



Research Article

ORAL CAVITY FINDINGS AMONG POSTMENOPAUSAL WOMEN ATTENDING DENTAL HOSPITAL IN RURAL PART OF TAMIL NADU

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Abstract: Objectives: To study the commonly occurring oral ailments in postmenopausal women in comparison to men of the same age group in rural part of Tamilnadu. After menopause, women are more exposed to periodontal disease in their daily life. We believe the problem is mainly due in to imbalance in the estrogen level with resulting weakness of bone and increased inflammation around the oral cavity. **Materials and methods:** Totally 100 patients were recruited for the study. Among 100 patients, 50 patients were female subjects, and 50 were male's age matched male individuals who were attending the dental OPD. Oral examinations such as dry mouth, altered taste sensation, halitosis, and mucosal ulceration, white and red lesions were examined for oral changes. **Results:** The important oral findings in postmenopausal women were white and red lesions inside the oral mucosa. Minimal changes are halitosis, and dryness of mouth was observed. All these symptoms were observed frequently in post menopausal women when compared to males. Oral sub mucous fibrosis (OSMF) was significantly more common in males as compared to postmenopausal females. **Conclusion:** Results from the present study reveal that oral symptoms are common problems in postmenopausal women. Postmenopausal women patients showed significantly more oral changes when compared to males of same age group. The changes observed in post menopausal women are mainly due to hormonal imbalance. Regular interval of oral consultation can reduce the severity of symptoms in post menopausal women

Key word: Postmenopausal, dry mouth, white and red lesions, halitosis

Introduction

Menopause is an event which every woman has to undergo in their lifetime. The mean age of menopause is 52 yrs. Menopause is defined as the permanent cessation of the primary functions of the ovaries¹. The process of above mentioned occurs in ovary mainly due to absence of estrogen. Many studies have shown that the oral mucosa and salivary glands are sensitive to estrogen action. Due to the expression of estrogen receptors (ERs) within these tissues, decreased estrogen activity not only affects the genital organs, but also heart, bone and metabolic functions. Mainly decreased estrogen level in circulating blood affects the behavior and attitude of old age group². Past studies have suggested that menopause initiates a host of physiologic changes that include both structural and functional alterations and atrophy of tissues lining the vagina and major part of uterus. Additionally, decreased estrogen levels increases the risk of developing heart disease, depression, hyperlipidemia and osteoporosis in menopausal women. These effects are related to the hormonal changes in woman's body is going through, and they affect each woman to a different extent. The only sign that all women universally have in common is that by the end of the menopause transition every woman will have a complete cessation of menses. In past studies cytological samples of the oral mucosa, gingival and vagina of postmenopausal women and reported tissue changes^{3,4}. Finally these changes showed a poor oral hygiene among the post

menopausal women. Most commonly, menopausal women may exhibit symptoms of oral discomfort characterized by a burning sensation, sensation of oral dryness and decreased saliva secretion. Oral dryness can lead to considerable difficulty in speaking, eating, altered taste perception, predispose wounds around oral mucosa leads to abrasion and infections frequently. A number of studies have shown that hormone replacement therapy (HRT) can relieve this oral discomfort in postmenopausal women, further suggesting a Role for female sex hormones in the maintenance of oral tissues⁵.

Materials and methods

Totally 100 patients were recruited for the study, and the subjects were examined using mouth mirror. Among 100 patients, 50 patients were female subjects, and 50 were males' age matched male individuals who were attending the dental OPD of Melmaruvathur Adhiparasakthi dental college. The age groups of post menopausal women were around 55 ± 6.42 yrs were matched with same group of male's age around 56 ± 4.33 yrs. Ethical clearance was obtained from the Institution ethical Committee to undertake the study oral examinations such as dry mouth, altered taste sensation, halitosis, mucosal ulceration, white and red lesions were examined.

Inclusion criteria – All women in post menopausal age group and all men around 50 years and above were included for the study.

Exclusion criteria - Local inflammation, infection and fibrosis of the major salivary glands, dehydration, autoimmune diseases, aggressive periodontitis, necrotizing periodontal disease were excluded from the study. For male subjects they should be a non smoker, non alcoholic, and persons without betel nut chewing were included in this study. A questioner were designed accordingly the plan and purpose of the study was explained to the patients. The patients were asked about classical findings of sensation of

repeated symptoms such as dry mouth, altered taste perception, halitosis, mucosal pain, and burning sensation. Complete oral examination was done to rule out the oral changes such as ulceration, white and red lesions.

