelvic cavity, is also observed to decrease in size (from 10 cm to 6 cm in length). The cervix may become stenotic and flush with the vagina. There may be a urethral caruncle, immediately posterior to the external urethral meatus, which consists of a benign erythematous nodule arising from the extrusion of uroepithelial tissue (REED, 2014).

Atrophic changes can occur in the urinary tract, as estrogen plays an important role in maintaining the epithelium of the bladder and urethra. This atrophy can give rise to atrophic cystitis, manifested by urgency, frequency, urinary incontinence, in addition to dysuria. This way, such changes lead not only to sexual dysfunctions, impairing the act, as well as making it difficult for women to perform sexual activities, acting both in decreasing libido and impairing the sexual act itself (HOFFMAN et al, 2014).

With menopause, menstrual cycles cease and the ovaries stop producing estrogen. A lack of estrogen causes thinning (atrophy) of the tissues of the labia minora (which surround the opening of the vagina and urethra), clitoris, vagina, and urethra. This thinning can cause chronic irritation, dryness and vaginal discharge that can harm a woman's sex life. (KNUDTSON & MCLAUGHLIN, 2019).

In addition, with aging there is a decrease in muscle mass and connective tissue, so affected organs may become torn or fall out (prolapse), leading to difficulty urinating, loss of control of urine or bowel movements (incontinence), or pain during urination. sexual relationship. (KNUDTSON & MCLAUGHLIN, 2019).

The gold standard test for identifying changes associated with reproductive aging is the Stages of Reproductive Aging Workshop (STRAW) staging system. This system is divided into three phases (reproduction, menopausal transition, and post-menopause) and includes 7 stages within these 3 phases and describes typical duration, menstrual cycle characteristics, hormone levels, antral follicle count, and symptoms of each stage. (TAKAHASHI & JOHNSON, 2015)

The male genital apparatus can also be divided into internal and external genitalia. Externally is the scrotum, which stores the testes, male gonads, and epididymis; and the penis, the organ of copulation. Internally, there are the ejaculatory ducts, place of passage of sperm, male gametes and the attached sex

glands, which are prostate, seminal glands and bulbourethral glands. As with the female genital system, we will highlight the male gonads, as well as the copulation organ, as they are important organs related to male sexuality (MOORE, 2019).

The penis is the male organ of copulation and, leading to the urethra, provides the common outlet for urine and semen. The penis consists of the root, body and glans. It is formed by three cylindrical bodies of erectile cavernous tissue: two cavernous spaces dorsally and a corpus spongiosum ventrally. At the distal end, the corpus spongiosum expands to form the conical glans penis, or head of the penis. The deep arteries of the penis are the main vessels that supply the cavernous spaces and therefore participate in the erection of the penis. They emit several branches that open directly into the cavernous spaces (MOORE, 2019).

Andropause and hypogonadism are also linked to sexuality in senescence. Andropause is a common disorder for men and is more likely to manifest over the years. This syndrome is associated with decreased sexual desire or a decline in a sense of well-being due to low levels of testosterone synthesized by the testes in older men. It is known that with age, testosterone levels usually decrease (1% drop per year). However, this rate of decline in testosterone levels can vary with an individual's lifestyle and is affected by factors such as obesity, chronic illness, severe emotional stress, and medications, as well as being mitigated by healthy lifestyle factors (SINGH, 2013).

One of the factors that makes andropause difficult to define is men who, despite having low levels of testosterone, are asymptomatic. Furthermore, andropause can occur from an event such as loss of testicular function, due to illness or accidents, or in men with advanced prostate cancer undergoing surgical castration. The diagnosis is based on the presence of symptoms suggestive of low testosterone levels such as loss of libido, morning penile erection and erectile dysfunction. Unlike menopause, which is a timed, universal and well-characterized process associated with absolute gonadal insufficiency, andropause is characterized by insidious onset and slow progression.

The European Study of Aging Male (EMAS) indicates that 18.4% of men over 70 years old have hypogonadism linked to decreased libido, morning erections and erectile dysfunction associated with a total testosterone level of less than 11 nmol/l and a level of of free testosterone of less than 220 pmol/L are indicative of this pathology (SINGH, 2013).

Epidemiological studies have established a link between obesity and low serum testosterone levels in healthy men. However, testosterone therapies with hormone replacement and supraphysiological doses have been shown to have positive connections to mood effects, but there is unequivocal evidence that testosterone can stimulate locally advanced and metastatic prostate cancer. In addition, lifestyle modifications based on increased physical activity and weight loss are strongly recommended in hypogonadal individuals with obesity, type 2 diabetes, and metabolic syndrome (SINGH, 2013).

