



## Psoriasis- can oral lesion be a common sign?

Charvi Chawla, Raghavendra Kini, Prasanna Kumar Rao, Gowri P Bhandarkar,  
Roopashri Rajesh Kashyap

A.J. Institute of Dental Sciences, Department of Oral Medicine and Radiology, Mangalore,  
Karnataka,India

### Abstract

Psoriasis is a common multisystem inflammatory chronic disease with predominantly skin and joint manifestations manifesting with remissions and exacerbations. It is a common skin disorder characterized by focal formation of raised plaques that constantly shed scales derived from excessive growth of skin epithelial cells. It is believed to be genetically linked but can also be triggered by mechanical, ultraviolet and chemical injury, various infections, drugs, psychological stress, and smoking. Oral manifestations of psoriasis are rare and are often difficult to diagnose. Oral psoriasis is a rare entity and geographic tongue is significantly more frequent in psoriatic patients but only a limited data is available so psoriatic patients should be encouraged to undergo routine dental checkups.

**Keywords:** Psoriasis, oral lesions, geographic tongue.

### INTRODUCTION

Psoriasis is a common chronic remitting inflammatory dermatological disease, characterized by itchy scaly red patches, papules and plaques manifesting with remissions and exacerbations (1). The term psoriasis is derived from the Greek word 'psora' meaning itch (2). Although psoriasis has been ubiquitous through the ages, it was not until the end of the 18th century that it was first described as a separate skin disorder (3). The estimated prevalence of psoriasis ranges between 0.5-3% with geographic and ethnic variations. It is usually seen in the second and third decades of life. The disease does not have any sexual or social predilection (4) Psoriasis is classified clinically into several types such as plaque type, inverse, erythrodermic, pustular, guttate, psoriatic onychodystrophy and psoriatic arthritis with plaque type being the most common (5). Classical psoriasis is characterised by abnormal cycle of epidermal development that leads to epidermal hyperproliferation, altered maturation of the skin, inflammation and vascular alteration (6) These characteristics are often observed as areas of dry, thickened, scaling, silvery white and reddened skin (7).

Received: 03.06.2016

Accepted: 03.10.2016

### Corresponding Author

Charvi Chawla  
A.J. Institute of Dental Sciences, Department of  
Oral Medicine and Radiology, Mangalore,  
Karnataka,India  
E-mail:charvigemini1@gmail.com

The dermatological and joint manifestations of the disease are well documented but oral manifestations are still a subject of controversy (8,9). Recent studies in this field have shown that psoriasis can give rise to mucosal lesions involving oral cavity (10). Various oral lesions such as geographic tongue, (11-13) fissured tongue, (14) and to less extent leukoedema and physiologic melanin pigmentation (9) have been described with higher prevalence.

Geographic tongue is mostly asymptomatic inflammatory disorder of unknown aetiology like psoriasis (15) It may present similar genetic, histopathological and clinical features like psoriasis; it is therefore thought that this lesion might be an oral manifestation of psoriasis (16,12). The available literature to date is limited but few modern studies in this field have reported a link between the two (17). This occurrence is more common in patients with plaque psoriasis (1). Here we report a known case of psoriasis with oral symptoms.

### CASE REPORT

A 65- year- old male patient reported with complaints of bleeding gums and loose lower front teeth with associated history of pain which is of dull and intermittent type and aggravates with consumption of food leading to difficulty in eating. The patient was known case of hypertension and diabetes since four years and was under medication. The extraoral symptoms of psoriasis was diagnosed one year back and it was correlated with the present intraoral findings.

On examination, well demarcated, erythematous, indurated plaque, dry papules were seen on the scalp and neck, each covered by a delicate silvery scale on its

surface with peripheral blanching (Woronoff's sign) along with bleeding points as a result of scratch during itching (Auspitz sign) (Fig. A,B).

Intra-orally, asymptomatic erythematous patch was seen on dorsum of tongue with loss of filliform papillae. The patches were irregular and sharply demarcated resembling a map. (Fig. C) The buccal and labial mucosa showed physiological melanin pigmentation; the linea alba being more pronounced, along with slight gingival enlargement involving mandibular anterior quadrant. Presence of a patch of size 2cm in diameter with white border seen on the ventral aspect of the tip of the tongue (Fig. D).

Hard tissue examination shows edentulous maxillary arch, missing mandibular posteriors and generalised mobility in mandibular anteriors.

Gingival examination revealed soft and edematous gingiva with bleeding on probing, pseudo pockets due to gingival enlargement in mandibular anteriors.

Informed consent is been taken from the patient and ethical approval is been taken from the ethical committee.



