INVESTIGATION OF THE PREVALENCE AND INTENSITY OF BURNING MOUTH SYNDROME (BMS) IN POSTMENOPAUSAL WOMEN, MEN AT THE SAME AGE AND PREMENOPAUSAL WOMEN

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ABSTRACT: Background: Burning Mouth Syndrome (BMS) is a condition in which the patients feel burning in the mucosa of the mouth without any pathologic changes. Although it is more common in postmenopausal women, but also some men and young women suffer from it. The aim of this study is investigation of the prevalence and intensity of BMS in postmenopausal women, men at the same age and premenopausal women. Materials and methods; In the current study, 40 postmenopausal women (50-70 years old), 40 men at the same age and 40 young women (20-50 years old) were studied. The Patients with no systemic diseases, drug usage and any intra-oral lesion are selected. Data was collected by means of questionnaires and for stimulating the intensity of the burning, the international scale “Visual Analogue Scale (VAS)”, is used. The results of the study are analyzed by chi-square test and PV<0.05 assumed to be meaningful. Results: %5 of postmenopausal women, %2.5 of men at the same age and %5 of young women suffered from BMS. None of the patients mentioned intense burning of the mouth. As statistical point of view, there is no meaningful difference between intensity of burning and its existence in 3 sample groups (PV=0.642 PV=0.812 respectively). Conclusions: According to this study, burning mouth syndrome is more prevalent in women than men and being menopause has no effect on BMS break out in women.

Keywords: Menopause, Burning Mouth Syndrome.

INTRODUCTION

Burning Mouth Syndrome (BMS) is a disorder in which the patients feel burning in the mucosa of the mouth without any pathologic changes [1]. There are various causes for this syndrome [2]. Some studies mention neurologic-vascular and psychogenic disorders can be a probable cause for BMS [2, 3]. Other reasons mentioned for this syndrome are, imbalance of hormones, hemologic disorders, inflammable and allergic diseases, malnutrition and chronic infections [4, 5]. BMS is more prevalent in postmenopausal women, but it can be found in men and young women too. [6]. Menopause is a physiologic condition that happens in women who are in fifth decade of their life and is known by permanent stop of women's menstruation [7-9]. Prevalence of oral disorders in menopause period is various [10-12]. BMS is more prevalent in postmenopausal women and is recognized by
burning sensation in the anterior part of the tongue, anterior part of the hard palate and the mucosa of the lower lip. In clinical and histological examinations, the mucosa of the mouth is healthy [13].

Studies have shown that the prevalence of oral symptoms in women depend on the geographic area, education degree, history of contraceptive drugs use, smoking and the age in which menopause takes place [14, 15, 16-18]. In Hashemipour et al's study in 2007, %6.3 of women suffered from burning mouth and its prevalence in postmenopausal women was four times more than others [19]. Terkkila et al investigated a statistical population of women by means of questionnaire. They concluded that the prevalence of BMS in this population was %23[20]. Bergdahl et al reported that the prevalence of BMS in women between 30 and 39 years old and older group were respectively %0.6 and %12.2. The intensity of burning mouth in VAS (Visual Analogue Scale) was estimated 6.9[21]. In Misra et al's study in 2012, %21 of 105 postmenopausal women suffered from burning mouth[22]. In 2011, Colak et al’s investigations showed that, %0.12 of 1000 statistical population (500 women and 500 men) suffered from BMS and the proportion of women to men was 5 to 1[23].

Although BMS is more prevalent in postmenopausal women but also it can be found in men and young women as well [6]. The aim of this study is investigation of the prevalence and the intensity of BMS in postmenopausal women, men at the same age and premenopausal women.

METHODS
This study is sectional and descriptive-analytic. The patients for the study were chosen between postmenopausal women who were examined and confirmed by gynecology specialist, men at the same age (50-70 years old) and premenopausal women (20-50 years old). All these people were patients who referred to gynecology department of Shahid Sodugh hospital of Yazd and oral diseases department of Shahid Sodugh College of dentistry between June 2009 and March 2010. Chosen patients were divided in 3 groups of postmenopausal women, men at the same age and premenopausal women. Each group included 40 people. The standards of choosing patients were not to have systemic disease, history of drug use, smoking background, allergy and inexistence of intra-oral lesions that cause burning. Another standard of choosing patients was having menopause history for at least one year that had been confirmed by a gynecology specialist (menopause is permanent stop of menstruation; a woman is recognized as postmenopausal if one year is passed from her last menstruation).Data was collected by the means of questionnaire. The questionnaire included background information (age, sex, history of menopause, systemic disease, smoking, allergy and drug use). For recognizing the existence of burning in the mouth, patients were asked whether they feel burning in the mucosa of their mouth or not [11, 24, 25]. For estimating the intensity of the burning VAS, an international scale, was used [26], a 10mm ruler in which 0 stands for, no pain and, 10 stands for the maximum of pain. After explaining this scale to the patient, he/she was asked to mark the severity of the burning on the ruler. For better estimation, the gained numbers in VAS were divided in 4 quality groups including slight burning (0-2 mm), moderate burning (25-49 mm), severe burning (50-74mm) and very severe burning (75-100 mm). Raw data was analyzed by statistical software SPSS11 and chi-square test. The percentage of the people suffered from burning mouth and its intensity was calculated and PV<0.05 was meaningful.