In terms of physiology, andropause is not an isolated process, but part of a broader one, senescence, which occurs at different ages and due to a series of varied factors, the most important of which is heredity. In senescence, a series of alterations occurs in the circulating levels of hormones, neurotransmitters, neuropeptides, vitamins and several other substances, and some of these biochemical alterations, it is known, today, have a preponderant role in the genesis of the decline of androgenic function in the

elderly (BONACCORSI, 2001).

In summary, after describing the female anatomy and physiology, as well as the male one, the correlation between these and aspects of senile sexuality is essential. This way, we can observe physiological changes in men such as more flaccid erections, requiring more time to reach orgasm; decreased nocturnal involuntary erections; delayed ejaculation and reduction of pre-ejaculatory fluid (CABRAL 2012).

Regarding the physiology of sexuality in the elderly, erection of the penis is an extremely complex process and is related to several neurological and endocrine factors. Swelling (enlargement of the penis) can be classified as psychogenic, when activation occurs by visual or mental stimuli; reflex, through physical or nocturnal stimulation, not yet fully understood. In response to these stimuli, the pudendal and dorsal nerves of the penis activate the parasympathetic autonomic nucleus, which promotes the release of acetylcholine and nitric oxide, responsible for the relaxation of the cavernous smooth muscle and dilation of the penile arteries, thus inflowing blood to the body. of the penis is increased by eight times, which results in an increase in size and length, this way, the growth generates a pressure that restricts the venous flow of drainage, causing the blood to be trapped in the penis and the erection to be maintained for longer. periods of time (ALVES et al, 2012).

Detumescence (penis shrinkage) occurs after ejaculation or loss of arousal, and occurs through activation of sympathetic innervation, which drives the release of noradrenaline, captured by α-adrenergic receptors responsible for smooth muscle contraction, thus, pressure The internal flow slowly decreases, until the venous flow is fully reestablished (ALVES et al, 2012).

Erectile dysfunction (ED), described as difficulty in achieving and maintaining penile erection, is the main difficulty presented by older men with an active sexual life, reaching 52% of men between 40 and 70 years of age. It is known that this mechanism basically depends on the nervous and vascular system and erectile dysfunction is strongly linked to dysfunctions in any of these systems (ALVES et al, 2012).

That said, the main risk factors for the development of erectile dysfunction in the elderly are hyperlipidemia, present in 42% of cases; hypertension in 40% of cases and diabetes in 20%. Furthermore, it is believed that use of drugs such as antidepressants and antipsychotics are responsible for about 25% of cases. The diagnosis of ED is based on data obtained from the physical examination, such as blood pressure, pulse and waist circumference, and a thorough analysis of the past history, taking into account lifestyle habits, previous illnesses and psychosocial factors (IRWIN, 2019).

There are several types of treatment for ED, the most common being the use of drugs such as yohimbine, which acts on the suppression of α-adrenergic receptors that promote detumescence and is recommended for cases of ED associated with the use of antidepressants and diabetes. However, treatment can also occur through prostheses, intracavernous injection and psychological therapies, but regardless of the method used, changes in habits are recommended, aiming at weight loss, reduction in alcohol and tobacco consumption and increase in physical activities (ALVES et al, 2012).

INFECTIONS ASSOCIATED WITH THE MALE AND FEMALE GENITAL TRACT

In view of the recent increase in the elderly population in recent decades, the growth in sex life is noteworthy. Faced with advances in

technology and health care, people over the age of 50 live a new reality, never experienced at other times (BRASILEIRO, 2004).

Thus, it is from this perspective that many elderly people make use of drugs for erection, which contribute to an active sex life, consequently, a better quality of life and longevity. However, a good portion of them do not use condoms during sexual intercourse, as some believe that, because the elderly woman can no longer get pregnant, there is no need to use them. In addition, some elderly people reported not having the knowledge to buy or acquire the product, or even for fear of compromised ejaculation (MICHELIN, 2015).

According to a survey carried out by the Franciscan University in 2018 in the municipality of Santa Maria - RS, about 79% of the elderly interviewed who were sexually active reported not using condoms (RODRIGUES, 2018). This data can be compared with data issued by the HIV/Aids Epidemiological Bulletin released by the Ministry of Health in 2018, which showed that the number of patients over 60 years of age diagnosed with HIV tripled in 11 years (BRASIL, 2018). Thus, in view of this holistic approach, the importance of sexually transmitted infections (STIs) in the elderly is highlighted.

