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# Is it a Common Oral Lichen Planus or a Part of Grinspan's Syndrome?

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## Abstract

**Introduction:** Grinspan's syndrome has triad of clinical symptoms: Oral Lichen Planus (OLP), diabetes mellitus, and hypertension. OLP is a disorder commonly found in oral mucosa. The symptoms and clinical features are often misdiagnosed which potentially harm the patients.

**Discussion:** A 74-year-old female had chief complaint of ulcers on the lower lip for 2 years. She had history of diabetes mellitus and hypertension for years. Previously, she went to dentist with an alleged herpes simplex virus infection and was treated with antiviral for a week but no improvement. The patient is diagnosed with erosive type OLP. Exploration was necessary to find out whether it was OLP or part of Grinspan Syndrome.

**Conclusion:** The diagnosis was Grinspan's Syndrome. Dentists must be familiar with medical management of hypertension and diabetes mellitus to take a role in the diagnosis and treatment of oral lesion with both of diseases in order to maintain optimum health.

**Keywords:** Grinspan's syndrome, oral lichen planus, diabetes mellitus, hypertension.

## Introduction

Lichen Planus (LP) is a mucocutaneous disorder present in the chronic squamous epithelium that may affect the mucosal, genital, and skin, including scalp and nails. Oral Lichen Planus (OLP) is the most commonly found oral disease and often found in the buccal mucosa, tongue, palate, mole, gingiva, and lips. The clinical features of OLP have one or more of six classical appearances: reticular, erosive, atrophic, plaque, papulla, bullous. The erosive form has a symptom relation ranging from mild discomfort to pain or burning sensation, especially when consuming hot or spicy foods.<sup>1-3</sup> The diagnosis of

OLP is obtained from clinical examination and a histological biopsy of the oral cavity if there is no doubt of a clinical diagnosis. The criteria used for histological diagnosis are abnormal keratinization, the presence of stratum granulosum, basal cell degeneration, and inflammatory cell infiltration, such as ribbons dominated by lymphocytes, which are present in connective tissue.<sup>4-9</sup> Grinspan et al found an interesting association between OLP and diabetes mellitus (DM) and vascular hypertension which is then called Grinspan Syndrome.<sup>10-12</sup> This case report is unique because presenting rare case of Grinspan's Syndrome, especially in geriatric.

**Case History:** A 74-year-old female came with chief complaint of ulcers on lower lip for 2 years. History of fever was denied. A couple months ago patients went to Mecca to perform the pilgrimage. While being there, she could not eat regularly and drink enough. Ulcers on the lips progressively worsened until a week ago when she came to hospital. In the previous treatment, the patient's complaint was diagnosed from herpes simplex

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virus infection. She had taken acyclovir for 2 weeks. Her lower lips feel drier, sometimes the brown liquid would come out from the wound. Communication with the patient was constrained by age, she had a limited hearing and memory disorientation. She also suffered from diabetes mellitus and hypertension for years. Blood pressure was 150/90 mmHg and she claimed for taking antihypertensive medication, such as 5 mg Amlodipine twice daily. The patient's blood glucose was above 300mg/dl, and she took Metformin twice daily before and Glimepiride after eating. Even though she regularly consumed drugs for hypertension and diabetes mellitus, blood pressure and blood sugar levels remained above normal. The patient used removable dentures in the upper and lower jaws for 5 years. Since the ulcers on her lips appeared, she felt uncomfortable using her dentures. She had less appetite and sleepless nights. On extra-oral examination, the lower lip border of the vermilion contained brown crust surrounded by erosive areas with white striae. On intraoral examination, there was atrophy and fissure in the dorsal portion of the tongue and all the teeth in the upper and lower jaws have disappeared. Laboratory results of blood tests obtained a rate of sedimentation of blood above the reference value and hemoglobin at the lower limit of the reference value. The possibility was iron deficiency anemia. From the results of clinical examination, the diagnosis of work suspected Lichen Planus Oral erosion type with systemic factors diabetes mellitus and hypertension was found. This case was about the Grinspan's Syndrome.