Statistical Analysis – It was done with SPSS version 6.0 programmed soft ware program was used for statistical analysis of the collected data. χ^2 analysis was utilized to examine the significance of the differences in means and distribution of categorical variables between groups. A $p < 0.05$ level of significance was chosen.

Results

Table -1 Show the distribution among the Post Menopausal Women with the Year Consideration

Years after menopause	No of subjects
5-10 yrs	20
10-15	15
15-20	15

Table -2 shows the clinical problems and oral examination findings among post menopausal women group I and age matched men group II

Clinical findings	Group I (post menopausal women) n=50	Group II (aged matched mens) n=50	P value
Mucosal pain	17	2	. <0.001**
Dryness of mouth	45	6	<0.001**
Altered taste sensation	18	3	<0.001*
Burning mouth	39	7	<0.001**
Halitosis	28	9	<0.058
White lesion	35	12	<0.001**
Red lesion	3	0	<0.046
Ulceration findings	4	0	<0.05

P value <0.005 considered as statistically significant, *significant, ** highly significant

From our study we concluded that incidence of oral cavity problems are found to be more in post menopausal women when compared to males of same group matched. Among the Oral findings dryness of mouth, burning sensation of oral cavity, white lesions inside the oral cavity, mucosal pain and altered taste sensation was found to be common among post menopausal women when compared to males of same group matched. Off p value <0.001** which is considered as statically more significant. Halitosis was found to be common in post menopausal women which is statistically p value <0.058. Red lesions around the oral cavity, and ulceration of oral cavity found to be less statistically significant of p value <0.05.

Discussion

Menopause can bring oral health problems commonly because of lack of estrogen. It favours the loss of the alveolar bone of the jaws, resulting in periodontal disease, loose teeth, and tooth loss. Menopause also leads to lot of physiological and psychological problems in females. This low evidence-level information, its far-reaching interpretation, and misinformation in the lay media about hormonal changes are associated with menopause have led to confusion among women; for clarification and reliable information, they are driven to ask their physicians

challenging questions related to oral health. This article reviews the published studies of the association between menopause and oral disease, specifically, the effects of hormonal changes and osteoporosis^(1, 3, 4). The rate of bone loss in postmenopausal women predicts tooth loss for every 1%-per year decrease in whole-body bone mineral density, the risk of tooth loss increases more than four times. Estrogen replacement improves bone density in postmenopausal women. In our study the commonly found symptoms among the post menopausal women were burning mouth syndrome, which is characterized by intense pain and a spontaneous burning sensation affecting mainly the tongue and less frequently lips and gums. However, despite the intense symptoms like pain and burning sensation, no appreciable lesions were generally observed, as seen in the present study. In addition to burning mouth syndrome, these patients complaints of alterations in taste (dysgeusia), halitosis, and dry mouth^(6, 7). Ben Aryeh et al... in 1996 conducted a study on oral hygiene among post menopausal women, and they found that in 63% women with oral manifestations including burning mouth, there was no evidence of any lesions capable of such alterations were observed. They further noted that prevalence

of oral discomfort in postmenopausal women was 46%, when compared to 6% for premenopausal women. Delibes C et al... concluded from their study that particular micro-organisms such as *Candida albicans*, yeast, *Streptococci*, plays an important role in of burning mouth syndrome, and altered taste perception among the menopausal women commonly^{6,7}. According to Krall EA, et al approximately two-thirds of the study subjects who presented with oral symptoms but no evident clinical manifestations were seen to improve with hormone replacement therapy. Particularly in introverted individuals, anxiety, phobias and depression to form an integral component of the psychological profile of patients with burning mouth syndrome. Xerostomia is another frequent symptom seen during menopause with 27.1% postmenopausal females as compared with only 5.2% age-matched males showing the symptom in the present study⁸. Postmenopausal women have decreased un-stimulated and stimulated submandibular and sublingual salivary gland flow compared with premenopausal women, a finding unrelated to any medication effect¹². Wactawski et al in 1996 stated that, dry mouth is not the only cause for oral malodor seen in postmenopausal women. Various other contributing factors such as disorders of digestive system, increased incidence of caries and periodontal problems, yeast overgrowth due to inability to maintain good denture hygiene, sinusitis, are shown to affect older people more than the younger. These are responsible for bad breath as seen in older females approaching towards menopause^{10, 11, 13}.

Conclusion

Post menopausal women are more prone for various oral problems. Certain chronic diseases decrease the quality of life in woman. A regular dental check up with hormonal replacement therapy decreases the severity of oral cavity diseases. Health awareness in the Post menopausal women helps them to protect from the major diseases. Our study proves that oral cavity problems were more commonly faced by post menopausal women when compared to men of the same age groups.

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