With regard to STIs, trichomoniasis stands out; infection caused by the protozoan: *Trichonomas vaginalis* which can infect both men and women of all ages. However, according to the WHO (2015), 170 million cases of trichomoniasis are diagnosed worldwide annually, the majority in women (92%). Thus, to better understand the disease, a brief definition of the protozoan, as well as its formation and life, is vital (GERBASE, 1998).

> "T. vaginalis is a facultative anaerobic organism. It grows perfectly well in the absence of oxygen in the pH range between 5 and 7.5 and at temperatures between 20ºC and 40ºC. As a source of energy, the flagellate uses glucose, maltose, and galactose" (NEVES, 2011, p.2)

In women, the disease mainly affects the vulva, vagina and cervix; it can also afflict the urethra and Skene and Bartolin's glands. Barrio (2002) states that trichomoniasis presents great variability of pathological manifestations, from the asymptomatic presentation to a state of severe inflammation (vaginitis). In men, T. vaginalis often affects the urethra, and although the symptoms appear less frequently, the main ones consist of irritation, penile discharge, dysuria and pain during ejaculation.

Neves (2011) concludes that the disease can be classified into three states: asymptomatic state; acute state, characterized by profuse purulent urethritis; and mild asymptomatic state, which is clinically indistinguishable from other causes of urethritis. However, as it is an infection, most of the time asymptomatic, it is essential to carry out diagnostic tests to confirm the presence of the parasite.

The most indicated laboratory tests are polymerase chain reaction (PCR) techniques and vaginal secretion culture, using vaginal secretion and samples of the uterine cervix taken during a colposcopy in women and, in men, urethral secretion and urine. (MACHADO & SOUZA, 2012; TORRES FILHO & LEITE, 2015).

Regarding treatment, the most widely used drug is metronidazole, which must be taken orally, twice a day, for seven days. However, its use in a single dose has been a choice, since many end up not following the treatment correctly, interrupting it before seven days. Secnidazole and tinidazole can also be used. However, it is known that prevention with the use of condoms during sexual intercourse is the best way to control this disease, which can reduce the chances of acquiring the parasite, as well as reducing reinfection

rates (BRAVO et al., 2010; VASCONCELOS et al., 2010; VASCONCELOS et al., 2010; VASCONCELOS et al. al., 2016).

In addition to trichomoniasis, another disease that often affects the sexual health of the elderly is syphilis, a systemic infection caused by the bacterium: *Treponema pallidum,* exclusive to the human being. It is predominantly transmitted sexually and vertically, and when not treated early, it can develop into a chronic disease with long-term irreversible sequelae (HORVÁTH, 2011).

Syphilis can present in four stages, the primary phase comprises the manifestation of a single wound at the entry site of the bacteria (penis, vulva, vagina, cervix, anus, mouth, or other skin sites) , which appears between 10 and 90 days after infection, usually painless and non-itchy. In the secondary phase, signs and symptoms appear between six weeks and six months after the primary wound has healed. Spots can occur on the body, including the palms of the hands and soles of the feet, in addition to fever, malaise, headache and enlarged lymph nodes (VIRAL, 2016).

The next phase consists of the latent phase, which has the characteristic of being asymptomatic and can last for more than two years after infection. Finally, the third phase, which can appear from two to 40 years after the beginning of the infection, when it presents signs and symptoms, mainly cutaneous, bone, cardiovascular and neurological lesions, which can lead to death (VIRAL, 2016).

The detection of this bacterium can be performed through the examination in the dark field, by microscopy, performed in both primary and secondary lesions of syphilis, using the serous exudate of active lesions, being the most efficient test to determine the direct diagnosis of syphilis. syphilis and low cost (WHO, 2015).

In addition, there are also two types of immunological tests for syphilis, such as the non-treponemal tests, which detect anticardiolipin antibodies, not specific for the antigens of the *T. pallidum*. Treponemal tests detect specific antibodies to the antigens of this pathogen (WORKOWSKI, 2015).

According to the Ministry of Health (2006), the treatment of syphilis is done with the use of benzathine penicillin that acts by interfering with the synthesis of peptidoglycan, a component of the cell wall of T. pallidum. The dosage schedule and application interval depend on the stage of the disease and time of evolution, being of fundamental importance to follow it rigorously to reach the cure of the disease.

