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CASE REPORT

Rapid Improvement of Acute Eczematous Facial Dermatitis During Pregnancy Following Stapokibart Therapy: A Case Report

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Background: Acute eczematous facial dermatitis can cause erythema, edema, and severe pruritus, with marked effects on sleep and quality of life. Treatment during pregnancy is challenging because therapeutic options are limited by safety concerns.

Case Presentation: This single case report describes a 35-year-old pregnant woman at 9 weeks' gestation who presented with a 10-day history of progressive facial erythema, swelling, and severe pruritus. She had recurrent facial dermatitis, allergic rhinitis, and asthma, supporting an atopic background. Antihistamines and topical corticosteroids were ineffective. Acute eczematous facial dermatitis with atopic features was considered. After risk–benefit assessment and informed consent, stapokibart was initiated with a 600 mg loading dose followed by 300 mg on day 10.

Results: Pruritus became minimal within 3 days after the first injection. By day 10, facial erythema and edema had markedly improved; by day 31, the lesions had nearly resolved. EASI decreased from 4.2 to 2 and 1 at day 10 and day 31, respectively; IGA improved from 4 to 2 and 0; pruritus NRS decreased from 8–9 to 3–4 and 0; and DLQI improved from 25 to 7 and 2. No treatment-related adverse events were reported during short-term follow-up. At the time of manuscript preparation, the pregnancy was ongoing at 18 weeks' gestation, with normal prenatal ultrasonography and no reported obstetric complications.

Conclusion: Stapokibart may provide rapid short-term improvement in selected patients with acute eczematous facial dermatitis with atopic features during pregnancy. During short-term follow-up to 18 weeks' gestation, no treatment-related adverse events or obstetric complications were reported. However, no conclusions regarding maternal or fetal safety can be drawn from this single case, and continued follow-up is essential.

Keywords: stapokibart, acute eczematous facial dermatitis, atopic dermatitis, pregnancy, biologic therapy

Introduction

Eczematous facial dermatitis is a common inflammatory skin disorder characterized by erythema, edema, scaling, and pruritus. In clinical practice, facial lesions may be caused by atopic dermatitis (AD), allergic contact dermatitis, irritant dermatitis, seborrheic dermatitis, or other inflammatory dermatoses, and differentiation may be challenging when morphology overlaps.[1,2] Because facial lesions are highly visible and often accompanied by severe itching, burning, edema, and cosmetic concern, facial involvement can substantially impair sleep, emotional well-being, social interaction, and quality of life.[1,3]

Recent advances in immunology suggest that type 2 immune responses play a central role in the pathogenesis of AD and related eczematous dermatoses. Interleukin-4 (IL-4) and interleukin-13 (IL-13) contribute to epidermal barrier dysfunction, inflammatory cell recruitment, IgE production, and pruritus, thereby sustaining chronic inflammation.[1,3] Dupilumab, an IL-4Rα-targeting biologic, has provided important clinical experience for IL-4/IL-13 pathway blockade, including emerging observational reports during pregnancy.[4–8] However, evidence regarding other IL-4Rα-targeted biologics in special populations, including pregnancy, remains limited. Stapokibart is a humanized monoclonal antibody targeting IL-4 receptor alpha (IL-4Rα). By blocking IL-4Rα signaling, stapokibart inhibits both IL-4 and IL-13 pathways

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and suppresses type 2 inflammation.[9] Phase 3 studies have shown that stapokibart is effective in moderate-to-severe AD inadequately controlled with topical therapies.[10,11]

During pregnancy, treatment options for severe eczematous dermatoses are often limited by concerns regarding fetal safety, avoidance of unnecessary systemic corticosteroid exposure, and the lack of pregnancy-specific evidence for newer immunomodulatory therapies. In the present case, intense pruritus, facial swelling, and progressive erythema substantially impaired sleep and daily functioning, while prior treatment with oral antihistamines and topical corticosteroids failed to provide adequate control. These factors created a strong clinical need for a rapidly effective, steroid-sparing therapeutic option. Here, we report a case of acute eczematous facial dermatitis with atopic features during pregnancy that showed rapid clinical improvement after stapokibart therapy.

Case Presentation

A 35-year-old woman presented to the dermatology clinic on February 4, 2026, with a 10-day history of progressive facial erythema, swelling, and severe pruritus.

