CASE REPORT

Flare-Up in Full Bloom: Navigating Rosacea Fulminans During Pregnancy

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ABSTRACT

Rosacea fulminans (RF) is a rare and severe variant of rosacea, characterized by the sudden onset of extensive facial skin lesions. Hormonal changes, particularly during pregnancy have been proposed as potential contributing factors for RF. Management of RF in pregnant patients poses unique challenges, as standard therapeutic options may carry teratogenic risk. To date, reported cases of RF during pregnancy in the medical literature is very limited. We report a case of RF that developed during pregnancy, likely precipitated by hormonal fluctuations. This case underscores the importance of prompt recognition and timely intervention to prevent permanent facial scarring, which may have profound psychological consequences for affected patients.

INTRODUCTION

Rosacea fulminans (RF), also known as pyoderma faciale, is a rare and severe inflammatory dermatosis first described by O'Leary and Kierland in 1940.[1] RF predominantly affects women of reproductive age and is differentiated from typical rosacea by the abrupt onset and rapid progression of painful facial lesions.[2] Although its exact aetiology remains unknown, RF can lead to significant facial disfigurement, necessitating prompt diagnosis and appropriate management. Such dermatological manifestations may contribute to heightened emotional distress, particularly during pregnancy, a period when women are mostly physiologically and psychologically vulnerable.

CASE REPORT

A 35-year-old Malay primigravida at 9-weeks' period of amenorrhoea (POA) presented with 4-week history of progressively worsening, painful, erythematous papules and pustules on the face. The onset of eruption coincided with confirmation of pregnancy at approximately 5 weeks' POA. She denied systemic symptoms such as fever, photosensitivity, or musculoskeletal pain. Her regular skincare routine included a twice-daily cleanser, moisturizer, and sunscreen, with no recent changes in cosmetic or skincare. She had no history of allergies or prior acne.

Initial treatment at a primary care clinic with topical therapy for presumed mild acne yielded no improvement. Lesions rapidly enlarged, coalesced, and ruptured, forming scabs and nodules. A subsequent consultation provided similar reassurance. She trialed alternative remedies (turmeric, honey, lime juice) once, after which symptoms worsened. However, the lesion was not consistent with contact dermatitis, as it was non-itchy, with no vesicles or eczematous changes.

The facial lesions' pain was progressively intensified, necessitating daily paracetamol use. She reported nocturnal burning and pruritus over the affected area causing sleep disturbance. Otherwise, there was no lesions were noted elsewhere on the body. Psychosocially, the

disfiguring lesions caused self-consciousness and concerns about stigmatization, though she denied depressive symptoms.

Moreover, her facial condition was adversely affecting her self-esteem. She often felt self-conscious about going to work, fearing stigmatization due to perceived infectiousness. After she shared her concerns, her husband encouraged her to seek a second opinion at a health clinic. Despite these challenges, she denied experiencing any depressive symptoms.

On examination, vital signs were stable. Cutaneous assessment revealed multiple erythematous papules, pustules, nodules, and purulent cysts with overlying scabs, measuring 0.2–0.5 cm in diameter, distributed over the bilateral cheeks, nose, and chin. Otherwise, there was no comedones or telangiectasia were observed. There was no cervical lymphadenopathy or extrafacial involvement.

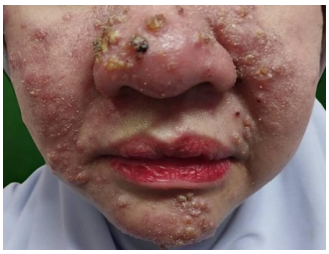

Figure 1: Close-up picture of the face upon presentation to our clinic.

Based on the patient's history and physical examination, a diagnosis of rosacea fulminans (RF) was established. The case was subsequently discussed with the Dermatology team. Initial management included oral amoxicillin, topical metronidazole, and symptomatic treatment with paracetamol and loratadine. Psychoeducation was provided to explain the nature of RF, its association with pregnancy, available treatment options, and to address psychosocial concerns with the aim of reducing distress and improving self-esteem.

After ten days, there was minimal improvement in her skin condition (Figure 2). She was counselled regarding a skin biopsy. However, she declined due to concerns about potential scarring and opted to continue with oral and topical therapy. Oral erythromycin was subsequently initiated, with topical metronidazole maintained. At the one-month follow-up, significant clinical improvement was noted, with resolution of pain, burning sensation, and no new pustular lesions (Figure 3). After three months of treatment, there was almost complete resolution of the facial lesions (Figure 4). The patient was advised to continue topical therapy to maintain remission.

