

Case Report

Burning Mouth Syndrome: A Diagnostic Enigma

Dr. Sujatha D¹, Dr. Akshita D²

^{1,2}The Oxford Dental College & Hospital, Bommanahalli, Hosur Road, Bangalore-560068, Karnataka, India

*Corresponding author

Dr. Akshita D

Email: aksh.devara@gmail.com

Abstract: Burning mouth syndrome is an idiopathic condition characterized by a chronic continuous burning sensation of intraoral soft tissues involving typically the tongue, with or without extension to the lips and oral mucosa. There may or may not be any positive clinical and laboratory findings. It is more commonly reported in women, especially the pre and post-menopausal age group. The causes are multifactorial and the diagnosis is done mainly by exclusion. Any nutritional deficiencies, chronic anxiety, menopause, depression, salivary gland anomalies etc. can cause BMS. This syndrome may also coexist with other oral conditions. Both physiological and psychological factors must be kept in mind in order to treat such patients. The present article discusses a case report of a 55 year old female patient with a 6 month history of oral burning all around her mouth and occasionally on her face too. Clinical and laboratory investigations revealed no abnormality, however patient revealed having been stressed out and had attained her menopause 4 months earlier.

Keywords: BMS, psychological, menopause

INTRODUCTION

“Burning mouth syndrome is a chronic oral dysaesthesia characterized by a burning sensation of the oral cavity with clinically normal mucosa and in the absence of any detectable organic cause” [1, 2, 3]. Other synonyms exist for this condition like, glossodynia, glossopyrosis, stomatodynia, stomatopyrosis, sore tongue, or burning tongue [4]. Oral physician must thoroughly evaluate this condition and provide an appropriate management. There is evidence in the literature about psychological elements causing Burning mouth syndrome (BMS). Identifying the etiology correctly aids in an appropriate diagnosis and also rendering an effective treatment to them. Stress, psychological factors play a demonstrable role and the patient must be evaluated for the same.

CASE REPORT

A 55 year old female patient had come with a complaint of burning sensation in the mouth and slightly on her face since 6 months approximately. On eliciting the history, patient had burning sensation present throughout the day, with varied intensity of

pain, beginning during the day and gradually increasing as the day progresses. It aggravated during the night and caused great discomfort and pain to the patient causing insomnia. Patient was unable to eat food and restricted herself to only bland soft solid food, indicating a Poor quality of life. On eliciting the history further, she revealed that she was stressed out, not happy, felt lonely at home as she was locked by her children. She wanted to go back to her native where her husband was staying.

Pt. had visited a specialty hospital for the same problem and was advised the following medications and few investigations (Table 1) were done:

- Cap polybion / once daily/30 days
- Tab folinal 10mg/ once daily/30 days
- Kenacort 0.1% -once oral gel/2 wk
- AF (antifungal) 15mg/once daily/1 wk was advised.

Even after all these medications pt. had no relief and was then referred to our college for further evaluation.

Table-1: shows the investigations done for the patient

Investigations Done	Results
Diabetes	104 Mg/Dl (Normal)
Vit B 12 Assay, Chemiluminescence	1017-High
Hb%	11.1 gm% (Normal)
Hypertension	120/70 (Normal)

Patient's personal history revealed, that she brushes once daily with finger and tooth powder Hospital Anxiety And Depression Scale (HAD) scale [5], was recorded, which gave a score of 28 and considered to be an abnormal case. Patient had attained menopause 4 months back and had post-menopausal mood fluctuations. Patient also complained having taste alterations and was not interested to eat any food.

Intraorally, there was generalized attrition, abrasion irt 11 21 22, wear facets seen irt 36 46 16 26, grade 1 mobility irt 11 21 12, grade 2 irt 31 41 42, color of the teeth appeared to be yellowish to brown due to attrition (Figure 1).



Fig. 1: shows abrasion of anterior teeth

Visual analog scale (VAS)[6] was recorded: On day 1 of the visit:VAS=10 during the whole day, burning sensation was diffuse, spreading throughout the tongue, buccal mucosa, lips, on the cheek region which was like a pin prick. Colour of the mucosa appeared to

be normal, suggestive of no nutritional deficiency. Modified shimmer's test was done as a chair side investigation, which revealed that patient had Dysgnesia with salt, sweet.