The patient reported recurrent episodes of facial dermatitis over several years. Ten days prior to presentation, facial erythema and itching recurred without an identifiable trigger and progressively worsened. Severe pruritus significantly affected her sleep and daily quality of life. During this period, she was treated with oral loratadine, topical desonide cream, epidermal growth factor preparation, and moisturizing repair creams, but her symptoms failed to improve.

The patient had a history of allergic rhinitis and asthma, supporting an atopic background. No definite allergen exposure was identified. At the time of presentation and treatment initiation, she was at 9 weeks' gestation.

Dermatological examination revealed diffuse facial erythema, edema, and mild exudation. Based on the recurrent course, severe pruritus, personal atopic history, and clinical morphology, a diagnosis of acute eczematous facial dermatitis with atopic features was considered.[1,2] Allergic contact dermatitis remained in the differential diagnosis, although no definite trigger was identified.

Because the patient declined systemic corticosteroid therapy due to concerns about pregnancy, treatment with stapokibart was initiated after careful risk–benefit assessment and detailed informed consent. The treatment regimen consisted of an initial loading dose of 600 mg followed by a maintenance dose of 300 mg administered on day 10. The patient continued routine prenatal follow-up during the observation period.

Treatment Outcomes

Early symptomatic relief was reported within 3 days after the first injection, with pruritus becoming minimal according to the patient's description.

By day 10, facial erythema and edema had significantly improved. By day 31, the lesions had nearly completely resolved. Correspondingly, the Eczema Area and Severity Index (EASI) score decreased from 4.2 at baseline to 2 on day 10 and 1 on day 31. The Investigator's Global Assessment (IGA) score improved from 4 to 2 and then to 0. Pruritus Numerical Rating Scale (NRS) scores decreased from 8–9 at baseline to 3–4 on day 10 and 0 on day 31. The Dermatology Life Quality Index (DLQI) improved from 25 to 7 and then to 2. No treatment-related adverse events were reported during the observation period. At the time of manuscript preparation, the pregnancy was ongoing at 18 weeks' gestation. Follow-up communication with the patient confirmed that routine prenatal ultrasonography was normal, and no obstetric complications had been reported to date. Maternal and fetal outcomes will continue to be followed until delivery. Changes in clinical scores are summarized in Table 1. Representative clinical images demonstrating the treatment response are shown in Figure 1.

Table 1 Changes in Clinical Scores During Stapokibart Therapy

Time Point	EASI	IGA	Pruritus NRS	DLQI
Baseline	4.2	4	8–9	25
Day 10	2	2	3–4	7
Day 31	1	0	0	2

Figure 1 Clinical improvement after stapokibart therapy in a pregnant patient with acute eczematous facial dermatitis. (**A**) Baseline showing diffuse facial erythema and edema. (**B**) Day 10 showing marked reduction in erythema and swelling. (**C**) Day 31 showing near-complete resolution of the lesions.

Discussion

Facial eczematous eruptions represent a heterogeneous group of inflammatory dermatoses that may arise from AD, allergic contact dermatitis, or irritant dermatitis. In routine practice, these entities can share similar morphology, making diagnosis challenging when confirmatory testing is unavailable or impractical. In the present case, the recurrent course, severe pruritus, personal atopic history, and overall clinical pattern supported a diagnosis of acute eczematous facial dermatitis with atopic features.[1,2] Unlike typical chronic atopic dermatitis, the present case was characterized by acute facial-predominant eczematous dermatitis during pregnancy, with recurrent episodes and an atopic background. Therefore, the diagnosis was described cautiously as acute eczematous facial dermatitis with atopic features rather than definitive classic atopic dermatitis.

A key feature of this case is the rapid clinical response after treatment initiation. Pruritus became minimal within 3 days according to the patient's report, and objective disease severity also improved substantially during follow-up. This rapid response is clinically meaningful because pruritus is one of the most burdensome symptoms in AD and related eczematous disorders, often driving sleep disturbance and impaired quality of life.[3,12] The marked decline in DLQI from 25 at baseline to 2 at day 31 further supports the substantial symptomatic and functional benefit observed in this patient.

