Generalized pustular psoriasis of pregnancy successfully treated with secukinumab

Dear Editor,

Generalized pustular psoriasis of pregnancy (GPPP) is a rare and severe condition that threatens the health of the mother and the fetus. The treatment options for GPPP are limited due to concerns about unfavorable pregnancy outcomes. We report two cases of GPPP successfully treated with secukinumab with no serious adverse events.

The first patient is a 26 year old female in her 26th week of gestation. She presented with a sudden aggravation of pustular psoriasis in her 20th week of gestation. She was diagnosed case of pustular psoriasis since past 20 years and had received steroids, azathioprine, cyclosporine, acitretin in the past with partial response. The disease flared after discontuation of drugs each time. She was off all medications 6 months prior to the pregnancy. At presentation, physical examination revealed a body temperature of 39°C, brightly erythematous plaques with scattered pustules on the waist, abdomen, back, elbows, and lower limbs [Figures 1a and 1d]. Routine laboratory examinations and serological tests for hepatitis B and interferon-gamma release assays were negative. Ultrasound showed a single live fetus with polyhydramnios. She was diagnosed with GPPP and treated with secukinumab 300 mg subcutaneous injection on day 1 (baseline), followed by secukinumab 150 mg subcutaneous injection on days 8, 15, 22, 29 and 60 for a total of 6 injections. She also received supportive care in the form of rehydration, nutritional support, maintenance of electrolyte balance, antibiotic treatment with azithromycin, and topical emollients. On the third day after admission, the patient was afebrile and most of the pustules started to dry

