

Oral psoriasis: case report in a patient without skin lesions

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Abstract

Background: Psoriasis is a chronic inflammatory genodermatosis characterized by erythematous-squamous lesions. In literature, few cases of psoriasis affecting oral mucous membranes are reported.

Materials and methods: a case of a 72-years-old woman with persistent burning symptoms on the dorsum of the tongue with an erythematous squamous area was reported. An oropharyngeal swab and a scalpel incisional biopsy were performed.

Results: Histopathological examination described the presence of hyperparakeratosis, acanthosis, papillomatosis and Munro microabscesses. Clinical and histopathological findings are compatible with a diagnosis of oral psoriasis.

Conclusions: Psoriasis lesion rarely affects oral mucosa. When it occurs, it is important a cooperation between oral pathologist and dermatologist.

Keywords: psoriasis, fissured tongue, geographic tongue, dermatology

Background

Psoriasis is a chronic inflammatory genodermatosis, clinically characterized by erythematous-squamous lesions localized more frequently at scalp, elbows and knees. It affects about 2-3% of the world's population [1].

Its etiology, not yet fully identified, is multifactorial and involves the association of genetic and environmental factors. Trigger factors act on the polygenic substrate and the most involved are traumatic cutaneous lesions, streptococcal infections, drugs, and, above all, stress [2].

Age of onset shows a bimodal distribution and defines two types of psoriasis:

- Type I psoriasis, which occurs in approximately 75% of cases, is characterized by an early onset, before 40 years, with a peak incidence between 16 to 20 years, a high familiarity and a strong tendency to evolve into a generalized clinical form;

- Type II psoriasis, defined as "late onset", is characterized by a peak incidence around 60 years, a family history only in a limited number of cases and less serious clinical outcomes [3].

About pathogenesis, psoriasis is characterized by an excessive turnover of keratinocytes, determined by migration of T lymphocytes, releasing cytokines, with the consequent formation of squamous and erythematous plaques [4].

Psoriasis is classified clinically into several types: vulgaris, erythrodermic, guttate, pustular, palmoplantar, inverse and arthropatic.

Depending on the age and activity of lesions, the histological appearance may change, although parakeratosis, spongiosis and acanthosis and elongated rete ridges are very often evident. However, the pathognomonic feature of psoriasis remains the intraepithelial Munro microabscesses, due to the migration of polymorphonucleated leukocytes. In the

lamina propria dilatation and tortuosity of the small vessels are observed [5].

Oral involvement by psoriasis is uncommon. The first author that described oral psoriasis (OP), diagnosed by an histological examination, was Oppenheim in 1903 [6]. Younai and Phelan [7], in 1997, in a review of the literature, identified 57 cases of oral psoriasis. Then, from 1997 to 2009, 8 new cases have been described, bringing the total to 65 cases reported in literature. OP can involve any areas of the oral cavity: lips, tongue, palate, gingival and buccal mucosa.

Psoriatic oral lesions can be divided into two groups. The first one includes authentic psoriatic lesions with a parallel or not clinical course with skin lesions such as erythema associated with well-defined, annular, white or grayish-yellow papules. The second group comprises nonspecific lesions such as fissured tongue (FT) or geographic tongue (GT) which occurs more frequently in psoriatic patients. The authors present a case of oral psoriasis in a patient without skin lesions.

Case Report

A 72-year-old Caucasian female was referred to the Department of Oral and Maxillo-Facial Sciences of "Sapienza" University of Rome for the presence of a lesion affecting the dorsum of the tongue (**Figure 1**).

Figure 1: Intraoral Clinical aspect of the lesion at the dorsum of the tongue.



Medical history revealed that the patient suffered from osteoporosis, treated with vitamin D3; furthermore she smoked about 20 cigarettes every day since 50 years. She did not refer any autoimmune disease or allergy to drugs and dental materials.

Intraoral examination revealed an erythematous lesion in the middle of a fissured dorsum of the tongue. The patient reported a burning sensation started two months before.