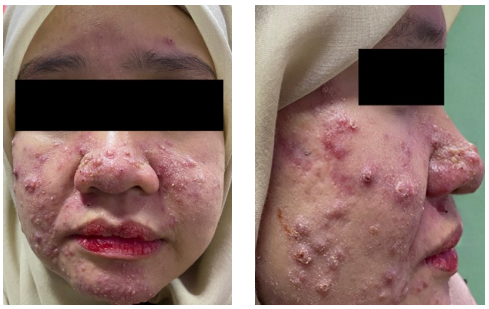

Figure 2. Ten days of treatment initiation (minimal improvement seen over the face)

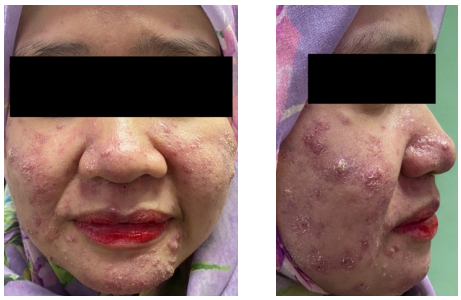

Figure 3. One-month post-treatment (resolution of the facial lesion)

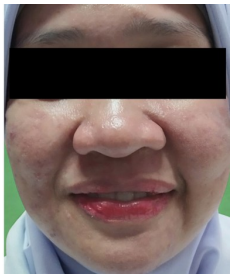

Figure 4: Three months post-treatment (significant improvement is seen over the face)

DISCUSSION

Rosacea fulminans (RF) is a severe and acute variant of rosacea that predominantly affects the face, typically involving the chin, cheeks, and forehead.[3] It is characterized by the sudden onset of painful and pruritic papulopustules, coalescing nodules, cyanotic erythema, and draining sinuses.[4,5]

The primary differential diagnosis is acne conglobata (AC). However, AC typically presents with comedones and acneiform lesions on the trunk and extremities, in which are absent in RF.[3] Due to relatively non-specific findings, histopathological examinations has limited

diagnostic value in RF, though it may help determine the stage of the disease and provide supportive diagnostic information when excluding alternative diagnosis.[1,2,3,,6] In this case, the patient's lesions were confined to the facial region, with no involvement of other body areas, supporting a diagnosis of RF.

Although the exact aetiology of RF remains unclear, interactions between hormonal changes and emotional stressors are thought to play a role in neurovascular dysregulation, triggering the abrupt onset and intense inflammatory response. This mechanism may explain the higher prevalence of RF among young women during pregnancy.[2,6,7]

A review of 135 cases of RF, rosacea conglobata, or pyoderma faciale reported between 1916 and 2016 identified potential triggering in 42% (57/135) of cases, with pregnancy being the most common, accounting for 42% (24/57) of these cases.[1] In the present case, our patient developed severe papulopustular eruptions shortly after pregnancy confirmation, with progressive worsening despite no prior dermatological history.

Given the severity of RF, early recognition and intervention are crucial to prevent complications, particularly permanent facial scarring.[3] However, managing RF during pregnancy poses unique challenges. Systemic therapy is often required, yet conventional treatments such as retinoids and tetracyclines are contraindicated due to teratogenicity.[8]

The recommended first-line treatment for RF during pregnancy typically consists of oral and topical antibiotics' combination.[9] Oral macrolides, such as erythromycin and azithromycin, are preferred due to their favourable safety profile and therapeutic efficacy, offering anti-inflammatory effects, reduction of bacterial colonisation, immunomodulatory benefits and rapid symptom relief. Topical agents, such as metronidazole, are also commonly prescribed for their anti-inflammatory properties.[8,9] Systemic corticosteroids may be considered when first-line therapy is ineffective.[9] In this case, the patient initially received oral amoxicillin with minimal clinical response. Subsequent treatment with oral erythromycin and topical metronidazole led to marked clinical improvement.

RF can also have a profound impact on psychological well-being, particularly in pregnant women who may already be sensitive to physical changes. The disfiguring nature of RF lesions can lead to diminished self-esteem, feelings of unattractiveness, and social withdrawal. This psychosocial distress may exacerbate stress during pregnancy and potentially affect pregnancy outcomes.[10] Therefore, both physical and emotional aspects should be addressed in managing RF.

Consequently, careful follow-up and strict adherence to treatment regimens are essential, with close consideration of the balance between therapeutic benefits and potential maternal–fetal risks.

The prognosis of RF in pregnancy is generally favourable, though clinical outcomes may vary.[2] To date, 27 cases of pregnancy-associated RF have been reported in the English literature, with one case of recurrence in the subsequent pregnancy.[1,11] Adverse obstetric outcomes, such as intrauterine growth restriction, have been reported, particularly in cases treated with systemic corticosteroid.[9] Consequently, careful follow-up and strict adherence to treatment regimens are essential, with close consideration of the balance between therapeutic benefits and potential maternal–fetal risks.

CONCLUSION

Navigating RF during pregnancy requires a holistic approach that incorporates understanding, patience, and individualised care. The complexity of this condition arises from the interplay between pregnancy-related hormonal changes, disease severity, and the need to balance treatment risks and benefits. Nevertheless, with timely diagnosis, adequate support, and personalised treatment strategies, effective management of this disfiguring condition is achievable, thereby minimising the associated psychological distress.

CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

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