International Journal of Medical Science and Clinical Research Studies

ISSN(print): 2767-8326, ISSN(online): 2767-8342

Volume 05 Issue 03 March 2025

Page No: 461-465

DOI: https://doi.org/10.47191/ijmscrs/v5-i03-09, Impact Factor: 8.188

Mucosal Involvement in Psoriasis: Series of Clinical Cases

Berumen Murra, María Teresa[1], Ortegón Blanco, Angel Enrique[1], Achell Nava, Lucía[2], Maldonado Colin, Guadalupe[2], Arellano Vivero, Dolores Maribel[2]

[1]Dermatology resident, CMN Hospital 20 de Noviembre, Mexico City.

[2]Department of Dermatology, CMN Hospital 20 de Noviembre, Mexico City.

ABSTRACT

Psoriasis is a chronic inflammatory disease that manifests mainly in the skin; however, some cases develop psoriatic arthritis, nails and mucous membranes involvement. Among the mucosal manifestations, the oral mucosa is the most frequently described.

Below, 6 clinical cases of psoriasis with involvement of both oral and genital mucous membranes in a thirth level health institution in Mexico City are presented and a bibliographic review of the topic is carried out.

KEYWORDS: Psoriasis, oral mucosa, genital mucosa

ARTICLE DETAILS

Published On:
08 March 2025

Available on:
https://ijmscr.org/

Table 1 describes 6 clinical cases of patients with psoriasis who present mucosal involvement:

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6
Gender / Age	F / 31 years	M / 54 years	F / 1.5 years	F / 67 years	M / 14 years	F / 56 years
Procedence	CDMX	CDMX	CDMX	CDMX	CDMX	CDMX
Psoriasis type	Inverted psoriasis	Plaque psoriasis + Psoriatic arthritis	Palmoplantar psoriasis	Inverted psoriasis due to Nivolumab	Plaque psoriasis, palmoplantar psoriasis and inverted psoriasis	Plaque psoriasis, psoriatic erythroderma, inverted psoriasis.
Mucosal involvement	Oral and genital mucosa [Figure 1]	Oral mucosa [Figure 2]	Oral mucosa [Figure 3]	Genital mucosa [Figure 4]	Oral mucosa [Figure 5]	Genital mucosa [Figure 6]
Smoking	Positive 2 cigarettes/ day	Positive 5 cigarettes/day	NA	Denied	Positive 2 cigarettes/week	Positive 10 cigarettes/day
Comorbidities	Von Willebrand disease, hypothyroidism, PCOS	HTN, epilepsy	Malabsorption syndrome	Tongue cancer, DM	Obesity	HTN, moderate depressive disorder, anxiety disorder
Cardiovascular risk	X	Ischemic heart disease, myocardial infarction	NA	X	X	Ischemic heart disease, cerebral vascular event

Topical treatment	Tacrolimus	Pimecrolimus	Pimecrolimus, calcipotriol/betametasone	Calcipotriol / betametasone	Pimecrolimus, Calcipotriol	Hydrocortisone, pimecrolimus, mometasone, desonide
Systemic treatment	Ixekizumab (adverse reactions: pruritus, paresthesia, headache, labial angioedema and dysphagia), switch to ustekinumab	Adalimumab	At 4 years of age she was evaluated by immunology who suggested not starting biological tretment due to inversion in the lymphocyte/neutrophil ratio, decrease in IGA and low weigth that can produce variations in cellular immunity.	Ixekizumab	Etanercept, secukinumab, ustekinumab	Ciclosporin, etanercept, adalimumab

Table 1. Presentation of clinical cases of patients with psoriasis with mucosal involvement.
HTN: Hypertension, DM: Type 2 diabetes, PCOS: Polycystic ovary syndrome, NA: Not applicable

Figure 1. Affection of genital mucosa characterized by multiple linear exulcerations of 1-3 cm with well-defined edges.

