Female aging

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Summary

Female aging is a process that involves hypoestrogenism time, the individual impact on each woman, and what we can do as experts to reduce morbidity and provide quality of life. This natural process in the female life cycle has been of concern to women after menopause. Changes in different biophysical and psychosocial aspects, and their individual experiences, have repercussions on the lives of patients seeking specialized and multidisciplinary support to reduce the harmful effects of prolonged hypoestrogenism. Overweight and obesity, inadequate living habits and the presence of multi-morbidities cause damage to the quality of life and impact the functional capacity. Behavioral prescription and hormone therapy are among the treatments given to ease symptoms and reduce morbidity. A better understanding of these factors can help identify groups that require more care after menopause.

Keywords: post-menopause, women, aging.

Aging is a physiological process in life and, in women, it is influenced by hypoestrogenism the greater their longevity. The increase in life expectancy among women brought changes in the mortality panorama.[1] Currently, the prevalence of chronic diseases, malignancies and repercussions of hypoestrogenism in each individual serves as motivation for health professionals in clinical and gynecological settings to offer prevention and promotion actions for women seeking quality of life and reduced morbidity.[2,3]

Also, concern about the quality of life and prevention of chronic diseases and cancer are the demands of women seeking a gynecologist.[3,4] The notion of health has been a concern of the very patients interested in weight maintenance, adoption of healthy lifestyle habits, cessation of legal and illegal adictions, and the use of medications for adequate control of chronic diseases.[5]

Changes in biophysical aspects also affect the quality of life caused by prolonged hypoestrogenism related to urogenital disorders, changes in sexual behavior and libido, memory, skin tropism, effects on lipid profile, and bone metabolism.[6]

Psychosocial factors contribute to a positive or negative perception of women's health, which depends on how she experiences and sees life after menopause.[7] There are occurrences such as loss of loved ones, change in marital status, retirement process, and prior preparation of this phase in which women turn their attention to themselves, their achievements and accomplishments, their wishes and needs.[8]

It is known that age, overweight and obesity, smoking, and the presence of multi-morbidities impair the quality of life and impact the functional capacity.[9] According to Fonseca et al., the most relevant information in medical history declared at the time of the initial treatment in women after menopause were: hypertension (44.94%), diabetes (10.1%), smoking (8.39%), thyroid disorders (7.7%), malignancies (6.41%), cardiovascular disease (17.1%), dyslipidemia (0.88%) and psychiatric disorders (0.06%).[10]

The severity of menopausal symptoms is negatively influenced in the presence of chronic diseases, multiple pregnancies and not using hormone therapy, with worsening of self-perceived health.[6,7]

The effects of hypoestrogenism on the weight gain is unclear, but several experimental studies have demonstrated the relationship between oophorectomy and an increase in adipocytes, tissue inflammation and the development of hepatic steatosis and insulin resistance.[11] Weight gain is more related to age than menopause itself.[12,13] In a previous study which included body mass index (BMI), calculated by weight (in kg) divided by height (in meters) squared, it was observed that 68.13% of women were overweight or obese.[12]

The prevalence of abdominal obesity is higher in age groups above 60 years and relates to cardiovascular risk and metabolic disease. In addition, this correlation worsens after menopause, with accumulation of visceral fat and changes in the concentration of inflammatory markers and serum hormone binding globulin carrier (SHBG) levels, which are inversely related to insulin resistance.[12,13] Visceral obesity is also related to sexual dysfunction, breast and endometrial cancer.[13,14]

In a study in Latin America, obesity is associated with hypertension, depressive symptoms, physical inactivity and worsening of climacteric symptoms.[13] Recent Brazilian studies show obesity as a major risk factor for worsening of menopausal symptoms and increased cardiovascular risk (hypertension, hyperglycemia and low serum levels of high-density protein).[3,12]

A better understanding of these factors can help reduce the impact of symptoms on women's health in late postmenopausal women, and identify groups likely to require care after menopause. This same group of women is often out of the window of opportunity to use hormone therapy and, therefore, multidisciplinary support to reduce the harmful effects of these factors is important to maintain an adequate quality of life.

