Knowledge and Awareness about Burning Mouth Syndrome among Dental Students

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Abstract

Aim: This study was conducted to evaluate the knowledge and level of awareness about Burning mouth syndrome among dental students.

Method: The study was carried out among the dental students.A self-constructed questionnaire was made and given to a total of 100 students. The answers were recorded and converted into numbers and percentages.

Results: The results of the study reveal that undergraduate dental students have a fair knowledge about burning mouth syndrome.

Conclusion: There is an increased need for comprehensive educational programmes and clinical exposure for students to be aware about burning mouth syndrome.

Key Words: *Burning mouth syndrome, Awareness, Dental students.*

Introduction

Burning mouth syndrome (BMS) is defined as burning pain in tongue or oral mucosa usually without accompanying clinical and laboratory findings.[1] International Association of Pain and Headache Society defines burning mouth syndrome (BMS) as "distinctive nosological entity, including all forms of burning sensation of mouth, including complaints described as stinging sensation or pain in association with oral mucosa that appears clinically normal in the absence of local or systemic diseases or alterations".[2] Many investigators suggestion is that BMS may exist with other oral conditions.[3]

Nearly one third of the patients relate onset with dental treatments, recent illness or medications. Regardless of pain nature once it starts then it persists for many years. [4]Patients correlate BMS with sleep disturbances hence report mood changes like anxiety and depression.[5]Recent studies reported that pain ranges from moderate to severe and similar in intensity to toothache.[6] A spontaneous recovery with 6to 7years of the onset has been reported in up to two third of patients with recovery preceded by a change from constant to episodic burning. [7,8].Multiple etiological factors like psychological disorder, systemic and local factors ,hormonal changes and use of certain medications have been identified.[7,4] This study assesses the knowledge and awareness of BMS among dental students.

Materials and Methods

The present study included a total of 100 dental students. Both undergraduate and post graduate dental students participated in the study. The e-questionnaire was constructed with the help of Google forms and was circulated among the students through email. It consisted of 10 questions (Table-1) which were based on prevalence, causes, signs, symptoms and treatment

methods of burning mouth syndrome. The responses were tabulated in excel sheet for assessment as percentages.

Table-1 Questionnaire

S.NO	QUESTIONS
1.	WHAT ARE THE COMMON SYMPTOMS OF BURNING MOUTH SYNDROME?
2.	BURNING MOUTH SYNDROME IS MORE PREVALANT IN.
3.	AMONG WHICH AGE GROUPOF WOMEN BURNING MOUTH SYNDROME IS MORE PREVALENT?
4.	WHICH IS THE MOST COMMON SITE AFFECTED BY BURNING MOUTH SYNDROME?
5.	WHAT DO YOU THINK WILL BE THE CAUSE OF PRIMARY BURNING MOUTH SYNDROME?
6.	WHAT ARE THE CAUSES OF SECONDARY BURNING MOUTH SYNDROME?
7.	WHAT ARE THE VARIOUS DIAGNOSTIC TESTS AVAILABLE FOR BURNING MOUTH SYNDROME?
8.	WHICH OF THE FOLLOWING DRUGS CAUSE BURNING MOUTH SYNDROME?
9.	ARE YOU AWARE OF VARIOUS TREATMENT MODALITIES AVILABLE FOR BURNING MOUTH SYNDROME?
10.	WHAT ARE THE OTHER NON PHARMACOLOGICAL TREATMENT FOR BURNING MOUTH SYNDROME?

Results

Dental students from various parts of India were selected for the study .A total of 100 dental students responded positively and participated in the present study.

Majority of the students (66%) had a good knowledge about the common symptoms of BMS .And about 8% were aware of dry lip and mouth as common symptoms of BMS ,22% responded burning sensation and 4% as persistent metallic taste.

Among gender distribution for BMS 67% responded that females are more affected than male(13%) and 20% responded that they are not aware. About 56% of students responded that women in the age of 45 and above are mostly affected with BMS,30 to 40years is the response given by 37%and 7% responded as 20 to 30 years (figure -1).

