

Perforating Reactive Collagenosis: A Rare Cutaneous Manifestation of Systemic Diseases

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Abstract: Not applied.

Keywords: Type II Diabetes Mellitus; Chronic Kidney Disease; Reactive Perforating Collagenosis.

Citation: Cardoso C, Santos PD, Furtado DM, Alves T. Perforating Reactive Collagenosis: A Rare Cutaneous Manifestation of Systemic Diseases. Brazilian Journal of Case Reports. 2026 Jan-Dec;06(1):bjcr151.

<https://doi.org/10.52600/2763-583X.bjcr.2026.6.1.bjcr151>

Received: 9 December 2025

Accepted: 11 January 2026

Published: 18 January 2026



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Reactive Perforating Collagenosis (RPC) is a rare dermatosis frequently associated with Diabetes Mellitus (DM) and Chronic Kidney Disease (CKD), characterized by transepidermal elimination of dermal components. A 74-year-old patient with a history of chronic kidney disease (CKD) and type 2 diabetes mellitus (DM) for 29 years with persistently inadequate glycemic control (HbA1c consistently above 7.5%) presented with progressively developing papular lesions over approximately 15 years, coinciding with referral to the hospital diabetes clinic due to poor metabolic control. The lesions were associated with episodes of pruritic exacerbations, during which lesions displayed serous exudation secondary to frictional trauma. These episodes were remittent, with the most inflammatory and pruritic phase lasting approximately one week, while cutaneous lesions persisted for months, healing slowly. Episodes were recurrent, with intervals of several months to years. Despite prior dermatological evaluation, the lack of skin biopsy precluded a definitive diagnosis. Despite prior dermatological evaluation, the lack of skin biopsy precluded a definitive diagnosis.

On physical examination, keratotic papules with a peripheral erythematous halo, measuring approximately 1–2 cm in diameter, were observed on the trunk and upper and lower extremities, some with crusting. These findings were consistent with RPC. Laboratory investigations revealed an HbA1c of 8.3%, an estimated glomerular filtration rate of 28 mL/min/1.73 m², and exudate cultures showed no microbial growth. Skin biopsy demonstrated transepidermal elimination of collagen and focal granulomatous inflammation. The presence of collagen was confirmed using Masson's trichrome, clearly distinguishing RPC from Elastosis Perforans Serpiginosa, in which expelled material would consist of elastin stained with Verhoeff–Van Gieson. These findings confirmed the definitive diagnosis of RPC.

Treatment included optimization of glycemic control and CKD management, along with systemic therapy with a non-sedating antihistamine and topical corticosteroids for pruritus relief and inflammation reduction. The patient experienced partial improvement of pruritus after four days, with complete resolution within one week, and reduction of erythema and exudation after ten days of therapy. Given the early symptomatic improvement, allopurinol was not required, a drug frequently used in refractory and extensive cases of RPC to reduce oxidative stress and collagen degradation, independently of serum

uric acid levels. Papular lesions persisted despite resolution of the inflammatory flare and underwent slow healing over six months.

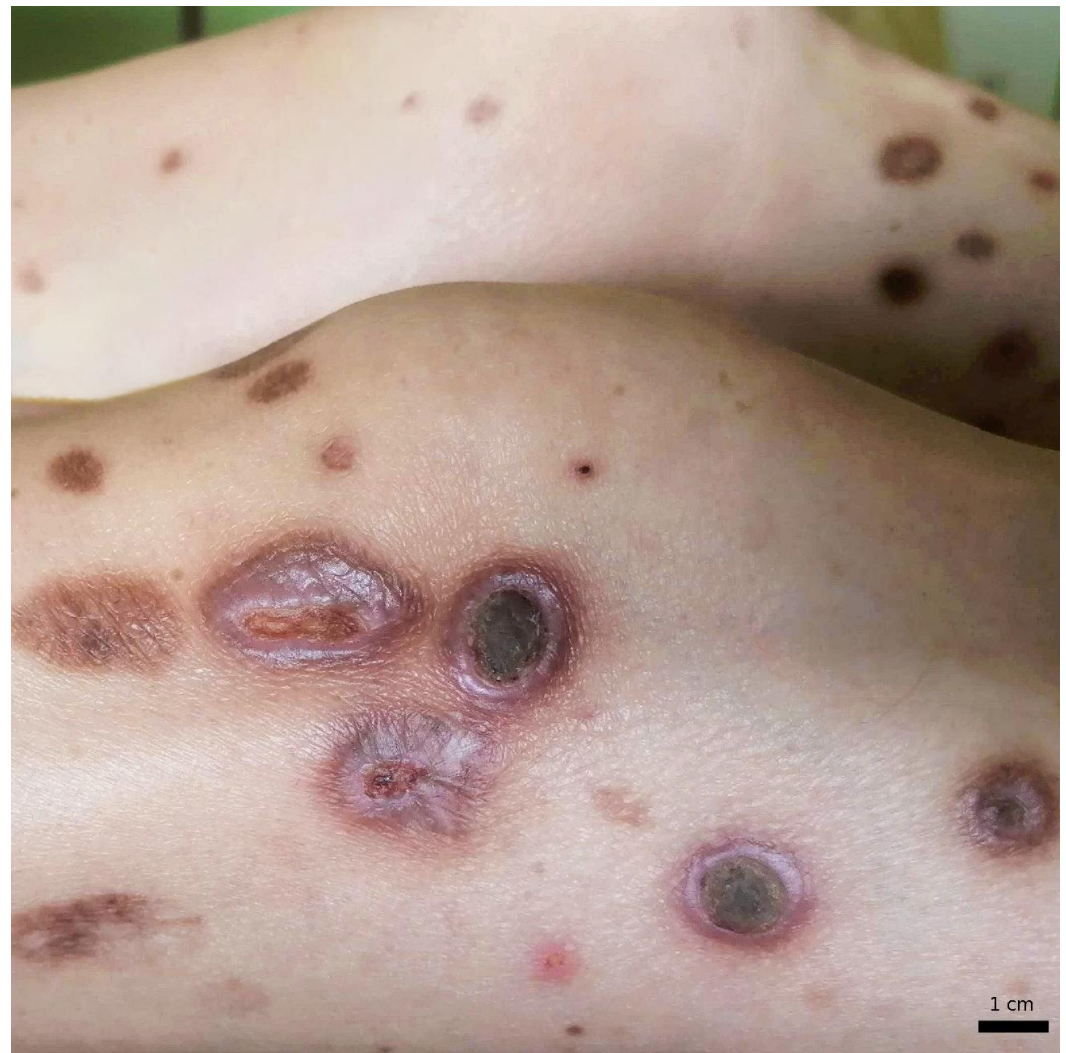


Figure 1: Multiple keratotic papular lesions with a peripheral erythematous halo.

This case highlights the importance of integrating chronic comorbidities into the assessment of dermatologic manifestations. Diagnosis relies on clinical and histopathologic correlation. Early recognition allows timely identification of patients requiring adjustment of systemic disease management, as intensification of therapeutic measures aimed at enhancement of both glycemic control and renal function is essential to minimize recurrence rates and prevent further cutaneous deterioration.

Funding: None.

Research Ethics Committee Approval: The patient provided written informed consent for participation, and the study was conducted in accordance with the ethical guidelines outlined in the Declaration of Helsinki.

Acknowledgments: None.

Conflicts of Interest: None.

Supplementary Materials: None.

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