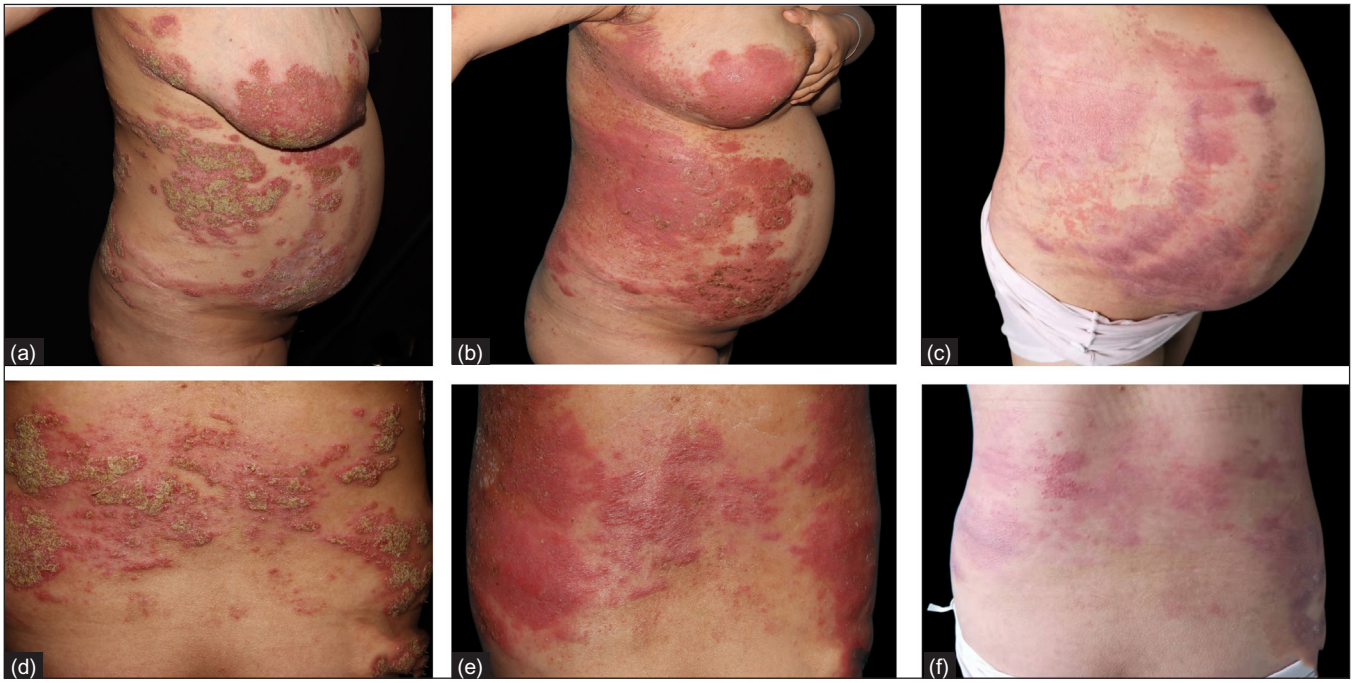

Figure 1a-f: Clinical images of patient 1 at (a,d) baseline, (b,e) 3 days and (c,f) 28 days after treatment

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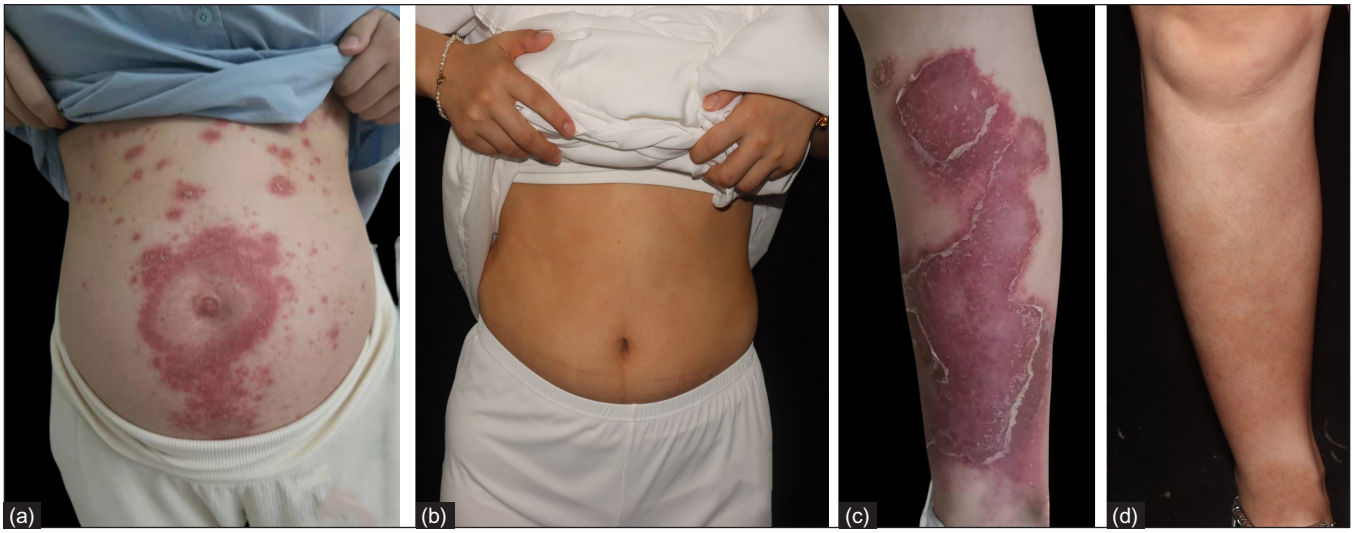

Figure 2a-d: Clinical images of patient 2 at (a,c) baseline,(b,d) 1 year later after treatment

up [Figures 1b and 1e]. By the end of one month, pustules completely disappeared, and erythema subsided [Figures 1c and 1f]. She delivered a healthy baby boy with normal birth weight and normal Apgar score at the 37th week of gestation.

The second patient, a 27-year-old female was admitted to the hospital at 24 weeks of gestation with a one-month history of pustular flare of preexisting chronic plaque psoriasis which was present since 10 years. She received secukinumab injections for 2 years until she got pregnant, when these were discontinued. At the 20th week of gestation, she presented with a pustular flare over her abdomen and lower limbs without fever. Physical examination revealed multiple erythematous plaques on the trunk and limbs, with extensively distributed tiny pustules, some of which coalesced into lakes of pus [Figures 2a and 2c]. No abnormalities were observed in blood cell counts, liver and renal function, hepatitis B, and tuberculosis screening. Based on her previous good response to secukinumab, subcutaneous injections of secukinumab 150 mg were given at weeks 0, 1, 2 and 4, for a total of 4 injections with which she had a dramatic response. She subsequently delivered a full-term baby boy with a birth weight of 3700 g. At one year follow-up, she was completely clear of active disease and only had post inflammatory hyperpigmentation [Figures 2b and 2d].