Another disease that also affects the health of the elderly is gonorrhea, a common bacterial infection caused by the Gram-negative diplococcus: *Neisseria gonorrhoeae*, whose transmission occurs exclusively through sexual or perinatal contact (PENNA, 2000).

Generally speaking, for both sexes, the symptoms of gonorrhea consist of itching, anal discharge and bleeding, sore throat, and difficulty swallowing. They can progress to pelvic inflammatory disease and infertility in women, and prostatitis in men, triggering pain, incontinence or urinary retention, fever and asthenia. The diagnosis of gonorrhea is established by identifying *N. gonorrhoeae* in genital and extragenital secretions, such as in the eyes and throat. The WHO indicates bacterioscopy as the method of choice for the diagnosis of gonorrhea in men, and, for women, culture of endocervical samples is indicated (PENNA, 2000).

Culture of organisms using specific media shows good sensitivity and specificity and is a highly standardized method. Furthermore, DNA amplification by polymerase chain reaction (PCR) offers sensitivity comparable or even superior to culture, but clinical experience is limited (PENNA, 2000).

Treatment is performed with the antibiotics ceftriaxone and azithromycin, abstaining from sexual activity until the treatment is completed to avoid infecting sexual partners, especially the elderly, who are more vulnerable to contagion (PENNA, 2000).

Finally, the Acquired Immunodeficiency Syndrome, popularly known as "AIDS", is a disease caused by the HIV virus (human immunodeficiency virus), which attacks the immune system of individuals affected by this disease (MINISTRY OF HEALTH). The 1980s were marked by the emergence of AIDS, a disease associated at that time with sexual contagion, use of illicit drugs and known by society as a serious and fatal disease. However, Brazil has stood out internationally with advances in diagnosis, treatment and availability of medicines by the public health system (FERREIRA, 2012).

In Brazil, the ELISA test is the most used diagnostic method, due to the ease of automation, relatively low cost and high sensitivity and specificity. Rapid Tests (RT) are simple immunoassays (IE) that can be performed in up to 30 minutes. As a consequence of the development and availability of these tests, HIV detection can currently also be performed in non-laboratory environments, expanding access to diagnosis (BRASIL, 2013).

Although rapid tests and IEs are sensitive and specific, false positive results can occur. For this reason, according to the Technical Manual for the Diagnosis of HIV Infection, complementary tests have been developed. Included in this category are indirect immunofluorescence, immunoblot and western blot. HIV infection can also be diagnosed through direct detection of virus components (p24 antigen, proviral RNA or DNA) and plays an important role when antibody detection is not possible. This method, however, has a high cost and takes longer, and its indication is currently restricted to the area of clinical research (MACHADO, 1998).

Regarding the treatment of HIV, there are currently 21 drugs. Since 1996, Brazil has distributed all antiretroviral drugs free of charge through the SUS and, since 2013, the SUS has guaranteed treatment for all people living with HIV, regardless of viral load, fundamental elements for the treatment of the elderly, since these are more vulnerable, in general (BRASIL, 2013).

IMMUNE RESPONSE TO VARIOUS PATHOGENIC MICROORGANISMS

Through sexual intercourse, the mucosa of the genital tract of individuals becomes the gateway for various pathogenic microorganisms that cause STIs (Sexually Transmitted Infections). The first defense that a pathogen encounters is the physicochemical barrier. This, when integrated and perfectly functioning, does not allow the entry of pathogens (FORTE, 2015).

Bacteria often cause human infections, so the natural barriers against infectious agents, innate and adaptive immunity, participate in the body's defense mechanism in order to fight them (MACHADO, 2004). The mechanisms of innate immunity begin with the activation of the complement system and the opsonization of bacteria. After that, there is the recruitment and activation of phagocytes, which use surface receptors and complement receptors to recognize bacteria opsonized with antibodies and complement proteins. Finally, dendritic cells and phagocytes activated by microorganisms secrete cytokines that induce leukocyte infiltration at sites of infection in order to destroy such bacteria (ABBAS, 2015).

In adaptive immunity, the effector mechanisms used by antibodies to fight these infections include neutralization, opsonization, phagocytosis and complement

activation by the classical pathway (MACHADO, 2004). Neutralization is mediated by the high affinity of IgG, IgM and IgA. Opsonization is mediated by some IgG subclasses and complement activation is initiated by the production of IgM and IgG subclasses.