Thus, multidisciplinary support with changes in lifestyle, encouraging aerobic physical activity and a balanced diet are guidelines adopted by educational programs during climacteric.[5] Studies have demonstrated benefits for climacteric symptoms, particularly improvement in vasomotor symptoms, depressed mood, arthralgia and myalgia.[8,9]

In female aging, effects in lower genital tract are common and related to late post-menopause, being atrophic vulvovaginitis and urogenital dysfunctions common complaints brought by patients.[15,16]

Atrophic vulvovaginitis affects 40% of postmenopausal women. Effects of prolonged hypoestrogenism are observed on physical examination of the vulva and vagina and clinical findings include loss of vaginal *rugae*, reduced elasticity, sparse vaginal content and thinning of the vaginal mucosa.[15] All these aspects influence the daily lives of patients on account of clinical manifestations, such as symptoms of vaginal dryness, pain or discomfort during intercourse, and urinary symptoms such as dysuria and urgency.[14,16]

Genitourinary dysfunction, in turn, characterized by sagging, dystopia and incontinence, may be made worse with the decrease in collagen secondary to hypoestrogenism affecting the support mechanisms, *fasciae*, and ligaments of the pelvic floor. There is also a reduction in the periurethral vascular cushion and estrogen receptor alpha and beta in the urethra, both involved in the urinary continence process.[16]

Symptoms related to the late post-menopause include cognition and memory, which may adversely affect the working lives of women due to estrogen levels that interact with other neurotransmitters, as well as glucocorticoids in the brain. Memory and cognition dysfunction in post-menopause is transient and not progressive. The worsening of symptoms may be related to other comorbidities such as *diabetes mellitus* and Alzheimer's disease.[17]

Another important aspect of women's health during the aging process is osteoporosis and fracture risk. What preventive measures are considered for women in late post-menopause? The focus of prevention, or better, of health promotion is the identification of individuals at risk, that is, with low bone mass and risk factors, in order to prevent fractures.[18]

The risk of osteoporosis and fracture increases with age and involves other risk factors for low bone mineral density and fractures such as: female gender, low body weight (<50 kg) or weight loss, smoking, family history, habits and behaviors such as alcohol and caffeine, low intake of calcium and vitamin D. In addition, secondary causes of osteoporosis include use of corticosteroids, transplant recipients, use of antiretroviral drugs and anticonvulsants.[18,19] Bone densitometry is a relevant examination in climacteric women, since there is significant deterioration in bone mineral density over the years of menopause, as well as low body mass index. This observation is relevant because it allows establishing preventive and therapeutic measures that will undoubtedly improve the quality of life of older women.[10]

In the case of populations with no risk of fracture due to fragility or secondary causes, subjects could have a different course of evaluation, without screening before the age of 65 years. There are some gaps in tracking patients using bone densitometry, for example in black populations, and the maximum age at which to perform the

scan. To date, a consensus or evidence has not been achieved, and there seems to be no benefit in screening patients over 85 years.[19]

Supplementation of calcium and vitamin D in postmenopausal women has always been the focus of guidance of health professionals. Supplementation of calcium for women after menopause has been encouraged for many years.[20]

Currently, an adequate intake of calcium mainly through food (dairy products, green vegetables, sesame, and sunflower seeds among others) and supplementation for patients who are treated with anti-absorptive medications and those knowingly at risk are indicated. Calcium supplementation is associated with common side effects, such as gastric symptoms, irritability, poor digestion and flatulence and urinary symptoms such as renal lithiasis. These symptoms are not always connected, even in diets with high levels of calcium. Cardiovascular events such as coronary heart disease and myocardial infarction have been demonstrated in some studies with a larger number of events in individuals undergoing supplementation.[18,21]