A provisional diagnosis of, 'Burning mouth syndrome secondary to stress & post menopause', 'Dysgnesia', 'Chronic generalized gingivitis with localized periodontitis irt 11 21 12 31 41 42' was given. A differential diagnosis of chronic facial pain/Atypical facial pain was given.

Thus a final diagnosis of burning mouth syndrome secondary to stress & postmenopause. Chronic generalised gingivitis with localised periodontitis irt 11 21 12 31 41 42 was given.

An extensive psychological counseling which lasted for an hour on the same day of visit was given to the patient. SM- Fibro (Antioxidant) once daily for 30 days was advised.

The following treatment was planned for the patient:

- Advised SM fibro once daily for 30 days
- Pt was given behavioral management: DIRECT & INDIRECT
- Pt was asked to do some stress relieving exercises, like meditation, walking and to keep herself busy at home.
- Adv extraction - 11 21 12 31 41 42
- Adv prosthesis after extraction.
- Stop using toothpowder for brushing her teeth.
- She was recalled after 15 days for a follow up and VAS scores were recorded.(Table 2)

Table 2: gives the details of the follow up and VAS scores of the patient.

Follow Up	Day Of Visit	Vas Scores
1 St	14th	9
2nd	40th	6-7
3 Rd (Pt Left To Her Native, Orissa)	After 3 Months (Tele Follow Up)	4-5
4 th	After 5 Months(Tele Follow Up)	Pain Relieved Completely

However if the VAS scores wouldn't have come down even after anti-oxidants therapy patient was advised to get hormonal blood test done, and start with hormonal replacement therapy. The patient recovered completely with the antioxidant therapy and behavioural therapy.

DISCUSSION

Based upon the occurrence of oral discomfort, pattern of symptom presentation and progression BMS has also be divided into three distinct. [1, 7]

Type 1: Characterized as a burning sensation that is not present upon waking, but which develops in the late morning and progresses during the waking hours, with the greatest intensity of discomfort in the evening. This sensation is present every day.

Type 2: Patients awake with a burning sensation that is constant throughout the day, which often prevents patients from falling asleep. This discomfort is present all day, every day.

Type 3: Patients report intermittent symptoms and symptom-free periods, with variable presence between days and may experience the symptoms at unusual oral sites such as the floor of the mouth and buccal mucosa.”[7]Type 2 BMS was seen in the present case.

Several factors are frequently associated with BMS, like altered taste, dry mouth, stress, nutritional deficiencies etc. Dysgeusia, occurs in as many as two thirds of patients.Candidal infections can also cause BMS. Candidiasis can cause burning pain, however its prevalence is not yet found [8, 9]. Post-menopausal women are also affected by BMS mainly due to hormone disruption and severe mood alterations with 10-40% commonly affected [10]. BMS is a psychogenic disorder associated consistently with personality and mood changes, like anxiety and depression,[10]which was seen in the present case.

MANAGEMENT

A thorough and a proper clinical diagnosis and examination is very crucial for diagnosing BMS. Treatment is aimed to reduce the symptoms considerably. A Cochrane review of interventions for BMS found that ‘cognitive behavioral therapy was one of only three interventions resulting in the reduction of BMS symptoms’. [11]Reassurance, alone can be an effective treatment, for BMS. In 24 per cent of patients, there was reduction of symptoms, an improvement of psychological status with only behavioral therapy. It was successful in the present case also. [12]

The use of antioxidants also aids in stress reduction and is effective for BMS. There was significant improvement in the present case with antioxidants supplementation.(Table 3)

Table 3: shows the improvement of BMS with the antioxidant therapy for the present case.

Before treatment with antioxidant (sm-fibro)	After treatment Antioxidant(sm-fibro)
Weak, lethargic	Active, started working in the house
Stressed out	Reduced stress levels
Was on bland SOLID food,	Started eating normal food
Less energy level.	Increased energy levels
Severe discomfort, burning sensation	Reduced burning sensation.

CONCLUSION

BMS is a complicated oral dysaesthesia occurring in females and a very difficult condition to treat. There are several complex etiologies for this condition with the psychological component being an important cause as seen in the present case. A standard treatment protocol is lacking to treat these patients and both the physiological and psychological aspects must be kept in mind while treating these patients. Helping the patients in understanding the condition, treating them with empathy is utmost important to deal with BMS with stress being the main cause. Clinicians must understand the cause at an early stage and treat the patient effectively.

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