GPPP is a rare and severe condition that most commonly occurs in the third trimester.[1] It is characterized by generalized aseptic pustules on a background of erythema with fever, leukocytosis and increased C-reactive protein. In severe cases, it can evolve into sepsis and endanger maternal and/or fetal life. Treatment with conventional medications, such as methotrexate, acitretin, and cyclosporine are limited by concerns of fetal toxicity. Secukinumab is a human IgG1 monoclonal antibody that selectively binds to and neutralizes interleukin-17A. It has been approved for psoriasis treatment. In contrast to glucocorticoids and cyclosporine, secukinumab has little effect on blood pressure and blood glucose in pregnancy. Data also suggests that the spontaneous abortion rate related to its use was similar to that of the general population. No safety signals were identified regarding spontaneous abortions or congenital malformations. In clinical practice, these data provided reassurance in cases where conception occurs during secukinumab treatment. In practice, only a small number of pregnant women continue treatment throughout their pregnancy, while the majority of them terminate treatment in the third trimester.[2,3] In our cases, the patients showed excellent response to secukinumab with favorable maternal and fetal outcomes. It is important to note that when choosing biological therapy during pregnancy, the risk of potential teratogenic effects in the early stages of pregnancy must be considered. In addition, newborns exposed to biologic agents in utero should delay exposure to live vaccines, especially tuberculosis vaccines.[4]

Larger studies are necessary to confirm the safety and efficacy of secukinumab treatment in GPPP.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Conflict of interest

There are no conflicts of interest.

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Dupilumab as monotherapy for bullous pemphigoid with multiple underlying diseases: A report of two cases

Dear Editor,

Bullous pemphigoid (BP) is an autoimmune blistering disorder that occurs mostly in elderly individuals and manifests as tense blisters over normal skin or overlying red plaques or patches. The tense blisters do not rupture easily and the Nikolsky sign is negative. Traditional therapies include topical or systemic corticosteroids, immunosuppressants and anti-inflammatory antibiotics. Studies have shown that autoimmune responses dominated by Th2 cells play a key role in the pathogenesis of BP. Dupilumab is a fully human monoclonal Ig4 antibody that blocks interleukin (IL)-4 and IL-13, key drivers of type 2 helper T-cell (Th2)-mediated inflammation,[1] providing a theoretical basis for its use in BP treatment.

We report two cases of BP patients with senility and multiple underlying diseases, who were treated with dupilumab alone. Detailed information about the two patients is provided in Table 1. The clinical manifestations of these patients included tense blisters on an erythematous base on the trunk and extremities, and oedema of the distal extremities [Figure 1]. They had no mucosal involvement. The Nikolsky sign and the bulla spread sign were negative. Histopathology of the lesions showed subepidermal blisters with eosinophil infiltration. In the first patient, direct immunofluorescence demonstrated linear deposition of C3 in the basement membrane zone; in the second patient, ELISA showed elevated serum levels of BP180 and BP230 antibodies [Table 2]. Both cases fulfilled the diagnostic criteria for BP, in keeping with the 2022 EADV guidelines.[2]

Table 1: Patient characteristics and dupilumab therapy

Number	Gender	Age	Duration of blisters and erythema	Systemic medications for BP before dupilumab	Comorbid diseases	Time for blisters to start drying up	Time for erythema to begin to fade	Time for itching relief	BPDAI score	
									Pre-treatment	Post-treatment
1	M	66	4 months	None	Diabetes, hypertension, chronic kidney failure, history of cerebral infarction	4 days	2 days	3 days	67	23
2	M	79	3 months	None	Diabetes, hypertension, asthma, history of cerebral infarction	3 days	Enlargement of the area on the second day after the first injection, which faded on its own	4 days	60	34

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