The biological rationale for the observed response is plausible. IL-4 and IL-13 are central drivers of type 2 inflammation, epidermal barrier dysfunction, and itch. Stapokibart, like dupilumab, targets IL-4Rα and thereby inhibits both IL-4 and IL-13 signaling.[9] Clinical trials have shown that stapokibart improves skin lesions and pruritus in patients with moderate-to-severe AD, supporting its therapeutic role in type 2-driven inflammatory skin disease.[10,11] Early improvement in pruritus has also been reported with IL-4Rα blockade using dupilumab; in the phase 3 SOLO 1 and SOLO 2 trials, a significant reduction in itching was apparent by week 2.[13] In the present case, pruritus became minimal within 3 days and facial erythema and edema had markedly improved by day 10, suggesting an early individual response to stapokibart. However, because this is a single uncontrolled case and direct comparative data between stapokibart and dupilumab are lacking, these observations should be interpreted descriptively and should not be considered evidence of faster onset or superiority over other biologics.

Another noteworthy feature of this case is that treatment was initiated during pregnancy, when the use of systemic corticosteroids or immunosuppressants may be restricted. Direct evidence regarding stapokibart exposure during pregnancy is currently unavailable. Therefore, this case cannot establish maternal or fetal safety, but only suggests short-term tolerability in this individual patient. Given the lack of pregnancy-specific safety data for stapokibart, treatment was undertaken cautiously with close clinical and prenatal follow-up. At the time of manuscript preparation, the patient was at 18 weeks' gestation, and follow-up prenatal ultrasonography was reported as normal.

Reassuringly, increasing evidence from the same therapeutic target, dupilumab, has not identified a clear increase in adverse maternal or fetal outcomes in patients with AD. Available literature, including case reports, case series, multicenter clinical experience, and systematic reviews, suggests that dupilumab exposure during pregnancy is generally associated with disease control and without an obvious signal for major congenital anomalies or miscarriage, although the evidence remains limited and largely observational.[4–8] Accordingly, the present case should be interpreted primarily as a preliminary therapeutic observation of rapid short-term response rather than evidence of established pregnancy safety for stapokibart.

In addition, this case highlights the potential advantages of targeted biologic therapy in special clinical scenarios, such as pregnancy or intolerance to conventional systemic therapies. Compared with traditional immunosuppressants, targeted cytokine blockade may provide a more precise therapeutic strategy by selectively inhibiting key inflammatory pathways. Stapokibart is a humanized monoclonal antibody targeting IL-4Rα, thereby blocking both IL-4 and IL-13 signaling pathways.[9] These cytokines play critical roles in type 2 inflammation, epidermal barrier dysfunction, and chronic pruritus in atopic dermatitis.[1,3] Clinical trials have demonstrated that stapokibart significantly improves skin lesions and pruritus in patients with moderate-to-severe atopic dermatitis.[10,11] In the present case, the rapid improvement of facial erythema, edema, and pruritus after treatment suggests a potential role of IL-4Rα blockade in severe inflammatory facial involvement. However, because direct comparative studies with dupilumab are lacking, this case should not be interpreted as evidence that stapokibart is superior for facial or neck lesions.

Nevertheless, several limitations should be acknowledged. First, this report describes a single patient, and the findings may not be generalizable. Second, the follow-up period remains relatively short, and pregnancy outcome is not yet available; therefore, long-term maternal and fetal safety cannot be determined. Third, allergic contact dermatitis could not be completely excluded because patch testing was not performed; however, no definite allergen exposure was identified, and the recurrent course, severe pruritus, and personal history of allergic rhinitis and asthma supported an atopic background. Fourth, no direct comparison with dupilumab or other biologics was performed, and the present report cannot establish superiority of stapokibart over other IL-4Rα-targeted therapies. Further studies involving larger cohorts are needed to clarify the therapeutic role and safety profile of stapokibart in inflammatory facial dermatoses, particularly during pregnancy.

Conclusion

This case suggests that stapokibart may provide rapid short-term clinical improvement in a patient with acute eczematous facial dermatitis with atopic features during pregnancy who was refractory to conventional therapy. During short-term follow-up to 18 weeks' gestation, no treatment-related adverse events or obstetric complications were reported. Targeted inhibition of IL-4/IL-13 signaling may represent a promising steroid-sparing therapeutic strategy in selected clinical situations where treatment options are limited, such as pregnancy. However, because direct pregnancy-specific safety data for stapokibart are lacking, continued maternal-fetal follow-up remains essential, and no conclusions regarding maternal or fetal safety can be drawn from this single case.

