

HORMONAL INDICATORS IN GINGIVAL CHANGES IN MENOPAUSE PATIENTS**Eduart Kapaj¹, Ilma Robo², Saimir Heta³, Sonila Kapaj⁴, Elsaïda Agrushi⁵***Gynecology-Obstetrics Hospital, Fier, Albania**Department of Dentistry, Faculty of Medical Sciences, Tirana, Albania**Pediatric Surgery Service, Tirana, Albania**Private clinic, Tirana, Albania*Received: **18-05-2021**Accepted: **25-05-2021**Published: **26-05-2021****Abstract:** The transition to menopause is accompanied by significant hormonal changes which reflect the change of age with the appearance of oral changes, both in relief or gingival quantity, as well as in the presence or absence of saliva.**Materials and methods:** The aim of the study is to analyze the oral signs observed in a group of patients of menopausal age or how much they have violated the age limit, presented at the Gynecology-Obstetrics Hospital Fier. The data collected are mainly on systemic pathologies from which patients suffer if any and from the oral signs or symptoms that patients suffer from.**Results:** There is a significant correlation between the presence of cardiovascular disease and diabetes with the most aggravated onset of osteoporosis with typical symptoms appearing in the oral cavity. These signs include xerostomia, change of taste or reduction of alveolar crest.**Conclusions:** Menopause is the age when the care of female patients should be increased in spite of some health directions to facilitate and understand the physiological hormonal changes which reflect the visible bodily changes in these same patients.**Keywords:** *menopause, hormones, oral, xerostomia, osteoporosis***Introduction**

Hormonal fluctuations at female patients of menopausal age have a significant impact on the oral and systemic health status of these same patients. The oral influence of menopausal hormonal fluctuations is also expressive of systemic consequences. This correlation should be seen more carefully as they are expressive of syndromes associated with estrogen reduction in the body. Irregular ovarian activity is caused by a significant reduction in estrogen production leading to a significant increase in pituitary-releasing hormones. Irregular ovarian activity is associated with the appearance of irregular menstrual cycles which are precursors of the violation in the menopausal age. Reduced levels of estrogen and progesterone affect the appearance of cycles without the presence of ovulation. (1)

In the oral cavity there are significant oral changes that are affected by a reduction in the amount of estrogen and progesterone production. It is known that these hormones act not only systemically, but also have effect on the mucosa and gingiva in the oral cavity of patients who have entered the menopausal age. Progesterone increases the permeability of blood vessels, significantly affects the immune response of the gingiva to local pathological stimulatory effects, affects the increase of collagen production, increases the production of prostaglandins mainly PGE2, increases the chemotaxis of polymorphonuclear - opposite effect to estrogen. (1)

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License (CC BY). <http://creativecommons.org/licenses/by/4.0/>**MATERIALS AND METHODS**

Based on the data recorded on the oral and clinical signs of a group of female patients presented at the Fier Gynecology-Obstetrics Hospital, this study was conceived in the type of review on the latest publications about oral complaints and lesions appearing during menopause. The search was conducted in the PubMed database for the period 2010-2020. The keywords used were menopause and oral lectures with a total of 164 articles. For further filtering we put words that link the two phenomena such as the addition of the word osteoporosis, in addition to the other two words, exceeds the number of articles in 12 of which some are included in the time interval 2010-2020. The articles found according to the established criteria were processed to find the possible correlation that serves to explain the purpose of the article. The keywords used to find the items were: menopause, oral lesions, dermatological lesions, leiomyomas, xerostomia. These words were selected as they were the most frequent complaints encountered in female patients presented to the Gynecology-Osthetics Fier Hospital in the period January-July 2020.

RESULTS AND DISCUSSIONS

During the search on PubMed with the keywords: menopause, oral lesions and osteoporosis from the items displayed in the publication year band selected for the study 5 items were selected.

In 2017 Jing Y et al published the article highlighting the role of menopause in the occurrence of osteoporosis and apoptotic lesions in the aortic root. (2)

Qian H et al in 2010 published in the article what is observed in patients with periodontal disease and concomitant post-menopausal osteoporosis. The possibility of estrogen

deficiency influencing the activity of bone cells and immune cells in such a way as to deepen bone loss was highlighted. (3)

Another view was for Brufsky AM in 2010, when he published the article on the adjunctive role of hormone therapy in women with breast cancer. Although the article has access beyond the scope of the study, we emphasize that the author assesses the oral status, but not the overall health status of the patient.(4)

Lopez-Lopez J et al in 2015 published the study that assesses the presence of periapical lesions and alveolar bone density in postmenopausal women. In conclusion, this study highlights the fact that low bone density is produced in marginal areas associated with high-frequency periapical radiolucent lesions. (5)

In 2020 Qian H et al published a study stating that menopause is directly related to the occurrence of inflammation to a lesser degree, indicating that postmenopausal women should be more often prey to the onset and development of inflammation. (6)

From the 12 articles of this selection package, only 5 articles have been singled out that are included in the publication period 2010-2020. If dermatological lesions are also placed as keywords, the situation turns into the display of 3 articles, included in the band of selected years of publication are 0 articles. If leiomyomas are also placed as keywords, the situation shifts to the display of 4 items, included in the band of selected years of publication are 0 items. If xerostomia is also used as a keyword, the situation turns into the appearance of 11 articles, included in the band of selected years of publication are 3 articles.

Silvestre Fj et al: This article includes the presentation of the clinical situation of the oral cavity in patients of menopausal age such as mouth burning syndromes. It is thought of as a syndrome with several causal and risk factors, but more recently it emphasizes the fact that it can also occur in cases of peripheral sensory nerve disorders. Differential diagnosis should be made mainly against disorders of the blood formula that presents this sensation in the oral cavity. Psychological support is mainly indicated at this age with the respective syndromes. (7) In the article published in 2018, it is emphasized that the presence of xerostomia as one of the factors in the occurrence of mouth burning syndrome, appears with high prevalence, especially in the post-menopausal age, nervous disorders that are excited especially with typical fluctuations in hormonal levels and mainly in the menopausal age. (8) Santosh p et al in 2013 published the study that highlights the occurrence of oral lesions over the age limit of menopause in a group of female patients, to be compared with a group of male patients of the same characteristics, which speaks of the occurrence of andropause. Typical signs of postmenopause in female patients are mainly pain due to mucosal burning, dry mouth, change in taste and facial pain. The medical intervention should be performed in cooperation with the gynecologist. (9)

Women of menopausal age complain mainly of xerostomia as the primary sign of this age in the oral cavity. Although, it can

be said that xerostomia is always associated with the symptom of loss of subjective oral taste, for as long as it is painful and as the level of its perception is different in different individuals. Lack of saliva mainly impedes speech and gives various difficulties in swallowing. This study provides data on the use of substances in vivo in rats, in order to improve the functioning of salivary glands. At the age of menopause. (11) Lack of saliva that is also associated with oral digestion syndrome mainly appears with paresthesia or oral pain in patients with lack of obvious pathological lesions in the oral cavity. Hypersensitivity to various foods and the characteristic change in taste have as unknown etiopathogenesis. Mechanical parafunctions and dysfunctions or irritations, contact allergies are among the factors that can cause mouth burning syndrome. *Cimicifuga racemosa* herbal for the treatment of postmenopausal symptoms, as it prevents cellular structural damage to the salivary glands, in rats after ovariectomy is thought to be an alternative therapy for estrogen replacement. (12)

Conclusions

Menopause is the age when the care of female patients should be increased against several health directions, to facilitate and understand the physiological hormonal changes, which also reflect the visible bodily changes in these same patients.

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