Vitamin D is highly recommended for older sedentary patients with restrictions and little daily sun exposure. Also, supplementation is indicated for postmenopausal women with osteoporosis and low bone mineral density, obese and on medications that interfere with vitamin D metabolism such as anticonvulsants and antiretrovirals. Vitamin D supplementation should not be adopted for the general population.[20,21]

Hormone replacement therapy (HRT) in postmenopausal women should always have a personalized indication. Before the prescription of HRT, the intensity of the symptoms and risks should be considered to determine the dose and the best treatment regimen. HRT is indicated to relieve vasomotor symptoms (hot flashes and sweating), which also has an effect in the improvement of sleep (decreasing insomnia) and reduces joint pain, myalgia, melancholy and other psychological symptoms. Moreover, it has an effect on the trophism of mucous membranes, skin and appendages affecting the urogenital system, and can also reduce bone resorption and increase bone formation, which reduces the loss of bone mass in many women during this period.[17,22]

According with the North American Menopause Society and the Brazilian Society of Climacteric, the following recommendations apply: the dose and duration of HRT should be consistent with treatment goals and individualized; studies suggest that HRT with micronized progesterone carries a lower risk of breast cancer with short-term use; local estrogen therapy is preferred for women whose symptoms are limited to vaginal dryness or discomfort associated with intercourse; estrogens should be given in small doses. Progestins derivatives should be used for endometrial protection; and, when HRT is introduced in the first 10 years after menopause, benefits are greater.[17,23]

Before the start of this therapy, its contraindications should be considered, including: multiple myeloma, tuberous sclerosis complex or lymphangiomyomatosis, and breast, lung, liver, bone, pancreas and kidney carcinomas.[22]

Non-hormonal treatment aims to relieve the symptoms and not to improve the general state of the patient. The agents best suited to reduce hot flashes are: antidepressants, cinnarizine, clonidine, gabapentin, benzodiazepines and non-benzodiazepines, psychoactive drugs and acupuncture.[22]

Treatment can also be done with phytoestrogens, compounds that are found in plants, fruits, vegetables and grains and which have some properties and chemical structure similar to estrogen, binding to its receptor.[22,24]

Phytoestrogens have less effect compared to estrogen to tackle severe vasomotor symptoms, but they can be an alternative for patients with phobia of classical hormonal therapy, even after explanations of the risks and benefits.

Prevention of diseases by vaccination is also important. MMR is recommended, as well as hepatitis A and B, varicella, influenza, double or triple bacterial, meningococcal C conjugated, pneumococcal and herpes zoster. Yellow fever vaccine is indicated for those who live or commute to risk areas.[22]

Summing up, female aging is a process in which hypoestrogenism time should be correlated with the individual impact of each woman and what we can do as experts, or even general practitioners, to reduce morbidity and provide quality of life to women, respecting their habits, culture and beliefs, as well as perspectives in their lives.

Resumo

Envelhecimento feminino

O envelhecimento feminino é um processo em que devemos correlacionar o tempo do hipoestrogenismo com o impacto individual em cada mulher e o que poderemos fazer, enquanto especialistas, para reduzir morbidades e proporcionar qualidade de vida. Esse processo natural no ciclo de vida da mulher tem sido motivo de preocupação das mulheres na pós-menopausa. As transformações nos diferentes aspectos biofísicos, psicossociais e em suas vi-

vências individuais trazem repercussões na vida das pacientes, que buscam apoio especializado e multiprofissional para reduzir os efeitos deletérios do hipoestrogenismo prolongado. O sobrepeso e a obesidade, inadequados hábitos de vida e a presença de multimorbidades trazem prejuízos à qualidade de vida e impactam a capacidade funcional. A prescrição comportamental e a terapia hormonal são tratamentos indicados para amenizar os sintomas e reduzir morbidades. Assim, uma melhor compreensão desses fatores pode ajudar a identificar grupos propensos a cuidados na pós-menopausa.

Palavras-chave: pós-menopausa, mulher, envelhecimento.

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