ISSN: 2754-494X

Journal of Dermatology Research Reviews & Reports

SCIENTIFIC Research and Community

Case Report

Open Access

Ostraceous Psoriasis, An Unusual Presentation: Case Report

Arausi Tortolero González[1]*, Liliana Coromoto Rosales Ochoa[2], Katherine Joleidy Mejía[3] and Marcia Endara V[4]

[1]First year Dermatology Resident, Postgraduate Program in Dermatology, University of Carabobo Ciudad Hospitalaria "Dr. Enrique Tejera," Valencia, Carabobo State, Venezuela

[2]Third year Dermatology Resident, Postgraduate Program in Dermatology, University of Carabobo Ciudad Hospitalaria "Dr. Enrique Tejera," Valencia, Carabobo State, Venezuela

[3]Second year Dermatology Resident, Postgraduate Program in Dermatology, University of Carabobo Ciudad Hospitalaria "Dr. Enrique Tejera," Valencia, Carabobo State, Venezuela

[4]Dermatology Specialist. Faculty Member, University of Carabobo. Member of the Coordinating Committee of the Postgraduate Program in Dermatology, University of Carabobo. Consultant, Dermatology Service, Ciudad Hospitalaria "Dr. Enrique Tejera."

ABSTRACT

We report the case of a 16 year old female patient, Fitzpatrick skin phototype IV, who presented with a generalized, bilateral, and symmetrical dermatosis characterized by erythematous plaques of oval configuration with well defined regular borders. The lesions exhibited whitish, hyperkeratotic, concave scales resembling oyster shells on their surface, with variable distribution and size, pruritic in nature, and of two months' evolution. Histopathological examination was consistent with psoriasis vulgaris. Systemic therapy with methotrexate was initiated, combined with high potency topical corticosteroids (clobetasol cream 0.05%), achieving satisfactory clinical improvement after three months of treatment. Ostraceous psoriasis is an uncommon presentation, with few cases reported in the literature. It accounts for approximately 26% of the atypical hyperkeratotic variants of plaque psoriasis. The diagnostic hallmark lies in the recognition of the elementary lesion: plaques with an erythematous ring and infiltrated base, circular in configuration, with regular and well defined borders, and an internal concave, concentric, and conical surface that imparts the characteristic oyster shell appearance. Therapeutic management is generally based on conventional systemic and topical regimens; however, in refractory cases, biological therapy has been employed with favorable outcomes.

***Corresponding author**

Arausi Geraldine Tortolero, First year Dermatology Resident, Postgraduate Program in Dermatology, University of Carabobo – Ciudad Hospitalaria "Dr. Enrique Tejera," Valencia, Carabobo State, Venezuela.

Received: December 27, 2025; **Accepted:** December 30, 2025; **Published:** January 12, 2026

Keywords: Ostraceous Psoriasis, Plaque Psoriasis, Hyperkeratosis

Introduction

Psoriasis is a persistent inflammatory dermatosis with complex immunological implications and heterogeneous clinical expression. Its development involves genetic susceptibility, modulated by environmental triggers and immune regulatory dysfunctions. It affects 1–2% of the global population, with plaque psoriasis (psoriasis vulgaris) being the most common form. Within this category, hyperkeratotic variants are considered uncommon.

Among them, ostraceous psoriasis represents an atypical presentation characterized by erythematous plaques with thick, firm, adherent hyperkeratotic scales, whose surface resembles an oyster shell. This variant, first described by Deutsch in 1898 and later classified by Grzybowski in 1948, accounts for approximately 26% of hyperkeratotic forms of psoriasis, yet remains underreported in Latin American dermatological literature.

Clinical recognition of this form requires meticulous observation of the elementary lesion, as it may mimic other hyperkeratotic dermatoses such as keratodermas, acquired ichthyosis, or secondary syphilis. Diagnostic confirmation relies on clinicopathological correlation, while therapeutic management often necessitates systemic therapy due to resistance to conventional topical treatment. In this context, we present the case of an adolescent patient with ostraceous psoriasis, who demonstrated favorable evolution following treatment with methotrexate and high potency topical corticosteroids, thereby contributing to the visibility of morphologic variants scarcely documented in the region.

