

PSYCHOLOGICAL DISORDER AS BURNING MOUTH SYNDROME RISK FACTOR : A REVIEW

Aisyah Rachmadani Putri Gofur¹ and Aulia Ramadhani^{2*}

¹Faculty of Dental Medicine, Universitas Airlangga, Surabaya, Indonesia.

²Dental Public Health, Faculty of Dental Medicine, Universitas Airlangga, Surabaya, Indonesia.

*e-mail: aulia-r@fkg.unair.ac.id

(Received 11 March 2020, Revised 9 May 2020, Accepted 11 May 2020)

ABSTRACT : Burning Mouth Syndrome (BMS) is a chronic condition characterized by a burning sensation in the oral mucosa especially tongue. Women experience BMS more often than men in the ratio of 7: 1 with an average age of 40 to 85 years. The prevalence of BMS in the general population reaches 0.5-5%. There are several specific factors that can trigger the emergence of BMS, but most BMS are often associated with individual psychological factors. The purpose of this review literature is to summarize the research regarding the relationship between BMS and psychological factors. Based on previous research, it was found that people with BMS tend to be aggravated by the psychological conditions of individuals such as endless anxiety, these conditions cause some nerve dysfunction associated with pain in BMS. Lingual mucosa shows a decrease in the number of small-diameter nerve fibers; The remaining small diameter nerve fibers show upregulation of subfamily ion channels that are part of a transient receptor potential V1 (TRPV1), and P2X3 receptor upregulation and nerve growth factor (NGF). The TRPV1 channel is mostly found in the nociceptive terminal peripheral A δ and C fibers, but is also concentrated in the dorsal root and trigeminal ganglia. This triggers a chemical irritation response. P2X3 ion channel receptors expressed by the primary nociceptor subpopulation of small diameter in the trigeminal nervous system also play a role. These receptors are activated by adenosine triphosphate (ATP), that can lead to burning sensation. From the results of the following explanation, it can be concluded that psychological factors may affect BMS.

Key words : Burning mouth syndrome, psychological well-being, mental health, mental illness, Transient Receptor Potential V1 (TRPV1)

INTRODUCTION

Burning Mouth Syndrome (BMS) is a chronic condition characterized by a burning sensation in the oral mucosa (Komiya *et al*, 2013), which is the same as a burning sensation in the oral mucosa after eating spicy food (Gutkowski, 2005). Based on Demarosi in 2013 stated that women experience BMS more often when compared to men with a ratio of 7: 1 with an average age of 40 to 85 years (Demarosi, 2013). Sardella *et al* (2013) also stated that the prevalence of BMS in the general population reached 0.5-5%. It was also reported in a number of studies that between 0.7% to 15% of the general population, 10% had BMS (Sun *et al*, 2013).

BMS is an orofacial chronic disease that does not find abnormal changes in clinical and laboratory examination (Grushka, 1987). This BMS condition often occurs in the tongue, so it is often called glossodynia (Bergdahl and Maud, 1999). As mentioned earlier, in the BMS event, no pathological changes are found in the oral cavity, so it is often regarded as "Oral sensorial

complaints." (Granot and Michal, 2005) and do not have standardized handling protocols (Zakrzewska *et al*, 2003). BMS is accompanied by taste disorders (dysgeusia, parageusia and xerostomia) (Nugraha *et al*, 2019). From the definition there is no macroscopic change in the clear oral mucosa (Nakazone *et al*, 2009).

Etiology of Burning Mouth syndrome

The etiology of BMS itself is not yet known, but there are several factors that can trigger the emergence of BMS. Most BMS are often associated with individual psychological factors. Psychological factors such as depression, anxiety, obsessive compulsive disorder (OCD) and psychosocial stressors. Several cases of BMS have been reported to have close links with psychological disorders. Some treatments that are often given are by mouthwash to stimulate the flow rate of saliva but, in some cases these treatments are considered less effective. One other treatment that can be done is to eliminate the trigger factors. However, until now there has been no study that explains the biggest triggering