In the case of intracellular bacteria, the innate immune response is mediated mainly by phagocytes and natural killer (NK) cells. Phagocytes engulf them in order to destroy these microorganisms, which are resistant to degradation within phagocytes. Intracellular bacteria activate NK cells, which in turn activate macrophages and promote the death of the phagocytosed bacteria.

Similar to the immune responses to bacteria, there is a defense of the human body against fungal infections. The pathogenicity of these microorganisms is mainly linked to the ineffectiveness of the host defense mechanisms, called opportunistic infections. This type of fungal infection can cause serious illness in immunodeficient people (ABBAS, 2015).

As for immunity to viruses, obligate intracellular microorganisms that only exist through their reproduction and infection of host cells, the defense mechanism consists of, initially, attenuating viral replication and later eradicating the infection (COICO, 2010).

In the initial phase of viral infections, these infections are controlled by type I interferons (cytokines) (IFN-α and IFN-β), macrophages and NK cells. Type I interferons are produced by virus-infected cells and, when interacting with an uninfected cell, have the property of protecting it against infection, in addition to collaborating with the adaptive immune response (MACHADO, 2004).

Despite the action of natural immunity mechanisms, which delay and partially contain several viral infections, the infection can progress, with viral replication and trigger an adaptive immune response. The humoral response results in the production of antibodies against the viral proteins, which are effective only during the extracellular phase of the virus, that is, at the beginning of the course of the infection, before the host cells are affected. In addition, the elimination of the virus already in the intracellular phase occurs through cytotoxic T lymphocytes that eliminate infected cells and have the function of surveillance against viral infections (COICO, 2009).

However, immunosenescence, which consists of the natural deterioration of the immune system due to aging, involves the loss of the body's ability to respond to infections and immunological memory, especially vaccination, being considered a factor of mortality among the elderly, since the processes described above are not completely carried out (ABBAS, 2015).

SELF CARE

Historically, old age was approached, in the world, as something based on social exclusion, in which nursing homes were the main symbol of this stage of life. However, after 1962, there was a movement in France that advocated the social inclusion of "old age", with the aim of changing the image of these people. It was in this movement that the expression "*third age*" emerged, since the term "elderly" was intended for individuals who had *social status*, such as political positions, accumulation of goods, among other activities related as important at the time (RODRIGUES & SOARES, 2006).).

It is known that, in Brazil, the aging process configures the idea of involution of the human being, because, among other factors, the word "aging" derives from "old" that alludes to something decrepit, decadent, which has lost its use. or validity (JECKEL NETO, 2001).

With regard to human biology, it is a process of morphological and functional

changes in the organism that occur as time flows. On the other hand, under psychological holistic, it is a constant and ascending process of additions of experiences, which need to be valued both by the elderly and by society in general (VIEIRA, 2012).

In this sense, the self-recognition of the recurring gains of aging is essential to remain active and participate in social life as well as to perform various tasks, with regard to the fact that the elderly need to take care of their own body, since for a whole dimension, there is such a possibility that aims to improve the quality of life and, especially, health (ARAÚJO, 2010).

The way each person ages is a subjective determinant, as it takes into account the individual's life history, which results in different points of arrival linked to sociocultural conditions. Western society commonly tries to marginalize the elderly as a retired, unproductive and undervalued person, which leads to a loss of self-esteem, as aging generates a change in the status of the elderly and in their relationships with other people due to an identity crisis. caused by the lack of social role (ZIMERMAN, 2000; SANTOS & CARLOS, 2003).

Nowadays, the idea that an elderly couple having an active sex life is something embarrassing is perceived and, therefore, they must be together because they "love each other" or even for convenience. However, there is no biological justification for any factor that ends sexual activity in humans, when it comes to the aging process (SILVA, 2006).

One way to assess the degree of independence of the elderly, so that this can serve as a basis for a more specific approach, is to assess the performance of activities of daily living, such as self-care and meeting basic needs (ARAÚJO & CEOLIM, 2007).

In short, assessing the quality of life consists of comparing the available conditions with the desirable ones, whether in the physical, psychological, social and/or environmental aspects; factors that become important in primary health care, as it works with research, clinical follow-up, planning of actions and policies, allocation of resources and evaluation of programs aimed at serving this portion of the population (NERI, 2001).

According to Chachamovich et al. (2007), quality of life is the apex, sought throughout it (from birth to death), which translates into the constant objective improvement of health policies and, subjectively, the search for the subject's well-being and satisfaction. In this sense, seeking ways to prevent sexually transmitted infections are part of the process of a better quality of life, especially in the elderly, which is the focus of this work.

