


MINI REVIEW

Hormone Replacement Therapy: Risks and Benefits

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ABSTRACT

The climacteric is a physiological period of the female reproductive cycle characterized by a decrease in the levels of sex hormones, mainly estrogen. It consists of several phases, with amenorrhea as the initial clinical manifestation followed by long-term changes, such as vaginal atrophy. In this context, hormone replacement therapy (HRT) aims to improve the symptoms of female reproductive senescence, seeking to provide a comfortable physical and psychological condition during this period. However, as with any drug treatment, HRT has its risks and benefits, and it is up to the medical practitioner, in agreement with the patient, looking for the best therapeutic option, minimizing the risks and consequences resulting from this clinical approach.

KEYWORDS: Hormone Replacement Therapy; Menopause; Therapeutic Resources.

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INTRODUCTION

The climacteric, due to the sensitive hormonal drop, mainly estrogenic, may cause uncomfortable symptoms that decrease the quality of life of several women [1]. In this context, hormone replacement therapy (HRT) is available; however, its risks and benefits must be evaluated periodically. This procedure is administered to reduce the main genito-urinary, bone and vasomotor symptoms [2]. Since it is a broad therapy, the application can be systemic, through the oral route, injectable or topical, with local action (e.g. vaginal creams). The systemic use of hormones has some adverse effects, such as the possibility of developing breast cancer, thus should not be indicated randomly [3,4]. Some symptoms and signs directly affect women's daily lives and are typical in climacteric periods. Among these, we can highlight the neuropsychic (emotional lability, anxiety, nervousness, irritability, melancholy, low self-esteem, difficulty in making decisions, sadness and depression) and sexual symptoms (decreased libido, frequency and response concerning orgasm). Additionally, vaginal atrophy, which also typically occurs in the climacteric, is characterized by

a thinner epithelial layer and less local blood flow. [5] Women in this period have greater bone fragility compared to young women and, consequently, a higher risk of fractures [6]. Thus, HRT is an option to be considered; however, its use should not be generalized for any type of negative manifestation typical of this period of the female reproductive cycle [7].

ADMINISTRATION

HRT can currently be administered in different ways, such as estrogen alone or combined with progesterone. When administered orally, the hormones are absorbed in the digestive tract, partially metabolized in the liver, and released into the systemic circulation, phenomenon known as “first hepatic passage.” During this process, enzymatic changes affect the coagulation cascade and may increase the risk for thromboembolic diseases. Concomitantly, it is effective in decreasing low-density lipoproteins (LDL) and increasing high-density lipoproteins (HDL), despite increasing triglyceride levels. Concerning the parenteral route, the transdermal application has the advantage of a

lower dose compared to the oral route, since it first reaches the circulation and may be used in women with a tendency of thromboembolic events. Additionally, there are other options for the parenteral route, substances for local use such as vaginal creams decreasing urogenital effects, and intramuscular injection [8-10].

HRT INDICATIONS

The use of non-hormonal drugs has been indicated as a good option for women who do not want or have a contraindication for HRT. This class includes hypotensive, vasoconstrictor, antidepressant, anxiolytic drugs [11]. In addition to HRT alternative therapy, changes in lifestyle may reduce various symptoms. Furthermore, the nutritional orientation, physical exercises, occupational therapy to control stress and irritability, acupuncture, phytohormones, and homeopathic drugs may be helpful [12,13]. Thus, the prescription of HRT in the climacteric period should be individualized, considering the collateral symptoms as well as pre-existing systemic diseases, and the therapy must be adapted in each particular case. However, HRT should be suspended when the risk ratio overlaps the benefits [14-16].

Vasomotor symptoms

Women in peri and post-menopause experience hot flashes also known as hot flushes, which are caused by the sudden drop in estrogen, the hormone responsible for regulating body temperature. When classified as moderate to severe, HRT treatment becomes more effective in relieving these symptoms. The benefits outweigh the risks for women under both 60 years age and 10 years of menopause [17]. Alternative therapy is indicated for patients who have contraindications for HRT. Tibolone is a synthetic steroid derived from norethynodrel, an oral medication with an estrogenic, progestogenic and androgenic effect depending on the tissue in which it acts and can be used to treat hot flashes and vaginal dryness. Raloxifene is a benzothiofene derivative that acts as a selective estrogen receptor modulator (SERM), exerting estrogenic effects mainly on the bones and cardiovascular system [18].

Genitourinary symptoms

Patients with vaginal atrophy, classified as mild, can use moisturizers and lubricants, and engage in sexual activity more often if they do not experience discomfort or pain. For moderate to severe cases, drug treatment is recommended. The first treatment of choice and most widely used is local vaginal estrogen therapy, which must be low-dose and has the benefits of efficacy, tolerance, and the reduction of other genitourinary symptoms such as

itching, dyspareunia (characterized by genital pain during sexual intercourse) and urinary incontinence [19].

Osteoporosis

HRT, with a focus on estrogen, is effective in both, prevention of bone loss (trabecular and cortical) and treatment of postmenopausal osteoporosis. It also reduces the number of fractures resulting from falls and increases bone mineral density in patients [20].

Endometrium

Combined HRT may decrease the risk of developing endometrial cancer. If the treatment is isolated from estrogen, there is an increase in this risk, so it is only indicated in hysterectomized women [21,22].

Cognition

Studies indicate that HRT can prevent and treat diseases that may alter cognitive deficits and in some cases even improve it, since menopause and aging are linked to decreased functions and development of dementia. There is a relationship between estrogen prescription and Alzheimer's prevention in postmenopausal patients [23].

CONCLUSION

HRT has important benefits for this phase of female reproductive cycle since some criteria are considered, such as the patient's age, use of specific hormones indicated for each particular case, adverse symptoms due to side effects, or comorbidities. HRT has a wide variety of indications, including improvements in vaginal dryness and atrophy, vasomotor symptoms, and cognition. Otherwise, important contraindications must be considered, such as weight gain, increased incidence of stroke, risk of developing systemic lupus erythematosus, and breast cancer

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COMPETING INTERESTS

The authors declare no competing interests with this case.

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