ORIGINAL REPORT

Subacute Annular Pustular Psoriasis with Flexural Accentuation: Dramatic Response to Risankizumab

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Submitted Sept 27, 2025. Accepted after revision Oct 2, 2025
Published Dec 7, 2025 25, 2025. DOI: 10.2340/actadv.v105.adv-2025-0055 Acta Derm Venereol 2025; 105: adv-2025-0055.

To the Editor,

Annular pustular psoriasis (APP) is a rare variant of pustular psoriasis with a subacute-chronic course (1), presenting with polycyclic annular erythematous lesions with circumferential sterile pustules and desquamative scales. Various topical and systemic treatment modalities have been reported with variable outcomes. Risankizumab is a monoclonal antibody inhibiting interleukin 23 (IL-23) approved for treatment of moderate-to-severe plaque psoriasis and has been used in generalized pustular psoriasis (2), including APP refractory to other biologics (3). The use of risankizumab in relatively treatment-naive patients has not been reported. Herein, we report a case of a subacute APP successfully treated with risankizumab as the index treatment modality.

A 48-year-old Chinese man presented to the dermatology clinic for evaluation of a pustular dermatosis, first over the axilla with subsequent spread caudally over 4 months. He denied the use of new contactants or medications prior to onset and had no joint pains or other symptoms suggestive of an autoimmune condition. He was afebrile and clinically appeared well. Examination revealed erythematous annular plaques with studded pustules at the peripheries over the flanks, flexural elbows and knees, axilla and groin creases (Fig. 1A, C and E). There were thick, scaly plaques over the posterior hairline not previously noticed by the patient.

He was initially treated with topical antifungals by his primary care physician with no improvement. A trial of tapering oral corticosteroids yielded a partial response, but the eruption flared upon tapering. A skin biopsy was performed, and histopathological examination of the pustule revealed a subcorneal pustule with neutrophilic spongiosis and exocytosis, without acantholysis. Direct immunofluorescence was negative.

A diagnosis of subacute APP was made, and treatment with risankizumab and high-potency topical corticosteroids was started. Desquamation was noted by day 2, and marked improvement was noted within a month (Fig. 1B, D and F). The patient's skin was completely clear at 15 weeks after the initial dose.

Differential diagnoses for sterile pustulosis include acute generalized exanthematous pustulosis (AGEP), pustular psoriasis, subcorneal pustular dermatosis (SPD) and amicrobial pustulosis of the folds (APF). Our patient had no inciting medications to suggest AGEP and no classical "half-half" blisters to suggest SPD. APF, a diagnosis of exclusion, usually responds rapidly to oral corticosteroids, and there were no associated features of autoimmune diseases. The scaly plaques over the hairline pointed towards a diagnosis of psoriasis, in particular APP, given the morphology of annular plaques with a pustular rim.

It is classically thought that pustular psoriasis and plaque psoriasis have distinct pathological mechanisms and cytokine profiles. While loss-of-function mutations of IL-36Ra leading to unopposed activation of IL-36R underlie pustular psoriasis (4), expression of IL-23 and IL-17 in the epidermis and perivascular dermis has also been reported (5). The success of risankizumab in treating our patient further strengthens the role of the IL-23 axis in the pathogenesis of pustular psoriasis.

Currently, there are no guidelines or recommendations on the optimal treatment of this rare subtype of psoriasis. This report highlights the safety, effectiveness, and fast onset of risankizumab, which can be considered as a first-line modality in APP. More studies are required to delineate the optimal treatment and pathogenesis of pustular psoriasis, including the role of the IL-23 axis.

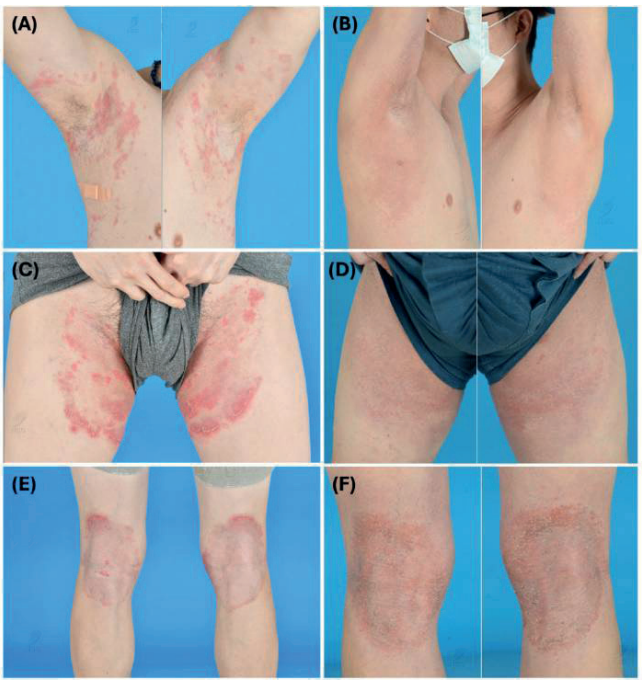

Fig. 1. Clinical photographs of the (A, B) axillae, (C, D) groin creases, (E, F) flexural knees before (A, C, E) and at 1 month post treatment (B, D, F).

ACKNOWLEDGEMENTS

Funding sources: No funding or sponsorship was received for this study or the publication of this article.

IRB approval status: Written informed consent was obtained from the patient for clinical photography and the publication of clinical information and related images. No formal Institutional Review Board (IRB) approval was required as this was a single-patient case report involving non-invasive treatment as part of routine clinical care.

The authors have no conflicts of interest to declare.

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