BMH MEDICAL JOURNAL

BMH Med. J. 2020;7(1):20-22. **Case Report**

Grinspan's Syndrome

Rajesh Manuel, MDS[1], Robin George Manappallil, MD, MRCPS (Glasg), FIMSA[2], Abhay Mani Martin, MD, DVD, DNB[3], Anju Chacko, DNB[4], Sneha Shalu, MDS[5], Seena Manuel, BDS[6]

[1]Consultant, Department of Oral and Maxillofacial Surgery, Baby Memorial Hospital, Calicut, Kerala, India, [2]Consultant, Department of Internal Medicine, Baby Memorial Hospital, Calicut, Kerala, India, [3]Senior Consultant, Department of Dermatology, Baby Memorial Hospital, Calicut, Kerala, India, [4]Consultant, Department of Pathology, Baby Memorial Hospital, Calicut, Kerala, India, [5]Consultant, Department of Orthodontics, MIDAC Dental Center, Calicut, Kerala, India, [6]Consultant, Department of Dentistry, Baby Memorial Hospital, Calicut, Kerala, India.

Address for Correspondence: Dr. Robin George Manappallil, Consultant, Department of Internal Medicine, Baby Memorial Hospital, Calicut, Kerala, India 673004. Email: drrobingeorgempl@gmail.com

Abstract

Grinspan's syndrome (GS) is characterized by the triad of oral lichen planus (OLP), diabetes mellitus and hypertension. Certain drugs which are used in the treatment of diabetes and hypertension can produce lichenoid reactions of the oral mucosa. The patient being reported is a middle aged lady suffering from recurrent OLP. She is a diabetic and hypertensive. Initially, she had uncontrolled blood glucose levels and had recurrent OLP. But even after controlling her blood glucose levels, she continued to have OLP, with increased frequency. On the basis of her medical history and clinical features, she was diagnosed to have GS. Her routine antidiabetic and antihypertensive medications were modified, following which her OLP showed resolution. Since GS can be drug induced, a detailed medication history is essential in all cases of OLP.

Keywords: Grinspan's syndrome, oral lichen planus, lichenoid reactions, diabetes mellitus, hypertension

Case presentation

A middle aged lady presented with history of burning sensation in mouth, painful ulceration over the tongue and buccal mucosa. The lesions were first noticed about 4 years ago, and she was diagnosed to have diabetes and hypertension. She was told to have oral lichen planus (OLP) due to diabetes, and was started on oral hypoglycemic drugs (gliclazide 60 mg once daily) and antihypertensives (captopril 25 mg once daily), along with prednisolone (5 mg) and multivitamins for her OLP. Though her oral lesions used to subside temporarily, the frequency of its occurrence increased drastically.

On examination, she had erythematous and violaceous lichen planus on the upper and lower lips (**Figure 1**) and erosive lichen planus of the gingival mucosa (**Figure 2**). A biopsy specimen taken

from the right cheek showed tissue lined by party squamous epithelium and partly stripped off, with lichenoid infiltration of submucosa with lymphocytes and melanophages; suggestive of lichen planus. Her vitals and systemic examinations were normal. Her routine blood investigations like complete blood counts, renal and liver functions, thyroid functions were normal. Random blood glucose level was 142 mg/dL and glycated haemoglobin (HbA1c) was under control (7.1%).

Figure 1: Lichen planus on upper and lower lip

Figure 2: Erosive lichen planus of gingival mucosa

On the basis of her history, clinical and biopsy findings, the diagnosis of Grinspan's syndrome (GS) was made. She was started on oral prednisolone (5 mg once daily for 1 week) and 0.1% triamcinolone oral paste, along with multivitamins. Her routine medications (gliclazide and captopril) were stopped, and changed to insulin analogues and amlodipine (5 mg twice daily). Within 2 weeks, her lesions had subsided completely. She was reviewed every 3 weeks for the next 3 months, after which she was lost for follow up. At the time of review, her blood glucose levels and blood pressure were under control, and there were no further episodes of OLP.

Discussion

Oral lichen planus (OLP) is a non-infectious chronic inflammatory disease affecting the oral mucosa; and may be associated with several systemic diseases. Grinspan reported a link between the severe or erosive form of OLP, diabetes mellitus and hypertension. Grupper and Avil later termed this association as "Grinspan Syndrome (GS)"[1]. It represents a drug induced disorder, and the oral lichenoid lesion, which is a variant of OLP, may be a reaction to the antidiabetic and/or antihypertensive drugs [2]. Several systemic medications are known to produce oral mucosal reactions which are clinically and microscopically similar to lichen planus. These lichenoid lesions may be considered as a disease itself or as an exacerbation of an existing OLP due to certain medications. These lesions are usually unilateral and of the erythematous and ulcerative variety. When compared to lichen planus, these lesions are commonly seen on ventral aspect of tongue and have a tendency to produce more full thickness ulceration [3].

The pathogenesis of lichenoid reactions is largely unknown, and is probably due to complex

interactions involving the drug in question, the patient's underlying disease, other medications, genetic and life-style factors. Idiosyncratic drug reactions can occur during the metabolic conversion of drugs to their chemically reactive products. An accumulation of these reactive metabolites, or their impaired detoxification, or a decrease in the cellular defence mechanism against these reactive metabolites appears to be the triggering factors [4].

There have been several reports suggesting the association between antihypertensive oral hypoglycemic drugs with OLP [5,6]. Drugs like captopril can precipitate an immune response to epidermal antigens leading to lichenoid drugs reactions [3]. These oral reactions can also be caused by sulfonylureas; however, the exact mechanism is remains unknown [5,6]. Apart from these drug reactions, the incidence of OLP has been noticed to be higher among diabetic patients [7].

References

1. Grupper CH, Avril J. Lichen erosive buccal, diabetes, hypertension (Sindrome de Grinspan) Bull Soc Franc Derm Syph. 1965;72:721–722.

2. Lamey PJ, Gibson J, Barclay SC, Miller S. Grinspans's syndrome: A drug-induced phenomenon? Oral Surg Oral Med oral Pathol 1990;70:184-185.

3. Ismail SB, Kumar SKS, Zain RB. Oral lichen planus and lichenoid reactions: etiopathogenesis, diagnosis, management and malignant transformation. J. Oral Sci. 2007;49:89-186.

4. Hess and Rieder. Hess DA, Rieder MJ. The role of reactive drug metabolites in immune-mediated adverse drug reactions. Ann Pharmacother 1997;31:1378-1387.

5. Johnson H, Soldano AC, Kovich O, Long W. Oral lichen planus. Dermatology Online Journal 14 (5): 20.

6. Murrah VA, Perez LM. Oral Lichen Planus: Parameter Affecting Accurate Dianosis and Effective Management. Available at: http://www.mmcpub.com/pdf. Accessed September 20, 2008.

7. Petrou-Amerikanou C, Markopoulos AK, Belazi M, Karamitsos D, Papanayotou P. Prevalence of oral lichen planus in diabetes mellitus according to the type of diabetes. Oral Dis 1998;4:37-40.