

# Psoriasiform Lesions Of The Oral Mucosa- A Misdiagnosis To Psoriasis

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**Abstract:** There are several pathological disorders in which the oral cavity may be involved. Though some are unrelated, but similar clinically and histologically .This short review is on the discussion on diagnostic dilemma on psoriasis and psoriasiform lesions of oral mucosa. The psoriasiform lesions which are focused in this article are Reiter's syndrome, benign migratory glossitis and erythema migrans.

**Keywords:** Psoriasis, Psoriasiform, erythema migrans, Munro's abcess

## 1. INTRODUCTION

Psoriasiform lesions of the oral mucosa or psoriasiform mucositis refer to a group of disorders which mimic psoriasis in histopathology. Literally, psoriasiform means "like or in the shape of psoriasis"<sup>1</sup>. Weathers and colleagues in 1974 characterized psoriasiform mucositis into three distinct clinical entities: (1) benign migratory glossitis (geographic tongue), (2) erythema migrans, and (3) intraoral psoriasis.<sup>2</sup> Psoriasiform lesions of the oral mucosa are extremely rare. The population based studies reported an incidence of 0.6 to 27 per 100,000.<sup>3</sup> The geographic tongue prevalence has been reported to range from 0.28 percent to 14.4 percent(3-13), but most studies indicate a range between 1.0 and 2.5 percent (14-211 percent).<sup>4</sup> Erythema migrans is a rare skin condition that affects less than 1% of the global population annually. <sup>5</sup>Their exact inter-relationship is still unknown.<sup>3</sup> Oral psoriasiform lesions exhibit all histological features of psoriasis and in some cases has identical co-existences with skin lesion. The scope of this review is to throw knowledge on the clinicopathological aspects that overlap in the diagnosis of psoriasis and psoriasiform oral lesions.

The existence of oral manifestations in cutaneous psoriasis is still a research question. The definitive oral psoriasis can be difficult due to the heterogeneity of presentation and clinical duplication with a variety of other conditions and histological characteristics as well as the absence of consensus to understand and clinically subtle.<sup>6</sup> It is a non-contagious skin disorder that most commonly appears as an inflamed, edematous skin lesions covered with silvery white scales. Removal of the scales results in minute bleeding points which are known as Auspitz's sign.<sup>3</sup> There is an increase in turnover time of the epithelial cells from 28 days in normal skin to 3 to 4 days in psoriatic skin.<sup>4</sup> The low frequency of oral cases

reported may also represent the accelerated turnover rate of cutaneous lesions approximating the normal oral epithelium so that there are oral abnormalities which are difficult to diagnose. Oral psoriasis scarcity can show variations in the expression of carbohydrates between skin and oral mucosal epithelia. As a result glycoprotein corneodesmosin which is noticed to play a role in psoriasis is present in skin, found to be absent in oral mucosal epithelium.<sup>13</sup> The manifestations of psoriasis orally may involve various locations in the oral cavity. In the absence of skin psoriasis, isolated reports of oral lesions with characteristic histological changes can indicate manifestations of psoriasis in patients with past cutaneous disease remissions or with a genetic history.<sup>8</sup> Other epidermal characteristics such as parakeratosis, hyperkeratosis, spongiosis, papillomatosis and absent or thinned out granular layer, as well as dilated and tortuous capillaries in the dermis can be considered confirmatory evidence of psoriasis in the absence of well-formed Munro microabscess and Kogoj pustules.<sup>9</sup> In the absence of the above diagnostic criteria, suspicious oral findings can be perceived as psoriasiform mucositis rather than oral psoriasis. The decrease or absolute absence of the granular layer was characteristic of psoriasis and represented the pathogenesis of the proliferation of defective keratinocytes.<sup>10</sup> When taken the perioral region and vermillion border into consideration psoriatic lesions are rare and are independent of oral cavity involvement. Due to the fact that the lip vermillion border is keratinised the behaviour of psoriasis resembles that of cutaneous type.<sup>11</sup>

Manifestations of oral psoriasis may include various locations being buccal mucosa the most common site and the palate and gingiva being the least common areas. Most common manifestations include angular cheilosis (11%), fissured tongue(6%) , benign migratory glossitis (5%) and ectopic geographic tongue (5.4%).<sup>7</sup> Clinically oral lesions exhibits morphological patterns similar to the skin lesions such as: i) well-defined yellowish-white lesions independent of cutaneous psoriasis ii) white, lacy, circinate, elevated lesions on the mucosa and tongue that are congruent with skin lesions iii) diffuse, intense mucosal erythema or redness associated with acute exacerbation of skin lesions.<sup>7</sup> Pindborg elaborated on four clinical presentations of intraoral psoriasis as (1) small, whitish, oval to round lesions that can be scraped off leaving a bleeding surface; (2) whitish plaques with red areas that parallel the cutaneous eruptions; (3) fiery red areas and (4) benign migratory glossitis<sup>12</sup>. A high prevalence rate in benign migratory glossitis (BMG) and fissured tongue (FT) has been identified in patients with psoriasis than in general population which are being misdiagnosed as oral psoriasis.