Case Report

A 16 year old female patient, native to the locality, reported onset of disease two months prior, presenting with erythematous, scaly plaques on the anterior thorax that rapidly disseminated to become generalized. She attended the dermatology service at Ciudad Hospitalaria Dr. Enrique Tejera.

On physical examination, Fitzpatrick skin phototype IV was noted. The patient exhibited generalized, bilateral, and symmetrical dermatosis characterized by erythematous plaques of oval configuration with well defined borders (Figure 1). The lesions showed whitish, concave hyperkeratotic scales resembling oyster shells, of variable distribution and size, pruritic in nature, with two

months' evolution (Figure 2). Nail findings included pitting, Beau's lines, oil drop sign, and a positive Auspitz sign. Dermoscopy under polarized light revealed an erythematous background with regular punctate vessels and adherent whitish hyperkeratotic scales (Figure 3). PASI score was moderate at 23 points.

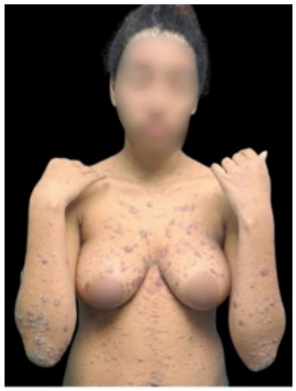

Figure 1

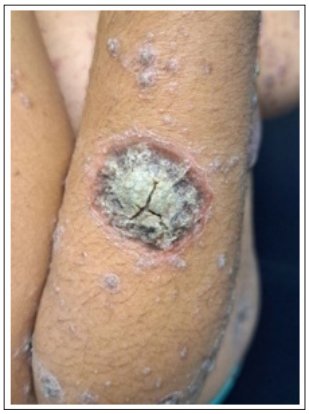

Figure 2

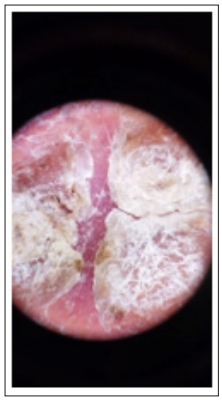

Figure 3

Laboratory studies reported: hemoglobin 14.0 g/dL, hematocrit 49%, leukocytes 6,500/mm³, platelets 351,000/mm³, segmented neutrophils 60%, lymphocytes 40%, HIV negative, VDRL non reactive. Fasting glucose 65 mg/dL, urea 20 mg/dL, creatinine 0.6 mg/dL, AST 11 U/L, ALT 13 U/L.

Histopathological examination of a skin biopsy stained with hematoxylin eosin at 10× revealed focal hypogranulosis, epidermal hyperplasia, and regular elongation of rete ridges. At 40×, sparse lymphocytic infiltrate and parakeratosis were observed (Figure 4). Findings were consistent with psoriasis vulgaris.

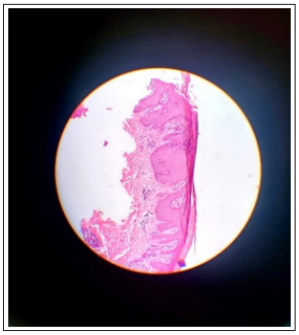

Figure 4

Systemic therapy was initiated with methotrexate 15 mg subcutaneously once weekly, combined with high potency topical corticosteroids (clobetasol cream 0.05%) and a second generation antihistamine (fexofenadine 120 mg OD). After three months of treatment, significant improvement was observed, with residual hypopigmented macules indicating complete resolution of lesions (Figure 5).

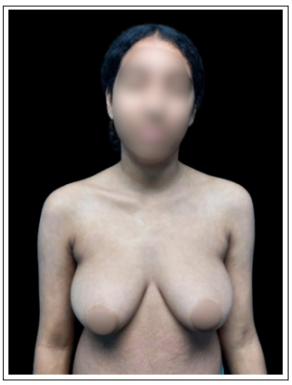

Figure 5

Discussion

Psoriasis is a multifactorial, immune mediated, chronic, and systemic disease, characterized by a genetic predisposition associated with HLA Cw6 and influenced by multiple triggering factors. Its hallmark clinical manifestation consists of pruritic erythematous scaly plaques. The condition affects approximately 1–2% of the global population, occurs in both sexes, and typically presents between 20 and 60 years of age, with one third of cases arising during childhood or adolescence (under 18 years) [1].