**Figure 1.** A- erythematous, indurated plaque covered by a delicate silvery scale with peripheral blanching on scalp, B- erythematous, indurated plaque, dry papules covered by a delicate silvery scale with peripheral blanching on neck, C- erythematous patch on dorsum of tongue with loss of filliform papillae suggestive of geographic tongue, D- patch with white border at tip on the ventral aspect of tongue

## DISCUSSION

Despite psoriasis being a common skin disorder, reviewing the literature reveals that reports of it involving the oral mucosa are relatively rare. There are few published reports of oral psoriasis in literature (16). Some authors are in accordance with the concept of oral lesions as a manifestation of psoriasis based on histopathological findings and others believe that oral lesions need to follow the same clinical course so as to accept them as same entity (9). The first oral manifestations of psoriasis were documented by Oppenheim and Thimm in 1903 (18). It was observed by DeGregori et al. that until 1971 only 15 cases of oral psoriasis had been documented, of which three had gingival involvement.

Benign migratory glossitis or geographic tongue is asymptomatic therefore easily overlooked by the clinicians and mostly patients are unaware of this condition as well. It is therefore suggested that clinicians should pay special attention to the oral mucosa of psoriatic patients.

Oral psoriasis usually develops in patients presenting acute cutaneous psoriatic lesions rather than their chronic counterparts. It has been seen to manifest in broadly four types of lesions: 1). well- defined yellowish-white lesions, round to oval in shape, which are independent of cutaneous lesions; 2). white, lacy, circinate, elevated lesions in the mucosa and tongue that are congruent with skin lesions; 3). erythema or redness of the entire oral mucosa associated with acute exacerbation of psoriasis; 4). geographic tongue, seen more frequently in patients with cutaneous psoriasis (16).

Psoriasis of the vermillion of the lips is rare and presents as scaly areas that may extend across the vermillion border (19). Geographic tongue presents with one or more irregular, well-defined red areas, most commonly surrounded by a raised white-greyish margin on the dorsum and/or borders of the tongue. The smooth red patches can have various shapes and size and are due to a localized desquamation with loss of tongue filliform papillae. The tongue papillae appear hyperkeratotic in the margins of the red denuded lesions, while fungiform and other tongue papillae are unaffected (20). Lesions of buccal mucosa are mostly seen in the acute stage of the disease and is present as annular, serpiginous overgrowths or as papules and plaques with whitish and erythematous patches (15) Oral lesion on palate manifests red serpiginous linear areas with or without ulceration which are asymptomatic (21). Gingiva is erythematous with presence of white reticular plaque which is extending from the gingival erythema manifesting generalised periodontitis state (22). Presence of geographic tongue and gingival erythema can be appreciated in the present case which is a known oral finding in psoriatic patient.

Tomb R et al (23). conducted a case control study comprising of 400 psoriasis patients and 1000 non psoriasis patients, his study shows strong correlation between psoriasis and geographic tongue (7.7% of psoriasis patients with geographic tongue versus 1% of

controls). L Germe MD et al (24). in 2012 performed a controlled and observational study, the data obtained suggested geographic tongue to be an oral manifestation of psoriasis (plaque type). The study showed that out of 535 psoriatic patients 35.1% had oral lesions, geographic tongue contributing 5.2%. Multiple surveys reported a significant higher prevalence of GT in psoriatic patients (8,14,24,). One histopathological study biopsied GT lesions in psoriatic patients and control subjects and described typical features of psoriasis in all cases from psoriatic patients but in 80% of the control subjects, hence concluded that GT is an expression of oral psoriasis. A geographic tongue is significantly more frequent in psoriatic patients but only a limited data is available to date to strongly validate the association between these two entities. These studies prove strong evidence with the present finding of the case.

Epithelial changes include loss or paucity of the granular cell layer, parakeratosis, elongation of rete pegs, and the presence of micro pustules of kogoj and microabscess of munro ,dilated tortuous vessels at the tip of dermal papillae, and predominant superficial and perivascular lymphocytic chronic inflammatory cell infiltrate. Epithelium over the connective tissue papillae was thinned with the proximity of the vascularized stromal tissue.

Migratory glossitis is mostly asymptomatic and usually resolve on its own, if symptomatic then it needs treatment with topical prednisolone. A topical or systemic antifungal medication may be suggested if secondary candidiasis is present. Although, successful treatment with cyclosporine and with topical and systemic antihistamines has been reported but still there is no standardized treatment available. New oral agents in development also have the potential to play a role in the treatment of psoriasis, providing a safer option compared with current oral therapies. These new treatments will provide both the practitioner and the patient with more choices and opportunities for individualized treatment regimes that will lead to better outcomes.

