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Opinion
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Hormone Replacement Therapy (Hrt) for Postmenopausal Periodontitis

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Opinion

Current importance about Hormone Replacement Therapy (HRT) issues, due to the high incidence of periodontal diseases, has prompted researchers to investigate the possibilty of associations between periodontitis and specific women's health issues. This increase is due by the increase in life expectancy, the scientific evolution of medical knowledge and the increased educational and cultural levels of society [1].

Women in particular may undergo a decrease in bone mass during menopause, affecting sites such as the alveolar and jaw bones, which secondarily produces periodontal-gingival-tooth disease, bringing us closer to the possibility of being able to avoid and/ or treat the sequelae of this disease. The menopause is a physiological process that takes place in the fourth-fifth decade of a woman's life, when permanent cessation of menstruation occurs, and is based on hormonal changes that will result in a series of general clinical manifestations as an increase in the symptoms of periodontal disease, including the exhibition of more severe attachment loss than premenopausal women, but the possible influence of some secondary effects of the menopause - such as osteoporosis/ osteopenia - as modifying factors in loss of periodontal attachment is still the subject of some debate [2,3].

Increasing numbers of women are using HRT and estrogens for replacement therapy during menopause to relieve climacteric symptoms (hot flashes, sweating, vaginal dryness, oral alterations, etc.) and increase their quality of life. HRT includes oral administration, oestrogen containing dermal patches and tibolone. Natural human estrogens are E2, estrone (E1) and estriol (E3), and their conjugates, i.e. the sulfuric acid esters and glucuronic acid esters [1,4]. In Europe the predominant estrogen for HT has been E2 [5]. whereas in the US conjugated equine estrogen is most commonly used [6]. Progestagens are divided into natural progesterone and synthetic progestagens. The most common progestagen used in US is medroxyprogesterone acetate (MPA), while in Europe MPA is used to a lesser extent [5,6].

Synthetic steroid tibolone, various phytoestrogens, testosterone and selective estrogen-receptor modulators are used under some conditions as alternatives to traditional HRT and, of these, only tibolone is useful in treating vasomotor symptoms [4,7-9]. Until recently, HRT was considered the single most effective treatment of menopausal symptoms and was recommended for the prevention of diseases associated with estrogen deficiency [1,2,7,9-11]. After the publication of the Women's Health Initiative, the use of HRT has been questioned [11].

Recent analyses of the WHI data and other randomized controlled trials, however, have suggested that the potential risks involved in taking HRT (increased risk of breast cancer, cardiovascular outcomes and stroke) may largely depend on the estrogen and progesterone/progestin formulation, dosage, mode of administration, patient's age, associated diseases, and duration of treatment. Therefore, based on the current evidence, the intention, dose and regimen of HRT need to be individualized, based on the principle of choosing the lowest appropriate dose in relation to the severity of symptoms and age at onset of menopause [9-11].

In past years, various studies have been conducted to evaluate the effect of HRT in modifying the periodontal conditions in postmenopausal women due to a possible connection between osteoporosis and periodontitis [12-19].

HRT was associated with a reduction of alveolar bone loss, but a number of studies failed to find an inverse correlation between alveolar bone density and severity of periodontal disease [20-22]. Furthermore, some authors failed to demonstrate any beneficial effect of HRT on alveolar bone density/height [23,24].

HRT has also been associated with decreasedlevels of gingival bleeding. It has been suggested that estrogen may have an inhibitory effect on gingival inflammation by inhibiting mediators (IL-1, TNF-, IL-6, IL-1b, IL-8) and cellular mechanism of inflammation [12,25]. Conflicting results exist on the effects of HRT on probing pocket depth and attachment level [18-20,22,25]. In somestudies the risk of tooth loss was found to be lower in women who used HRT than those who did not [23,26-29].

However, further studies should address the biological mechanisms underlying this effect.

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