



Emotional Stress and Acidic Intercellular PH is an Initial Event in the Etiopathogenesis of Oral Lesions - A Hypothesis

Sandhya Tamgadge*

Professor and PG Guide, Department of Oral and Maxillofacial Pathology and Microbiology, Dr D Y Patil Dental College and Hospital, Navi Mumbai, Maharashtra, India

***Corresponding Author:** Sandhya Tamgadge, Professor and PG Guide, Department of Oral and Maxillofacial Pathology and Microbiology, Dr D Y Patil Dental College and Hospital, Navi Mumbai, Maharashtra, India.

Received: November 26, 2018; **Published:** December 13, 2018

Oral cavity is composed of complex anatomical organs and their intricate association which leads to various acute and chronic hard and soft tissue lesions. Due to complex anatomy and ecosystem, the etiopathogenesis of most lesions too, is considered to be multifactorial and in most lesions, it is not completely explored. Therefore, most of the lesions run a chronic recurrent course even after treatment. Medical Literature reveals that emotional stress is strongly associated with few lesions such as autoimmune lesions, but such association has never been explored [1,2].

As per medical literature healthy gut is the key for good health but emotional stress can damage the health of intestinal tract and this leads to leaky gut syndrome. This leaky gut syndrome further leads to malabsorption [3]. Therefore it could be hypothesized that the food particles which escape digestion through this leaky gut might enter the tissues and could evoke auto immune response resulting in various autoimmune diseases of hard and soft tissue diseases.

Literature also reveals that emotional stress tremendously leads alteration in ph of interstitial fluid which highly impact the intercellular molecular events of all systems and alkaline ph is considered best for all cellular functions. But when it becomes acidic, all cellular functions and ultimately all systems get affected enormously, leads to cardiovascular, respiratory, neurological disorders etc. and even cancer [4]. Body, in turn, tries to buffer this acidic ph by borrowing calcium from hard tissues such as bones and teeth from marrow surface and dentinal surface respectively, which leads to osteoporosis of bone. Therefore, it could be hypothesized that initial event in the dental caries too, is emotional stress which leads to acidic ph of interstitial fluid and leads to porous teeth, clinically seen as incipient lesion. Such porous teeth from in-

ternally, are then prone to acid attack, formed due to microbial fermentation of carbohydrates. This initial event of emotional stress and acidic ph of interstitial fluid haven't been explored in dental caries literature [5,6].

Similarly, various chronic periodontal diseases are still not completely understood as far as etiopathogenesis is concerned. Similar initial event for jaw bone demineralization could be associated with emotional stress and acidic ph of interstitial fluid [5].

Therefore, as various systemic diseases have now been treated additionally in a spiritual way such as yoga, meditation and holistic approach to deal with emotional stress, similarly it could be hypothesized that various oral soft and hard tissues lesions which have systemic manifestations too, should be additionally prevented with similar approach to maintain the alkalinity of interstitial fluid [7].

Bibliography

1. Kumar GS. "Orban's Oral histology and embryology". New Delhi; Elsevier: (2010).
2. Neville., *et al.* "Oral and Maxillofacial pathology. Philadelphia: Saunders; (2002).
3. Fasano A. "Leaky gut and autoimmune diseases". *Clinical Reviews in Allergy and Immunology* 42 (2012): 71-78.
4. Young RO. "Using Sodium and Potassium Bicarbonates in the Prevention and Treatment of all Sickness and Disease". *International Journal of Complementary and Alternative Medicine* 9 (2017): 00318.

5. Feng X and McDonald JM. "Disorders of bone remodelling". Annual Review of Pathology (2010).
6. Tikhonova S., *et al.* "Investigating the association between stress, saliva and dental caries: a scoping review". *BMC Oral Health* 18.1 (2018): 41.
7. Kox M., *et al.* "Voluntary activation of the sympathetic nervous system and attenuation of the innate immune response in humans". *Proceedings of the National Academy of Sciences of the United States of America* 111.20 (2014): 7379-7384.

Volume 3 Issue 1 January 2019

© All rights are reserved by Sandhya Tamgadge.