## CONCLUSION

“WHAT CANNOT BE CURED MUST BE ENDURED”

Oral psoriasis is a very rare entity and can be confused with other mucous membrane dermatoses. A geographic tongue is significantly more frequent in psoriatic patients but only a limited data is available that indicates its prevalence so their precise relationship needs to be clarified and whether they constitute oral counterpart of the cutaneous lesions awaits further studies. Recent years have seen tremendous advances in the understanding of the pathogenesis of psoriasis due to newer genetic and immunological techniques.

## REFERENCES

1. Griffiths CM, Barker JN. Pathogenesis and clinical features of psoriasis. *Lancet* 2007;370(9583):263-71.

2. Zhu JF, Kaminski MJ, Pulitzer DR, Hu J, Thomas HF. Psoriasis: Pathophysiology and oral manifestations. *Oral Dis* 1996;2(2):135-44.

3. Schmidt JE. Medical discoveries, who and when. Springfield, IL: Thomas; 1959. p. 391.

4. Shafer WG, Hine MK, Levy BM. Diseases of the skin. A text book of oral pathology. Philadelphia: WB Saunders; 1983. p. 814-16.

5. Zargari O. The prevalence and significance of fissured tongue and geographical tongue in psoriatic patients. *Clin Exp Dermatol* 2006;31(2):192-95.

6. Stern RS. Psoriasis. *Lancet* 1997;2;350(9074):349-53.

7. Van Onselen J. Psoriasis in general practice. *Nurs Stand* 1998;12(30):32-3.

8. Costa SC, Hirota SK, Takahashi MD, Andrade H Jr, Migliari DA. Oral lesions in 166 patients with cutaneous psoriasis: a controlled study. *Med Oral Patol Oral Cir Buccal* 2009;1;14(8):e371-5.

9. Hernández-Pérez F, Jaimes-Avelañez A, Urquizo-Ruvalcaba 3. Mde L, Díaz-Barcelot M, Irigoyen-Camacho ME, Vega-Memije ME, et al. Prevalence of oral lesions in patients with psoriasis. *Med Oral Patol Oral Cir Bucal* 2008;1;13(11):E703-8.

10. Shulman JD, Carpenter WM. Prevalence and risk factors associated with geographic tongue among US adults. *Oral Dis* 2006;12(4):381-6.

11. Pogrel MA, Cram D. Intraoral findings in patients with psoriasis 6. with a special reference to ectopic geographic tongue (erythema circinata). *Oral Surg Oral Med Oral Pathol* 1988;66(2):184-9.

12. Femiano F. Geographic tongue (migrant glossitis) and psoriasis. *Minerva Stomatol* 2001;50(6):213-7.

13. Morris LF, Phillips CM, Binnie WH, Sander HM, Silverman AK, Menter MA. Oral lesions in patients with psoriasis: a controlled study. *Cutis* 1992;49(5):339-44.

14. Daneshpazhooh M, Moslehi H, Akhyani M, Etesami M. Tongue lesions in psoriasis: a controlled study. *BMC Dermatol* 2004;4(1):16.

15. Bruce AJ, Roger RS 3rd. Oral psoriasis. *Dermatol Clin* 2003;21(1):99-104.

16. Yesudian PD, Chalmers RJ, Warren RB, Griffiths CE. In search of oral psoriasis. *Arch Dermatol Res* 2012;304(1):1-5.

17. Scully C, Hegarty A. The oral cavity and lips. In: Burns T, Breathnach S, Cox N, Griffiths C, editors. *Rook's Textbook of Dermatology*. 8 th ed. Chichester: Wiley-Blackwell; 2010. p. 69.1-69.129.

18. Oppenheim M. Psoriasis mucosae oris. *Monatsschr Prakt Dermatol* 1903;37:481.

19. Rahman MA, Fikree M. Perioral psoriasis. *J Eur Acad Dermatol Venereol* 2000;14(6):521-2.

20. Hume WJ. Geographic stomatitis: A critical review. *J Dent* 1975;3:25-43..

21. Eastman JR, Goldblatt LI. Psoriasis. Palatal manifestations and physiologic considerations. *J Periodontol* 1983;54:736-9.

22. Yamada J, Amar S, Petrunaro P. Psoriasis associated periodontitis: A case report. *J Periodontol* 1992;63:854-7.

23. Tomb R, Hajj H, Nehme E. Oral lesions in psoriasis. *Ann Dermatol Venereol* 2010;137(11):695-702.

24. L Germe, V De Giorgi, F Bergamo, MC Niccoli , F Kokelj, M Simonacci, et al. Psoriasis and oral lesions: Multicentric study of oral mucosa diseases italian group (GIPMO). *Dermatology Online Journal* 2012.