Management for erosive-type OLPs is by using topical corticosteroids on the red lip margin and the use of triamcinolone acetonide cream ointment 4 times daily on thin lips. Patients were administered with an iron-deficiency anemia by taking multivitamins containing folic acid and ferrous fumarate twice daily for 2 weeks and supportive therapy using Zinc, B, and E once daily. Communication, instruction, and education were emphasized in patients to consume foods high in iron, such as red meat, red beans, red fruits, such as beet, and vegetables. She was also advised to replace her dentures.

After a week of treatment, the patient came back for visit. Patients felt several improvements, especially on the bottom lip. After extra-oral examination, the wound and crust on the lower lip were healed with marked thin red areas on the lower lip, better hygiene of the mouth, and comfort in the mouth was increasing. She used triamcinolone acetonide cream ointment on her lower lip according to the doctor's instructions, and she felt

the lower lip was softer. She took vitamins according to each dose before breakfast and dinner. She continued to take diabetes and hypertension drugs according to the dose. In general, she felt better than last week and more comfortable when eating.



a



b

**Figure 1. Lesions on the lower lip: (a) Before treatment: there was white erosive area and stria on the lower lip with a brown crusted coating; (b) After treatment: the erythema area of the lower lip, crust and erosion disappeared and the white striae fades.**



a



b



a

Figure 2. Patient uses removable dentures: (a) Before treatment: erosive areas bordered red lips and lower labial mucosa; (b) After treatment: erythema of the lower lip was still out of the blood point.



a



b

Figure 3. Dorsum of the tongue has papillary atrophy and tongue fissure (a) Before treatment: erosive area of the posterior dorsum of the tongue; (b) After treatment: erosive area narrowly oval shaped surrounded by white edges.



b

Figure 4. Lateral of the right tongue (a) Before treatment: atrophic papilla tongue and erosive area surrounded by a thin white layer (b) After treatment: erosive area disappeared.



Figure 5. Denture hygiene was full of poor release.





**Figure 6. Extraoral and fingernails after two weeks of treatment.**

### Discussion

Lichen planus is common in patients over 50, and more in women than men. With changes in daily diet, patients with OLP consumed too few fresh vegetables and fruits. Stress and emotions can be considered as contributing factors, especially in the exacerbation phase of OLP.<sup>5,13-16</sup>

Patients with OLP lesions and using drugs related to reactions in the oral mucosa are also a possible implication of the drugs. The patients will experience symptoms described as Grinspan's Syndrome with a wide variety of drugs which now is known as oral

lichenoid reactions. The clinical picture will look like a phenomenon of drug reaction<sup>8</sup> and is no longer referred to Grinspan's Syndrome.<sup>10</sup> Clinical manifestations of OLP and medical history suggest that drug consumption may lead to lichenoid changes. It is important to note that the lichenoid response appears as an agent response that amplifies the presence of drug-induced abnormalities rather than the induction of a disease. Clinical response to OLP management is done such as by removing suspected drugs in amplifying OLP or by using<sup>30</sup> topical steroids in OLP lesions.<sup>6,17-20</sup> The main goal of OLP therapy is to reduce the<sup>5</sup> symptoms of pain, remove oral lesions, reduce the risk of oral cancer, and maintain oral hygiene.<sup>21</sup>

Circumstances in the oral cavity reflect the health of the body and systemic diseases. Good dental and oral hygiene are partially<sup>21</sup> dependent on the patients' mental health status. A state of stress, depression, and excessive anxiety lead to the cleanliness of the oral cavity which will be neglected. When experiencing stress, the body releases adrenaline and noradrenaline so that it not only leads to a decrease in blood circulation, but there is the possibility of altering the blood elements needed to maintain the body's resistance to disease.<sup>22,23</sup>

In this article, the patient was diagnosed as having Grinspan's Syndrome, which is associated with erosive lichen<sup>21</sup> planus, diabetes mellitus, hypertension. Dentists must be familiar with medical management of hypertension<sup>21</sup> and diabetes mellitus patients by taking important role in the diagnosis and treatment of oral lesion with both of diseases in order to contribute to maintain optimum health.

### Conclusion

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<sup>20</sup>  
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