

# The Effect of Citalopram and Colonazepam on Burning Mouth Syndrome

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## KEY WORDS

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## ABSTRACT

**Statement of problem:** Psychosocial factors are thought to play a role in burning mouth syndrome (BMS) and several therapeutic approaches for BMS are based on this consideration.

**Purpose:** This paper evaluated the efficacy of the combined systemic administration of citalopram and clonazepam, as anti-depressant and anti-anxiety drugs, in the management of burning mouth syndrome and reduction of the burning sensation.

**Materials and Method:** In this cross-sectional study, 80 subjects suffering from idiopathic burning mouth syndrome were enrolled. The patients underwent a thorough clinical examination. Oral symptoms before and after treatment were assessed using a Visual Analogue Scale. The mean duration of burning in our patients was 7 months. Systemic combination of citalopram (20 mg/daily) and clonazepam (0.25 mg/daily) was prescribed for all of them for 8 weeks. Then, the data were analysed, using Student's t-test.

**Results:** Of the 62 patients who completed the protocol, 38 reported complete remission of the oral burning sensation. However, 20 patients reported a little improvement, and four of them reported no improvement.

**Conclusion:** These data suggest that citalopram with clonazepam is effective in patients with BMS

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## Introduction

The International Association for the Study of Pain defines BMS as "a burning pain in the tongue or other mucous membranes" [1]. Patients suffering from this syndrome have a normal oral mucosa with no identified systemic or local causative factors [2]. Despite these criteria, which seems to be accepted widely, there is a lack of consensus on putative causes and pathogenesis of BMS. Consequently, the therapeutic approaches differ and are often subjective and based on clinician background. Psychosocial factors are thought to play a role in BMS. Several studies have assessed the psychological

status of these patients [3-5] and have evaluated the impact of various interventions, including psychological counseling [6, 7] and psychotropic drugs [8-10]. To manage BMS, many investigators have studied various ways such as psychotherapy, hormone therapy, analgesics, vitamin therapy [11, 12], and using alpha lipoic acid (ALA) [11]. However, none of them have had a significant effect on burning in these patients. In this paper, we evaluated the efficacy of the systemic administration of Citalopram [13] and Colonazepam [14], as anti-depressant and anti-anxiety drugs, in the management of BMS symptoms.

## Materials and Methods

This study was conducted at the Department of Oral Medicine, University of Mashhad, Iran, since April 2004 to May 2006. During this period, 80 consecutive patients complaining of burning mouth sensation were evaluated. All the subjects gave their informed consent and the study was approved by the local ethics committee.

For differentiating the patients whose burning was related to clinical and laboratory disorders, they underwent a thorough clinical examination, including salivary flow rate measurements, laboratory evaluations (complete blood cell counts, blood glucose levels, serum iron and transferrin levels, serum vitamin B12, and folate levels), patch test for contact allergy to denture materials, and isolation of *Candida* species from oral mucosal scrapes. Only patients suffering from idiopathic BMS were included in this study. Idiopathic BMS is defined as a burning sensation in the mouth, including complaints described as stinging sensation or pain, associated with an oral mucosa that appears clinically normal in the absence of detectable local or systemic diseases or alterations [15-17]. Idiopathic BMS was diagnosed in 65 subjects. The patients excluded from the study consisted of 1 patient suffering from chronic candidiasis, 4 with oral mucosal lesions, 1 with vitamin B12 deficiency, and 3 patients with subjective oral dryness. Six of the remaining 71 patients with a definitive diagnosis of BMS were excluded because of the concomitant use of benzodiazepines or other antipsychotic drugs. At last 65 patients with BMS who had not used any medications or received no treatment were selected for the study. All the remaining patients used Citaloperam (20 mg/ daily) and Colonazepam (0.25 mg/daily) for 8 weeks. Citaloperam, a serotonin reuptake inhibitor, is used for treatment of depression disorders while colonazepam, a short acting benzodiazepine, is useful for anxiety disorders [18]. The side effects were recorded at clinical follow-up visits, scheduled twice a month. In order to evaluate the severity of symptoms before and after the treatment, the patients were asked to use a visual analogue scale (VAS) [19]. In this scale, a dot was marked along a line whose endpoints were 0 and 10,

indicating no symptoms and severe burning sensation, respectively. Based on the score, the treatment outcome was defined as not effective (the score after treatment was the same as or higher than that before treatment), partially effective (any reduction in score), or effective (complete absence of symptoms). VAS scores before and after treatment were compared, using the Student's t-test.

## Results

The study group consisted of 41 women (mean age,  $63 \pm 12.7$  years) and 24 men (mean age,  $61 \pm 13.3$  years). All the patients had oral complaints for more than 3 months (average,  $15 \pm 2.17$  months; range, 3 to 36 months). Three of the patients (4.61%) stopped taking Citaloperam within 1-2 weeks because of side effects; one of them experienced stomach cramp and 2 reported dizziness. These side effects disappeared within a few days of discontinuation of the drug.

Following 6 weeks of treatment with Citaloperam and colonazepam, 38 (61.2%) patients who completed the study reported a complete remission of the oral burning sensation. In 20 patients (32.2%), the drug was partially effective. In 4 (6.6%) patients, Citaloperam and Clonazepam were not effective. As reported by the patients, no one experienced complete remission of symptoms during treatment with Citaloperam and Colonazepam. No significant correlation was observed with respect to the patient's age or disease severity at the time of diagnosis. Statistical analysis showed that taking citaloperam and colonazepam reduced the oral burning sensation in BMS ( $P < 0.05$ ).

## Discussion

BMS is quite common disorder, affecting post-menopausal women with a prevalence range of 2.5% to 5.1% in the general population ranges [5, 20]. Several therapeutic approaches for BMS are based on the consideration that the disorder seems to be related to psychological problems [3, 21, 22]. Anti-depressants with noradrenergic or serotonergic effects [10, 23], anxiolytics [8], and benzodiazepines [9, 24] have been tentatively used to treat BMS.

Consequently, we evaluated the combination of

Citaloperam and Colonazepam in the management of idiopathic BMS in this study. These drugs are used as anti-depressant and anti-anxiety as well as for the treatment of psychologic disorders [13]. A study by Maina *et al.* [18] suggested that amisulpride is an effective treatment for BMS and is especially useful at the beginning of drug therapy for this syndrome. As reported by the patients, no one experienced complete remission of symptoms during treatment with Citaloperam and Colonazepam. This might result from the negative effects of prolonged chronic discomfort on the emotional profile of the subjects. In other words, a prolonged period of untreatable, and sometimes undiagnosed, oral pain might aggravate the already “disturbed” psychology of the patients and consequently make them more resistant to therapy.

In this investigation, no significant correlation was observed with respect to patient's age or disease severity at the time of diagnosis. The observed occurrence of side effects reported by the patients (4.61%) associated with low doses of the drug administered in this investigation suggests that Citaloperam and Colonazepam may be considered safe for use by general practitioners.

### Conclusion and suggestion

These preliminary data revealed that citaloperam with colonazepam is effective in patients with BMS. It is suggested that Citaloperam and Colonazepam should be evaluated in placebo-controlled, randomized, double-blind trials to determine its effectiveness for treating this enigmatic oral condition.

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