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Antidepressant-induced Burning Mouth Syndrome - A Unique Case

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Burning Mouth Syndrome (BMS) is defined as a chronic orofacial pain syndrome, without evidence of mucosal lesions and other clinical signs of disease or laboratory abnormalities. Patients with BMS complain of burning pain in the mouth, xerostomia and taste disturbances. It is more common among women and the median age of occurrence is about 60 years. BMS may be primary or secondary to other diseases. The mainstay in the treatment of BMS includes antidepressants, benzodiazepines, and anticonvulsants. A few cases of BMS caused due to medication have been reported. The causative drugs include angiotensin-converting enzyme inhibitors, anticoagulants, antipsychotics, antiretrovirals, and benzodiazepines. This is a case report of a patient on antidepressants who developed symptoms of BMS thereby causing a dilemma in management. (Korean J Pain 2014; 27: 294-296)

Key Words:
antidepressants, burning mouth syndrome, drug-induced BMS, fluoxetin, SSRI.

Burning mouth syndrome (BMS) is characterized by a burning sensation of the oral mucosa without accompanying abnormal clinical or laboratory findings. It mainly affects post-menopausal women [1].

BMS is classified as primary or idiopathic BMS, for which a neuropathological cause is likely, and secondary BMS, which results from local factors or systemic conditions [2]. Antidepressants are the main therapeutic regimen for the management of primary BMS [3]. This article describes an unusual case of a patient who developed symptoms of BMS as a result of antidepressant treatment.

CASE REPORT

A 55-year-old female patient presented with a four-month history of a continuous burning sensation of the oral mucosa. It was initially present only on the tongue but gradually involved the entire mouth. The burning sensation was not associated with an altered taste sensation or dry mouth. It developed in the morning and progressively increased in intensity throughout the day. It was aggravated by spicy food and not relieved when taking analgesics.

Her medical history revealed that the patient had been

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in menopause for four years. The patient had witnessed an accident and suffered from major depression 3 years prior to visiting our clinic. The patient had been on the following medication for 3 years: Monoprolol 40 mg, Benzhexol (Parkin) 2 mg, Sodium valproate (Valprol) 50 mg, Haloperidol (Trancodol) 5 mg and Fluoxetin 100 mg.

In the course of managing her depression, the dosage of the drug fluoxetin was briefly increased one year prior to her visit from 100 to 200 mg per day for a month. During this period, the patient experienced a mild burning sensation in her mouth, which returned to normal when the dosage was decreased. The dosage of the same drug was again increased from 100 to 200 mg six months prior to her visit, and the patient had been experiencing symptoms of burning mouth for the last four months.

On examination, the patient was apparently healthy, conscious, co-operative, well-oriented, well-built and nourished. Her vital signs were within the normal range. Intraoral examination revealed that the oral mucosa appeared normal and healthy; there were no mucosal lesions to explain the pain. Salivary secretion appeared adequate, and saliva was thin and copious.

The intensity of the burning sensation was rated on a visual analogue scale, with a score of 8. Laboratory analysis of her bloodwork revealed that all parameters were within the normal range.

The patient was referred to her psychiatrist with a request to alter or reduce the dosage of the drug fluoxetin. The drug was discontinued, and her depression was managed instead with the drug Colostrinin (Cognate). Following this change, the patient's glossodynia disappeared completely within one month.

Based on her history, clinical features and response after drug cessation, a final diagnosis of selective serotonin reuptake inhibiter (SSRI) antidepressant-induced BMS was arrived upon. The patient is under constant follow-up and remains pain-free.

DISCUSSION

Burning mouth syndrome is defined by the International Association for the Study of Pain as burning pain in the tongue or other oral mucous membrane associated with normal signs and laboratory findings, lasting for at least 4 to 6 months [3]. One of the most commonly affected sites is the tip and anterior two thirds of the tongue, which are the areas of greatest movement in the oral cavity [4]. The prevalence of burning mouth symptoms reported by international studies ranges from 0.6% to 15% [5]. Patients are around 60 years of age, and females are more commonly affected than males [6].

Lamey and Lewis [7] have suggested classifying BMS into three patterns: types 1, 2, and 3. Type 1 includes symptom-free waking, with sensations developing in the morning and progressively rising to a severe level by evening. Type 2 involves continuous symptoms throughout the day; whereas type 3 features intermittent symptom-free periods throughout the day. Nonpsychologic causative factors, such as nutritional deficiencies, have been linked to type 1, chronic anxiety to type 2, and food allergies to type 3.

Another approach in classifying BMS is to divide patients into either primary or secondary groups. While primary BMS is idiopathic, secondary BMS may be caused by local factors or systemic conditions. Local factors associated with BMS include mucosal diseases, fungal infections, bacterial invasion, allergies, temporomandibular joint dysfunctions, and salivary gland abnormalities. Deficiency diseases, hormonal and immunologic disturbances, and pharmacotherapeutic side effects are included in the systemic conditions [8].

Secondary BMS requires appropriate diagnosis and treatment of the underlying condition to manage symptoms. In primary BMS, the cause is unclear and counselling and medication remain the mainstay of treatment [9].

Patton et al. [10] set out the guidelines for the management of primary BMS based on a systematic review of randomized controlled trials, and recommended the following drugs: SSRI, clonazepam, alphalipolic acid, amisulpride and cognitive behavioral therapy.

However, several medications have been reported to induce BMS. These include the following: efavirenz, clonazepam, hormonal replacement therapies, fluoxetine, sertraline and a broad range of antihypertensive agents such as captopril, enalapril, and lisinopril [11]. Thirty-three percent of drug-induced BMS have been seen to be dose-dependent phenomena, because the burning sensation appears after elevating the drug dose in search of increased therapeutic efficacy [12].

Levenson [13] reported a case of a patient with major depression who developed BMS after an increase in the dosage of SSRI (fluoxetine, sertraline) and whose burning

sensation was completely relieved after discontinuation of the medication.

The pathogenesis of BMS has been described in terms of local factors or conditions that alter the peripheral nerves, resulting in a decreased threshold of burning sensation and peripheral sensitization. If the peripheral sensitization continues for a long period of time, it adversely affects the central nervous system and results in neuroplasticity and central sensitization [14]. Antidepressants decrease the delay in neurotransmission by increasing neurotransmitters in the synapses. SSRIs block the reabsorption of serotonin by nerve cells in the brain. This leaves more serotonin available, which enhances neurotransmission. This improves the depressive state of the patient [15].

However, serotonin has a central analgesic effect but acts as an algogenic peripherally. Our patient was on SSRI for the management of depression. The dose of her medication was increased to improve the efficacy of treatment for her depression. However, this resulted in the symptoms of a burning mouth. This probably occurred because of the peripheral algogenic action of serotonin.

This is a case report of a patient who developed BMS while on antidepressants. The purpose of this article is to bring to light this rare occurrence. Cessation of the drug is the best way to manage such patients after obtaining physician consultation for the medical management of depression.

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