According to research carried out by Maschio et al. (2011), the majority of elderly people with an active sexual life report not using condoms and, a minority, the use of prophylactic medications. In addition, the number of elderly people infected with HIV has increased and, consequently, the number of deaths has increased. Because of this, there is a need to create specific public health programs to prevent this disease in this population, since this pathology and most existing STIs are preventable and easily preventable with the use of condoms during sexual intercourse (GIRONDI et al., 2012).

Thus, it is clear that although physical health is a crucial point for quality of life, issues such as respect, safety, activity in the community, freedom of expression of feelings, emotions, interests, opinions and experiences, are also crucial to compose a good life during old age (PENNA & SANTO, 2003).

MEDICAL CARE UNDER SEXUALITY IN THE ELDERLY

In order to obtain good medical care

regarding sexuality, it is important that the elderly, as well as society as a whole, understand that aging is not a decadence, but a natural sequence of life, understanding that there are normal physiological changes. Thus, it is up to the understanding about the change of their body and acceptance so that they can continue with their sexual lives (VIEIRA, 2012).

Studies show that many seniors feel insecure about their physical appearance, as they no longer feel attractive. They believe that their body is outside the standards of beauty, which has an impact on low self-esteem and, consequently, on problems of body self-care, which contributes negatively to sexuality. In view of the above, it is clear that the conduct of health professionals towards the health of the elderly is complex. One of the important points to be worked on is the re-education in the direction of these ideas, which can provide well-being, quality of life, self-knowledge, self-care and self-esteem to the elderly (SIQUEIRA & PEREIRA, 2007).

As part of the elderly care process, geriatric care can be defined as an interdisciplinary mechanism that serves the elderly, providing medical, psychological, social and functional services in order to keep these people at full capacity for as long as possible. (PENNA & SANTO, 2003).

This process is transdisciplinary, as it gathers information from various disciplines as well as addresses all areas of professional health. Gerontology, according to Elie Metchnikoff in 1903, is the science that studies the aging process in its biological, psychological and social dimensions, and can be attributed to these processes, since with their union, one can create a scientific knowledge capable of to guide their practice to all health workers, whether doctors (not only geriatricians, but all specialties), psychologists, nutritionists, physiotherapists, among others (PAVARINI et al., 2005).

In addition, sexuality is a neglected topic by the health areas, since professionals often feel ashamed or insecure to ask about the patient's sexual life, as they believe it is a lack of respect, and on the other hand, it is common for elderly also feel ashamed for not understanding such questions and/or feel uncomfortable to question the professional (SILVA et al., 2012).

Thus, it is essential that the professional has an open mind and speaks directly about the subject, with interest, without embarrassment, so that the elderly patient feels more comfortable and open to discuss their sexuality. The use of an environment with privacy, the support of support and discussion groups and, during the service, addressing old taboos and myths, and giving suggestions for possible resolutions of related problems are milestones of this relationship and trust building between the elderly patient and the patient. the working professional (VIANNA & MADRUGA, 2010).

A way of approaching preventive medicine beyond the traditional anamnesis is identified in the request for laboratory tests that investigate the health of the genital tract, even for the elderly who do not have an active sexual life. This is because, it is natural for humans to decrease the defense capacity of the immune system over time, and STIs may appear, such as HIV, which can be confused with other diseases associated with age (Michelin, 2015).

For Viana (2010), another factor that contributes to medical care is the importance of professionals treating the elderly as normally sexual beings, addressing that sexual impulses do not disappear after youth, as well as recognizing that sexual relationships can improve with help or not, as you get older. Furthermore, this technical guidance has the objective of not promoting "contra-myths", which are super-optimistic images

of the elderly, at the same time unrealistic. Therefore, the information must be passed on correctly, sincerely and easily understood by these people.

CONCLUSION

Based on the above, the consolidation of the social right of the elderly with regard to the promotion of their well-being is relevant, associating this as a result, in large part, of a well-established sexual health. It was verified, however, that there are flaws in the integrated medical execution, such as the lack of information explored by professionals about the sexuality of the elderly person, given the delicate content that covers the reality of the same, as a sexual figure, permeating spheres of stamp. both biological and psychosocial. Through a transdisciplinary approach, the role of the health system is to fully contemplate the elderly, validating their carnal needs in favor of a natural, positive and healthy view of human behavior in the face of aging in line with libido.

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