Regarding the site most commonly affected 39% responded as gingiva, 19% as soft palate,28% as hard palate and 14% as tongue(figure-2)

For the primary cause of BMS 37% responded dry mouth, 14% hormonal changes,20% as nerve damage, and 4% as none of the above. For secondary causes of BMS 15% said ill fitting denture,15% diabetes mellitus,15% deleterious oral habits ,55% as all of the above.

For various diagnostic tests 21% responded oral swab test,15% salivary flow test, 14% blood tests for checking the underlying causes, 50%all of the above(figure-3).

About drugs causing BMS 16% responded as Angiotensin converting enzyme(ACE) 16% said Angiotensin receptor blockers (ARB),57% said both,11% said none. For the awareness of treatment for BMS 56% responded as yes and 44% no (figure-4). For non pharmacological treatment 9%said acupuncture, 14%cognitive behavior therapy,36%cessation of smoking,41% said all of the above(figure-5).

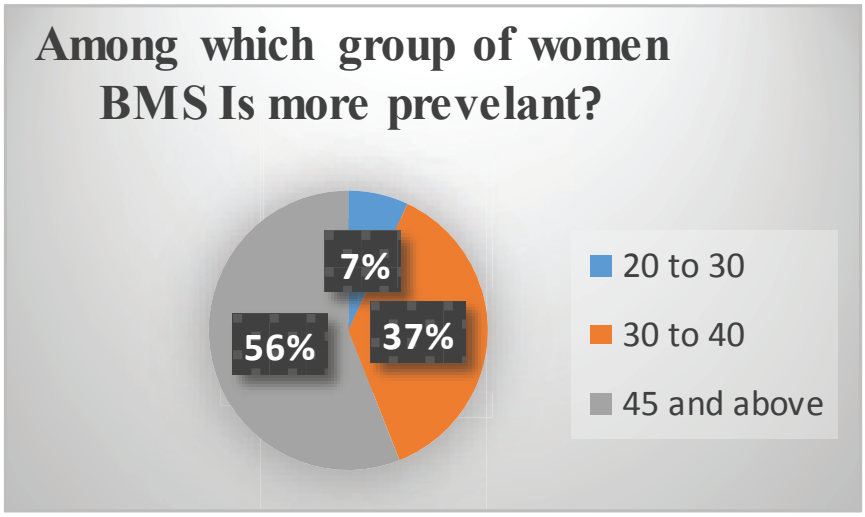

Figure-1 Age distribution in women

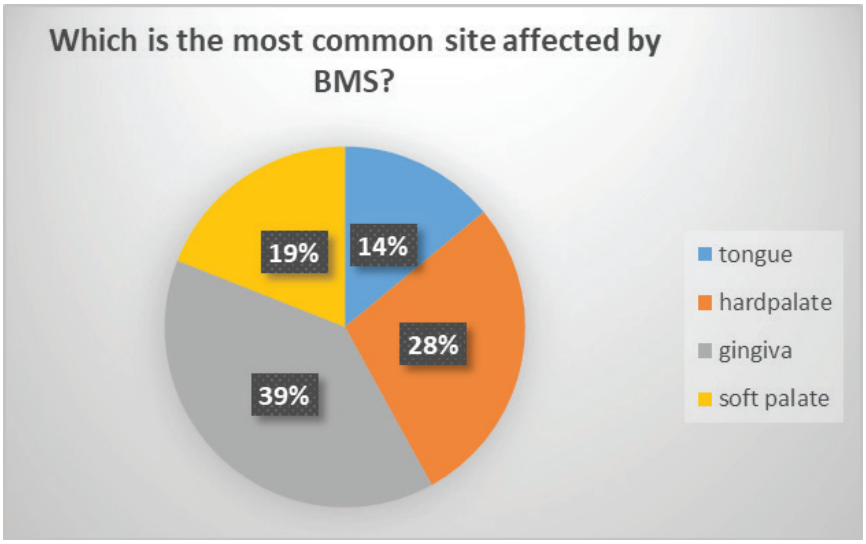

Figure-2 Common sites affected in BMS

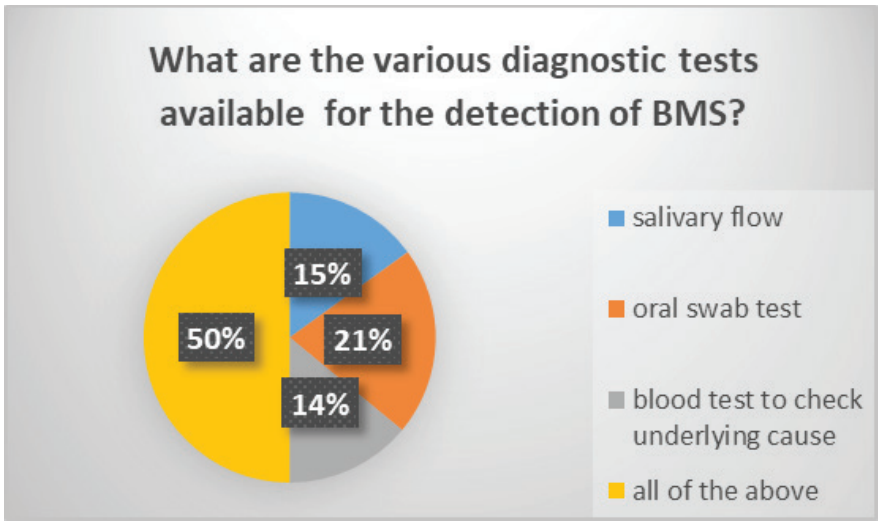

Figure-3 Diagnostic tests for BMS

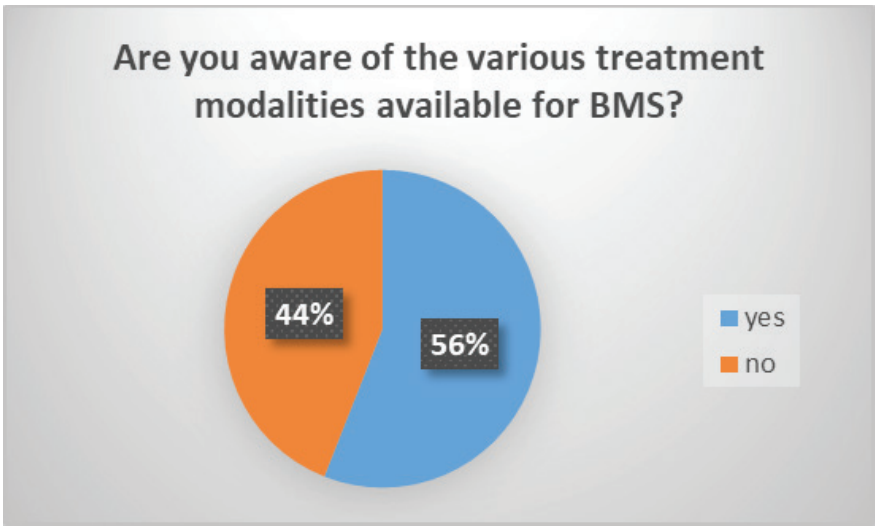

Figure-4 Treatment for BMS

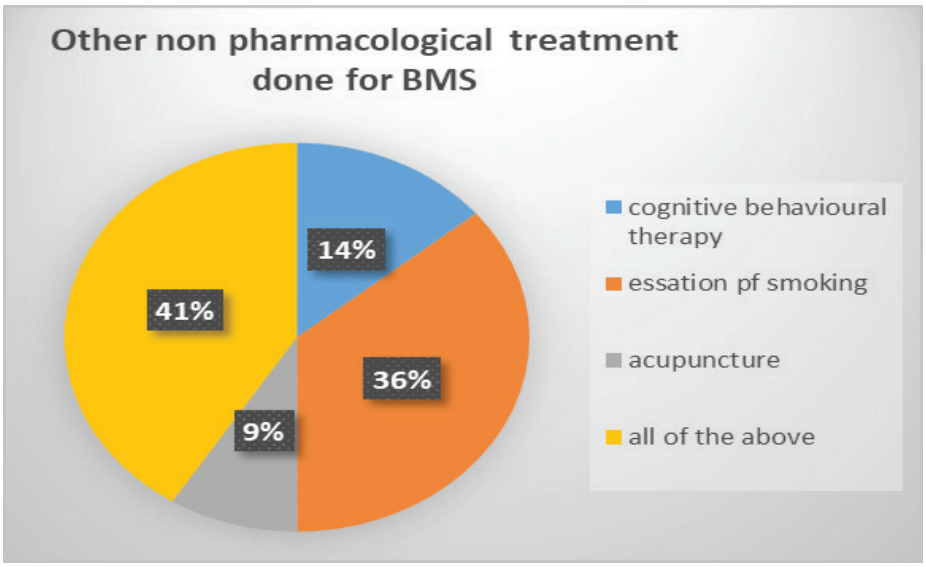

Figure-5 Non pharmacotherapy for BMS

Discussion

Although many studies are conducted and published on BMS a confusion still exists about the fact that BMS is defined by the symptoms which is seen co-existing with other local and systemic conditions and psychological disorders. The lacunae in the diagnostic method makes the management difficult.[9] Mostly middle aged and geriatric population are affected.[10] Comparatively women are more affected than men. The prevalence of BMS is more in the post menopausal women.[11,12]

