

Relation Between Psoriasis and Geographic Tongue

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ABSTRACT

The aim this article is to investigate the link between geographic tongue and psoriasis skin disease. Our review paper of the literature will handle strict study about the relation between geographic tongue and psoriasis. Our search has identified only limited studies available in English written literature starting from 2006-2013 using PubMed – indexed for MEDLINE.

The result of this review suggests that geographic tongue may be an oral manifestation of psoriasis. There is no clear evidence in literature about association with gender and aetiology except one study which shows that benign migratory glossitis is more prevalent in young, nonsmoker and atopic or allergic individuals. Treatment for oral lesions is not standardized.

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. We recommend the general practitioner to have a good understanding about the clinical presentation, pathogenesis, diagnosis and treatment of this lesion. Psoriatic patients should be encouraged to undergo routine dental checkups.

Keywords: Geographic tongue, Migratory glossitis, Oral Psoriasis

INTRODUCTION

Psoriasis is a common chronic remitting inflammatory dermatological disease, characterized by itchy scaly red patches, papules and plaques [1-2]. According to the National Institutes of Health (NIH), approximately five million Americans, 3% of the population, have been diagnosed with psoriasis. Recent studies in this field have shown that psoriasis can give rise to mucosal lesions involving oral cavity [3]. Nonspecific lesion in oral cavity such as geographic tongue is found to be relatively frequent in patients suffering from generalized pustular psoriasis [4]. Geographic tongue is mostly asymptomatic inflammatory disorder of unknown aetiology like psoriasis. It is a psoriasiform mucositis of the dorsum of the tongue; it is also known as migratory glossitis as it rapidly changes its location, colour, shape and size. It affects the epithelium of the tongue resulting in ulcer like lesions due to localized loss of filiform papillae surrounded by white lines. Geographic tongue may present similar genetic, histopathological and clinical features like psoriasis; it is therefore thought that this lesion might be an oral manifestation of psoriasis [5,6]. The available literature to date is limited and controversial about existence of a particular oral lesion in psoriasis. A few modern studies in this field have reported a link between the two. This occurrence is more common in patients with the severe forms of psoriasis, such as generalized pustular psoriasis [4].

DISCUSSION

Herna'nez et al., [7] made an observational and comparative study among 207 patients (132 women and 75 men). Oral lesions were found in 67.5% psoriatic patients out of whom geographic tongue was present in 12.5% of patients with psoriasis. Miloglu O et al., [8] conducted a study on 7619 patients (3819 female, 3800 male) on a Turkish dental outpatient and geographic tongue was found in 1.5% of all the patients examined. This study further provided evidence that geographic tongue was more prevalent in young, nonsmokers, and atopic/ allergic individuals. Costa SC et al., [9] carried out a controlled study of 166 patients with psoriasis and found out that geographic tongue was significantly associated with psoriasis.

Tomb R et al., [10] 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).

Picciani B et al., [11] presented a case of geographic stomatitis in a 37-year-old female with a positive family history of psoriasis. The data indicate that geographic stomatitis may have been oral manifestation of psoriasis. Patil S et al., [12] conducted a study in India on 4926 patients for the presence of various tongue lesions. 12.07% of tongue lesions were found out of which geographic tongue contributed up to (16.4%).

L Germi MD et al., [13] 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%.

Although this lesion is not specific of psoriasis but due to its high rate of incidence it requires more attention in modern research. 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.

The definitive diagnosis of oral psoriasis is based on good knowledge of the clinicians about both clinical and histological facts of the disease. Both dentists and general practitioners are encouraged to check for skin lesions in patients with migratory glossitis and similarly psoriatic patients should undergo detailed oral examination. It is important that geographic tongue is occurring simultaneously to cutaneous psoriasis in order to establish a definite relation between the two. Ideally biopsies should be performed for definitive histologic and immunofluorescence evidences but in daily practice it is not feasible for the clinicians to take a biopsy of asymptomatic oral lesion. Also, the histologic evidence is not exceptionally specific for psoriasis and migratory glossitis therefore it is encouraged that

clinicians should perform complete patient evaluation. A detail history of the patient should be taken, presence of family history and recurrence of disease may provide helpful clues in making oral diagnosis.

The histopathologic appearance of geographic tongue is quite similar to psoriasis showing hyperparakeratosis, acanthosis, subepithelial lymphocyte inflammatory infiltration, neutrophil and granulocytes migration into the superficial epithelial layer resulting in formation of superficial microabscesses, similar to the Munro's microabscesses as seen in pustular psoriasis [14]. Few other pustular diseases affect the oral mucosa such as parulis at the orifice of a fistula extending to the surface from a dental or periodontal abscess, pyostomatitis vegetans and stomatitis herpetiformis. These lesions show neutrophilic infiltration in the stratum basale of the epithelium or underlying connective tissue unlike oral psoriasis. Another example is presence of subcorneal pustular mucositis in the mouth, but the separation of the keratin layer from the spinous layer makes it easy to differentiate it from migratory glossitis.

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.

CONCLUSION

A geographic tongue is significantly more frequent in psoriatic patients but only a limited data is available to date that indicates geographic tongue is oral manifestation of psoriasis, in order to strongly validate the relationship between these entities further thorough studies are recommended. General practitioners are encouraged to perform detailed oral examination of psoriatic

patients similarly dentists are advised to recommend patients with geographic tongue for routine skin examination.

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