RESULTS
In this study, 120 patients in 3 groups each contains 40 members including postmenopausal women (50-70 years old), men at the same age and premenopausal women (20-50 years old) were investigated. 2 (%5) of postmenopausal women, 1 (%2.5) of men and 2 (%5) of young women suffered from burning mouth. There was no meaningful difference in existence of burning mouth between these 3 groups (PV=0.812) (table 1).None of the sightly patients, suffered from severe or very severe burning, %2.5 of postmenopausal women and men at the same age and %5 of young women suffered from slight burning .2.5 of postmenopausal women suffered from moderate burning. (table 1)There was no meaningful difference in intensity of pain between these 3 groups (PV=0.642). (table 2).

DISCUSSION
Burning Mouth Syndrome (BMS) is a chronic painful disorder in which the patient feels burning in his/her mouth without having any clinical visible lesion[27].
In previous studies, the prevalence of BMS had been reported between %0.7 and %4.6 [1, 2, 4, and 28].
In the current study, the prevalence of BMS in 3 groups including postmenopausal women, men at the same age and premenopausal women was 4.2. %5 of postmenopausal women (50-70 years old), %2.5 of men at the same age and %5 of young women suffered from BMS.

In Hashemipour et al's study, the prevalence of BMS in postmenopausal women was %6.3 that is reasonably similar to the current study. They eliminated the interfering factors that are the same as the present study [19].

In Terkkila et al's research, the prevalence of BMS in women who were under research, was %23[20]. Perko et al investigated the prevalence of BMS in 50 postmenopausal women and reported that %26 of these women suffered from BMS[29].

In 2012, Misra et al investigated the prevalence of BMS in 105 postmenopausal women between 43 and 85 years old and concluded that %21 of them suffered from BMS[22]. The reason of the difference between these studies and the current one is the difference in geographic areas or the existence of interfering factors but in the present study, these factors were omitted. In addition, in Misra's research, the age of studied groups was different. Thus, this can be another reason of difference in conclusion of his study from the current one.

In Equia Dewalle et al's study (2003), the prevalence of BMS in population studied was %66.7[30] that was different from the conclusions of other studies and the current one. The reason of this difference may be the difference in the populations studied or existence of interfering factors.

In the current study, the prevalence of BMS in young women was %5 as well. The reason may be stress and depression that are proved factors in appearance of BMS [31, 32]. According to the author's opinion, since women fewer than 40 years old in Iran have a special lifestyle and are in pregnancy age, the rate of stress they experience is very high so this can lead to the equal prevalence of BMS in this age group as the postmenopausal one. On the other hand Lack of estrogen in menopausal age is not a generally accepted factor for the appearance of BMS [33].

The present study indicates that the prevalence of BMS in women is twice as much as the men at the same age. This difference was not statistically meaningful at the cause of few numbers of studied patients.

In the current study, %2.5 of postmenopausal women suffered from slight burning, %2.5 of them suffered from moderate burning and none of them suffered from severe or very severe burning. Men and young women mentioned slight burning.

In Colak's research, the intensity of BMS was reported %5.6[23]. Hakeberg [34] and Bergdahl [21] reported that the intensity of BMS was %4.6 and %3.8 respectively. In the current study, the intensity reported was mentioned as severe, moderate or slight.

APPENDIX

Table 1: Comparison of existence of burning mouth between postmenopausal women (50-70 years old), men at the same age and premenopausal women (20-50 years old)

<table>
<thead>
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<th>women (20-50 years old)</th>
<th>Group burning mouth</th>
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<td>115</td>
<td>95</td>
<td>38</td>
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<td>4/2</td>
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<td>100</td>
<td>120</td>
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</table>

Table 2: Comparison intensity of burning between postmenopausal women (50-70 years old), men at the same age and premenopausal women (20-50 years old)

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<th>women (20-50 years old)</th>
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642/0 = P.V

REFERENCES