Use of AI-Assisted Technologies

The authors used ChatGPT (OpenAI) to assist with English language editing and manuscript organization. All authors reviewed, revised, and approved the final manuscript and take full responsibility for its content.

Data Sharing Statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Ethics Approval and Informed Consent

Ethical approval was waived because this study describes a single case. Written informed consent was obtained from the patient for publication of clinical data and images.

Consent for Publication

The patient provided written informed consent for publication of the case details and accompanying clinical images.

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Disclosure

The authors report no conflicts of interest in this work.

References

1. Weidinger S, Novak N. Atopic dermatitis. *Lancet*. 2016;387:1109–1122. doi:10.1016/S0140-6736(15)00149-X
2. Eichenfield LF, Tom WL, Chamlin SL, et al. Guidelines of care for the management of atopic dermatitis: section 1. Diagnosis and assessment of atopic dermatitis. *J Am Acad Dermatol*. 2014;70:338–351. doi:10.1016/j.jaad.2013.10.010
3. Guttman-Yassky E, Waldman A, Ahluwalia J, Ong PY, Eichenfield LF. Atopic dermatitis: pathogenesis. *Semin Cutan Med Surg*. 2017;36:100–103. doi:10.12788/j.sder.2017.036
4. Lobo Y, Lee RC, Spelman L. Atopic dermatitis treated safely with dupilumab during pregnancy: a case report and review of the literature. *Case Rep Dermatol*. 2021;13:248–256. doi:10.1159/000515246
5. Escolà H, Figueras-Nart I, Bonfill-Orti M, et al. Dupilumab for atopic dermatitis during pregnancy and breastfeeding: clinical experience in 13 patients. *J Eur Acad Dermatol Venereol*. 2023;37:e1156–e1160. doi:10.1111/jdv.19165
6. Xará J, Farinha P, Lé AM, et al. Pregnancy and breastfeeding outcome in patients with atopic dermatitis treated with dupilumab: the clinical experience of three centers. *Int J Dermatol*. 2024;63:e335–e337. doi:10.1111/ijd.17410
7. Gregoriou S, Routsi E, Koumprentziotis I-A, Papapanou M, Stratigos A. Dupilumab use for atopic dermatitis during pregnancy: a systematic review. *J Eur Acad Dermatol Venereol*. 2025;39:e750–e755. doi:10.1111/jdv.20570
8. Sánchez-García V, De-Miguel-Balsa E, Ramos-Rincón J-M, Belinchón-Romero I. Safety of dupilumab therapy for atopic dermatitis during pregnancy: a systematic review and meta-analysis. *Acta Derm Venereol*. 2025;105:adv41307. doi:10.2340/actadv.v105.41307
9. Liu W, Zhao Y, He Y, et al. Stapokibart (CM310) targets IL-4Rα for the treatment of type 2 inflammation. *iScience*. 2024;27:110721. doi:10.1016/j.isci.2024.110721
10. Zhao Y, Zhang L, Zhang J; CM310AD005 Study Investigators. Efficacy and safety of stapokibart (CM310) in adults with moderate-to-severe atopic dermatitis: a multicenter, randomized, double-blind, placebo-controlled phase 3 trial. *J Am Acad Dermatol*. 2024;91:984–986. doi:10.1016/j.jaad.2024.07.1447
11. Zhao Y, Zhang L, Wu L, et al. Long-term efficacy and safety of stapokibart for moderate-to-severe atopic dermatitis: 52-week results from a phase 3 trial. *Allergy*. 2025;80:1348–1357. doi:10.1111/all.16368
12. Oetjen LK, Mack MR, Feng J, et al. Sensory neurons Co-opt classical immune signaling pathways to mediate chronic itch. *Cell*. 2017;171:217–228.e13. doi:10.1016/j.cell.2017.08.006
13. Simpson EL, Bieber T, Guttman-Yassky E, et al. Two phase 3 trials of dupilumab versus placebo in atopic dermatitis. *N Engl J Med*. 2016;375:2335–2348. doi:10.1056/NEJMoa1610020