Reiter's syndrome (reactive arthritis) is a disease of unknown origin is characterized by the triad of urethritis, arthritis, and conjunctivitis. It is common in young males.<sup>14</sup> The skin lesions of Reiter's syndrome may closely resemble those of psoriasis, both clinically and histologically .They are most common on the palms and soles and known as keratosis blennorrhagica. This was originally described by Vidal in 1893. While simultaneous eruptions of both Reiter's syndrome and psoriasis are apparent and transitions from one to the other have been reported<sup>15</sup>. Oral lesions occur in less than 20% of the patients. The lesions are raised, white, scaly on the palate or buccal mucosa, or as well-demarcated, flattened, erythematous with a circinate border. The lesions of the tongue closely resemble geographic tongue. Histologically the oral lesions of Reiter's syndrome appear psoriasiform.<sup>2</sup>The overlap of skin, rheumatological, histological and radiographic characteristics makes it difficult to distinguish between psoriasis and reactive arthritis. Mucosal lesions that fail to differentiate between the two are circinate balanitis and ulcerative vulvitis, which affect the genital mucosa, as well as erythematous plaques, palatal erosions, ulcerations, glossitis and geographic tongue, which affect mucous membranes in

the oral cavity. Other similarities between the two disorders include arthritic symptoms, negative rheumatoid factor and antinuclear antibody serology and the potential for a background infection-related flare-up.<sup>15</sup>

Benign migratory glossitis (geographic tongue, wandering rash of the tongue, Annulus migrans) is seen in adults, and occasionally in children. It is mostly asymptomatic and of unknown aetiology.<sup>16</sup> It is often seen in association with fissured tongue and its combined prevalence is higher in patients with psoriasis than general population. Its etiology is unknown, however, a psycho-somatic background appears to be involved. It is mostly asymptomatic but may occasionally cause a burning sensation.<sup>15</sup> Geographic tongue is found on the dorsum of the tongue, where there is a centrifugal spreading loss of the filiform papillae resulting in erythematous zones or patches. The advancing margin is slightly raised and whitish yellow, with an irregular or serpiginous shape.<sup>7,2</sup> The appearance may keep changing and hence termed "migratory".<sup>2</sup> Erythema migrans or ectopic geographic tongue include lesions that are clinically and histologically similar to geographic tongue but involve oral mucosa other than the dorsum of the tongue. The lesions occur either in floor of the mouth, soft palate, gingiva, lower lip or buccal mucosa. Ectopic geographic tongue present as annular, exophytic, serpiginous overgrowths, polycyclic papules and plaques or as whitish and erythematous patches. Involvement of gingiva is very rare. It manifests as erythema of the gingival margin with white reticular plaques extending from the erythema.<sup>14</sup> The oral lesions of BMG exhibit all histological features of psoriasis and the simultaneous remission of psoriatic skin lesions and tongue lesions with retinoid treatment encourage the presumption that the condition is a type of psoriasis. The immunohistochemical studies also illustrate that the makeup of the subepithelial infiltrate in benign migratory glossitis resemble that of psoriatic skin lesion with a predominance of CD4-positive cells in the macrophage and T-cell infiltrate.<sup>13</sup> Moreover the resolution of both benign migratory glossitis and cutaneous lesions with antipsoriatic agents appears to suggest a common etiology<sup>14</sup>. Several links between geographic tongue and diabetes mellitus, Reiter's syndrome, Down's syndrome, pregnancy, psychological causes, family history and the use of some drugs, such as oral contraceptive pills and lithium carbonate, have been established.<sup>17</sup> The elevated prevalence in atopic patients can be explained by psychosomatic causes, which are likely to lead to both regional language and atopy.<sup>18</sup>

The microscopic appearance of psoriasiform lesions is characterized by uniform parakeratosis. The presence of nuclei within the cornified layer is the consequence of a rapid turnover of the epidermal/epithelial keratinocytes. Diminished or absence of the stratum granulosum is the classical sign. There is elongation ("test tube" rete pegs) and clubbing of the rete pegs. The epithelium over the connective tissue papillae is thinned, and it is from these points that the bleeding occurs when the scales are peeled off. Tortuous, dilated capillaries extending high in the papillae are prominent. In psoriasis the immunological reaction is for CD4+ and CD8+ where as in psoriasiform lesions like geographic tongue it is anti CD31 antibody. The proliferation marker Ki67 which is highly expressible in psoriasis is similar in geographic tongue. When taken the genetic susceptibility into consideration between psoriasis and geographic tongue the former is the HLA located on chromosome 6, the latter HLA-B13, -B15, -CW6, DR5 and DRW6 antigens.<sup>19</sup> Mild lymphocytic, histiocytic and neutrophils infiltration of the connective tissue is also typical.<sup>20</sup>

## 2. CONCLUSION

Psoriasisiform lesions are a rare entity that often makes it a clinician's dilemma. Oral Psoriasis, Reiter's syndrome, benign migratory glossitis and erythema migrans have similar clinical and histologic findings and hence careful distinction is necessary. It is also emphasized that the prerequisite for diagnosing oral psoriasis is the presence of cutaneous lesions along with oral lesions that are diagnosed histopathologically following biopsy of the lesion.

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