Patients with burning mouth syndrome have higher incidence of dry mouth hence dry mouth is suggested as the main etiological factor in causing BMS according to Grushka. M and Svensson et al [4,6] likewise in the present study majority of the students have responded that dry mouth to be a major clinical symptom.

Studies on salivary flow rate did not show any reduction in the unstimulated or stimulated salivary flow rate [7] but changes in the composition of saliva was noted and the reason was unknown.[9]Changes could be due to stress related sympathetic output or alterations in interactions between cranial nerves supplying pain and taste sensation.[13]

According to Ship et al post menstrual women are mostly affected, Ben et al have reported that about 10-40% women presenting for treatment of post menopause symptoms had BMS.[7,14] In the present study 67% of the participants had a good knowledge about the gender distribution and most commonly affected age group in women.

According to Ship et al more than one site is affected in burning mouth syndrome. In which anterior 2/3rd of the tongue, anterior part of hard palate and mucosa of lower lip are the regions mostly affected.[7] This is in contrast to the present study in which 39%of the participants responded anterior gingiva, 28% hard palate and 40% responded as tongue. This shows not only multiple sites are involved it also varies between patients. Among various diagnostic tests clinical history is considered very important for diagnosing BMS.[4] In the present study about 50% of study participants had a good knowledge about diagnostic methods of BMS. Various medications are said to cause BMS one such is Angiotensin-converting enzyme (ACE)[15-17].On discontinuing these medications burning sensation was found to remit within weeks.[15].

Medical management of BMS was done with low dosage of clonazepam[18]Gabapentin[19]and tricyclic antidepressants[20],topical capsaicin was also used as desensitizing agent.[21].About more than 50% of the students were aware about various treatment modalities available for BMS and had a good knowledge about non pharmacological therapy for BMS. This shows that the level of awareness and knowledge was good about burning mouth syndrome among dental students.

Conclusion

Correct diagnosis is of paramount importance which serve as the foundation for proper management of BMS. This study shows that more than half of the dental students who participated in the study have a good knowledge about BMS

More of comprehensive education programmes based on this condition and clinical exposure of students to observe patients with this condition will enhance their skill for proper diagnosis. Enough knowledge about this condition will help students to a great extent in identification, diagnosis and treatment planning.

Conflict of Interest-Nil

Source of Funding-Self

Ethical Clearance-Na

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