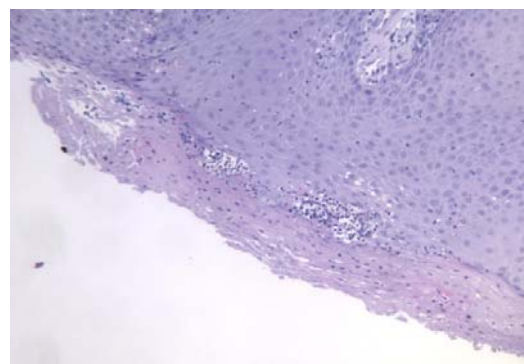
During the first visit, an oropharyngeal swab for a suspected candidiasis infection was performed and the Patch Tests for possible intolerance to dental materials were required for the presence of metal restorations in the mouth. Furthermore, the use of a tongue cleaner was recommended. Since the swab and Patch Tests were negative, a scalpel incisional biopsy was performed using local anesthesia.

Histological examination showed the presence of epithelial hyperparakeratosis, acanthosis, papillomatosis, Munro microabscesses and many figures of neutrophil granulocytic exocytosis. The lamina propria is the site of fibrosis associated with numerous capillary and small-sized vascular structures, in presence of inflammatory lymphoplasmacellular infiltrate and neutrophil granulocytes (**Figure 2- 3**).

Figure 2: Histological photomicrograph illustrating hyperparakeratosis with elongated rete ridges, hyperkeratosis, parakeratosis and acanthosis. (hematoxylin and eosin, original magnification $\times 10$).



Figure 3: Intraepithelial infiltration of neutrophil granulocytes and T lymphocytes (Munro microabscesses) (hematoxylin and eosin, original magnification $\times 20$).



The histological examination was compatible with a diagnosis of OP.

Instructions were given to achieve and maintain good oral hygiene and the patient was placed on regular follow-up. Moreover, the patient was recommended to go to a dermatologist if skin lesions occurred.

Discussion

Literature on OP is primarily based on case reports [8]. De Biase et al., in 2005, described whitish patch on the dorsum of the tongue and a reddish-colored, oval-shaped, erythematous patch in the left latero-posterior side of the tongue in a 30 years old man. The histological examination described the presence of hyperparakeratosis, papillomatosis of lamina propria with intense inflammatory infiltration of neutrophil granulocytes and lymphocytes and diffuse Munro microabscesses [9].

Lier et al., in 2009, examined a 61 years old man affected by cutaneous psoriasis lesions on the right leg and on the face. The tongue was fissured and edematous with erythematous areas at the margins. The dorsum was covered by a thin white layer, not removable. Histological examination showed parakeratosis, acanthosis, psoriatic hyperplasia, elongated papillae and small Munro intraepithelial microabscesses [10].

Clinical diagnosis of OP is not easy when it does not appear in cutaneous areas. In addition, the variable localization of the oral lesions could complicate the differential diagnosis [7, 11, 12]. The GT and the FT could be confused with true oral psoriasis, as Reiter's Syndrome, although this syndrome is characterized by the presence of conjunctivitis and urethritis. Oral candidiasis could be excluded with the support of oral swabs. Lichen planus and lichenoid lesions may also be clinically similar to oral psoriasis, but different in clinical and histopathological aspects [13].

Management of OP is not well documented because the lesions are generally asymptomatic and transient. Administration of topical steroids or systemic immunosuppressant drugs such as tacrolimus and methotrexate, in case of symptomatic and severe lesions, are efficacious [14].

Conclusion

Due to the multiplicity and the complexity of psoriasis, a multidisciplinary approach is necessary.

A strong collaboration between dermatologists and oral care providers is also important in order to reduce the intraoral infections as risk factors triggering psoriasis itself.

It would be recommended in the future to provide

valid criteria to diagnosticate oral psoriasis: the diagnosis should be reached only with clinical and histological correlations.

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