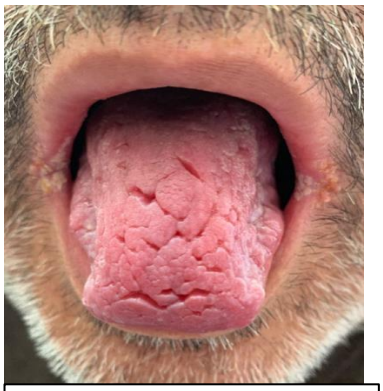

Figure 2. Affection of oral mucosa at the level of the dorsum of the tongue characterized by mutliple fissures of irregular shapes, 7-15 mm in diameter, well-defined edges.

Figure 3. Affection of oral mcuosa at the level of the upper and lower lip characterized by thickening, erythema and slight infiltration.

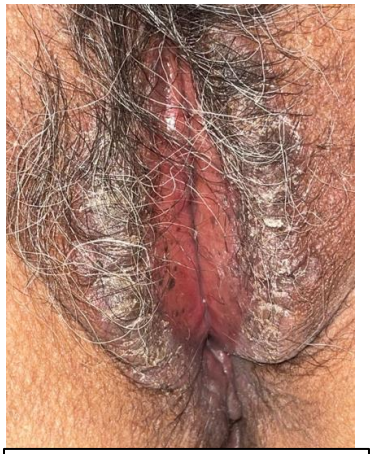

Figure 4. Affection of genital mucosa characterized by erythematous scaly plaques, increased volume and some excoriations.

Figure 5. Affection of oral mucosa at the level of the upper and lower lip characterized by erythematous plaque with fine scale on its surface.

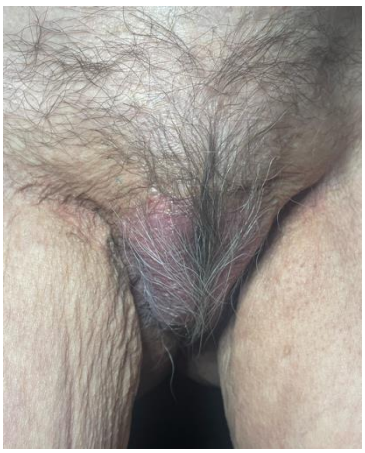

Figure 6. Affection of genital mucosa characterized by a plaque formed of erythema and chalky white scale, with well-defined edges.

DISCUSIÓN

Psoriasis is a chronic systemic inflammatory disease in which there is a defect in the proliferation and differentiation of keratinocytes associated with the infiltration of inflammatory cells, particularly composed of T lymphocytes, macrophages and neutrophils.[1] It is one of the most common immune-mediated diseases, reaching a prevalence of 3% in those over 20 years of age.[2] The clinical manifestations occur essentially in the skin, but between 20% - 25% present alterations in the nails, 5% to 8% will develop psoriatic arthritis, and the involvement of mucosal affections has also been observed, particularly in the oral cavity, occurring predominantly in cases of psoriasis with a pustular presentation.[3]

In 1903 Oppenheim made the first description of a case of psoriasis with oral manifestations corroborated by histological study. In the last decade, only 60 cases of oral manifestations of psoriasis verified with histopathology were reported. Histopathological findings in mucosa are quite similar to those found in skin, observing thickening of the edges with generalized acanthosis, evident parakeratosis, and the hyperplastic acanthotic epithelium being responsible for the white lesions of the mucosa.[4] The papillae of the lamina propria are elongated, edematous with a decrease in the overlying suprapapillary epithelium and dilation of the shallow vessels. The absence of a stratum corneum in the oral mucosa may clarify why there are no noticeably obvious pustules in the mouth even though these lesions occur in pustular psoriasis.[5] Macroscopically, the patterns of oral lesions vary from scaly, white, raised lesions on the palate or oral mucosa, to well-defined, flat, erythematous lesions affecting the dorsal surface of the tongue with an annular or serpiginous edge, and given the high rate of epidermal replacement and the asymptomatic and nonspecific nature of these lesions, all of them occur transiently and in most cases unnoticed by the physician and the patient.[6] It is recognized that there are 2 oral alterations mostly presented in patients with psoriasis: 1) fissured tongue: presence of grooves or channels in the tongue, and 2) geographical tongue: red dots with a smooth surface that resemble islands that can change location, size and shape.[7] Other oral manifestations described are cheilitis, leukokeratosis, erythematous macules, fibromas, a depapilated tongue, gingivitis, and even in an extraordinary way, the alteration of the temporomandibular joint.[4,7]