According to current classification, plaque psoriasis accounts for approximately 80–90% of cases. However, it is important to emphasize that within this category there are variants defined by their hyperkeratotic morphology, among which ostraceous psoriasis is included [2].

Hyperkeratotic variants are considered atypical presentations of plaque psoriasis. They were classified by the Polish dermatologist Marian Grzybowski in 1948, who described the morphological characteristics that include: the rupioid variant, the most frequent at 60.6%, characterized by cone shaped hyperkeratosis; the ostraceous variant, accounting for 26%, with ring like and concave scales; and the elephantine variant, representing 18%, with thicker, flat, extensive scales predominantly on the lower extremities. These forms are associated with psychiatric comorbidity in 15.2% of cases and with psoriatic arthritis in 20–30% [2,3].

It is noteworthy that ostraceous psoriasis was first described as an atypical form of psoriasis by Deutsch in 1898. This rare variant remains scarcely reported in the literature and therefore lacks specific epidemiological data. It is typically characterized by lesions with thick, firm, and adherent scales, whose surface resembles that of an oyster shell. The most common sites of involvement include the scalp, retroauricular region, abdomen, and inguinal folds [4].

According to its morphological characteristics, the elementary lesion is expressed as plaques with an erythematous and infiltrated ring, circular in configuration, with well defined and regular borders. The internal surface is concave, concentric, and conical, imparting the typical oyster shell appearance. These features result from an abnormal process of hyperkeratinization accompanied by abundant serous exudate, in which crusts intermingle with scales, producing a whitish, shiny coloration and firm, thick, adherent hyperkeratotic scales [5].

Although its pathophysiology shares immunological mechanisms with other forms of psoriasis, an exacerbated epidermal hyperproliferation and an aberrant keratinocyte response have been postulated as contributing factors [5].

Cytokines derived from innate immune cells (tumor necrosis factor α, interferon γ, IL 1β, IL 6) activate myeloid dendritic cells, which, once stimulated, present antigens and release mediators such as IL 12 and IL 23. These cytokines drive the differentiation of Th1 and Th17 cells, respectively. Mediators released by Th17 cells subsequently activate keratinocytes, inducing the production of antimicrobial peptides and proinflammatory cytokines. The products secreted by keratinocytes establish a positive feedback loop that perpetuates the inflammatory process [6].

Most cases of hyperkeratotic psoriasis, including the ostraceous variant, tend to be resistant to topical therapy due to the marked hyperkeratosis. This makes the use of keratolytic agents as adjuvants such as salicylic acid, urea based emollients, and coal tar particularly important. Systemic agents including acitretin, cyclosporine, methotrexate, and biologic therapies have also been tested, with variable outcomes, mainly in patients presenting with psoriatic arthritis [7,8].

Conclusion

Ochraceous psoriasis is an uncommon presentation, with few cases reported in the literature. It represents approximately 26% of the atypical variants of plaque psoriasis, in which the study of the elementary psoriatic lesion serves as the diagnostic cornerstone for this form.

Recognition of this variant requires meticulous observation of the psoriatic lesion, as its morphology may mimic other hyperkeratotic dermatoses such as keratodermas, acquired ichthyosis, chronic tinea corporis, secondary syphilis, or even cutaneous lymphomas. In this regard, detailed evaluation of the scale, distribution pattern, and response to scraping are key elements in guiding clinical suspicion toward this specific variant of psoriasis.

Therapeutic management is primarily based on conventional regimens, considering the resistance to topical therapy due to the density of hyperkeratotic scales. In refractory cases, biologic therapy is indicated, particularly when associated with psoriatic arthritis.

Documentation of such cases contributes to increasing awareness and visibility of underreported morphologic variants in Latin America.

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