Although it was previously thought that oral lesions in patients with psoriasis were rare, almost anecdotal, research aimed at their detection shows the opposite, reporting that oral lesions can be found between 24.7% and 75.6% of patients with psoriasis,[3,7–9] Nery et al., in a non-systematic review, point out an average prevalence of 48.7%, with the most reported lesions being: cleft tongue (55.4%), and geographical language (19.5%).[10] Table 2 summarizes the frequency and types of oral lesions in publications on the subject. [3,7–9,11–14]

Table 2. Frequency and type of oral lesions in patients with psoriasis

	Hernández-Pérez et al., 2008.[10]	Darwazeh et al., 2012.[8]	Picciani et al., 2015.[11]	Talaee et al., 2017.[2]	Ehsani et al., 2018.[13]	Olejnik et al., 2020.[7]	Costa et al., 2021.[12]	Altemir et al., 2022.[6]
Patients with psoriasis	80	100	348	117	100	127	295	100
Prevalence of oral lesions	67.5%	43%	36%	46.9%	48%	75.6%	24.7%	74%
Oral lesions								
Cleft tongue	47.5%	35%	36%	28.4%	35%	49.6%		39%
Geographical tongue	12.5%	17%	12%	5.4%	6%	17.3%	5%	4%
Whitish plaques	11.3%	1%	-	3.4%	-	31.5%	3.7%	17%
Yellow plaques	-	-	-	1.7%	-	-		-
Periodontitis	-	-	-	-		-		28%
Angular cheilitis	-	-	-	-	13%	2.35%	18%	3%
Papillary hypertrophy	-	-	-	-	-	-		3%

Oral candidiasis	8.7%	3%	-	-	4.4%	-		-
Melanic macule	6.2%	4%	-	-	-	3.4%		-

It would be logical to think that oral lesions, being a manifestation of psoriasis, could be more frequent in patients with severe disease; however, studies that have analyzed the occurrence of lesions with severity quantified using the Psoriasis Area and Severity Index Scale (PASI) and the Dermatology Life Quality Index Questionnaire (DLQI), have not identified such an association.[3,10]

It is known that Candida species may be associated with infections that affect the mucous membranes, including those of the oropharynx and esophagus, particularly in immunosuppressed patients.[15] Some studies have shown a greater occurrence of oral candidiasis in patients with psoriasis, such as in the study carried out by Lesan et al., which detected the presence of oral candidiasis in 20% of patients with psoriasis vs. 2.8% of healthy patients in a group control.[16] A possible explanation for this situation is that patients with psoriasis have low levels of NK lymphocyte cells (Natural Killers), which are the first line of defense against fungi and other pathogens.[17]

Regarding psoriasis at the genital level, Meeuwis et al described in a systematic review in which they report that vulvar psoriasis can be found in 2% of chronic symptomatic vulvar conditions and penile psoriasis in 3% of patients with alterations in the skin of the penis. The lesions are described as thin plaques, made up of erythema and scale, with some areas with maceration, with well-defined edges. In men, the glans is the most frequently affected genital region. Patients with genital psoriasis may present itching and/or burning density. It has been described that genital psoriasis can significantly affect quality of life and psychosexual well-being.[18]

CONCLUSION

Psoriasis is a disease that can express lesions in practically any tissue, most commonly the skin; however, the occurrence of lesions in the oral cavity is not negligible. The clinical cases that we present presented lesions in the oral cavity and/or in the genital area, which were identified after a comprehensive body examination, otherwise they would have gone unnoticed, so it is a call to readers to also carry out examination of the oral and genital mucosa of all the patients with this diagnosis.

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