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Rosacea fulminans herpeticum: Rosacea fulminans with superimposed herpetic infection

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Key words: herpes simplex; inflammatory disorder; rosacea fulminans; systemic corticosteroids.

INTRODUCTION

Rosacea fulminans (RF) is a rare disorder characterized by the sudden onset of coalescing papules and plaques on a background of erythema confined to the face.[1] It primarily affects women between 20 and 40 years old.[1] Initially thought to be related to acne, recent evidence suggests that it belongs on the rosacea spectrum.[1,2] However, the classification of RF as a subtype of rosacea has not been officially recognized by the National Rosacea Society.[3] Here, we present a case of RF with a concomitant herpes infection, or rosacea fulminans herpeticum, which has not been reported in the literature previously.

Abbreviations used:

HSV: herpes simplex virus
RF: Rosacea fulminans

CASE REPORT

A 34-year old Caucasian woman with a history of papulopustular rosacea and recurrent *herpes labialis* presented to dermatology clinic for an exuberant facial eruption consisting of painful, eroded, erythematous papulonodules and pustules developing over the past 2 weeks. She denied any history of seborrheic, atopic, or allergic contact dermatitis. Before onset, the patient experienced facial peeling and irritation. She was initially evaluated at an urgent care and started on doxycycline 100 mg twice a day for 1 week with mild improvement, but her rash drastically worsened after alcohol consumption. At this time, she described diffuse erythema and multiple pustular papulonodules over her face (Fig 1). The patient also failed empiric treatment with topical triamcinolone 0.1% ointment and pimecrolimus 1% cream after her course of doxycycline. She presented to us 2 weeks after symptom onset, noting some improvement of the papulopustular lesions, which she attributed to doxycycline. Our dermatologic examination at that time revealed a diffuse background erythema of the face with overlying erosions with scalloped borders (Fig 2, *A*).

The patient's overall clinical presentation was consistent with RF with superimposed orofacial herpes infection. A viral polymerase chain reaction was performed and returned positive for herpes simplex virus (HSV) 1. She was empirically started on valacyclovir 1g thrice daily, as well as a prednisone taper (40 mg, 30 mg, 20 mg, 10 mg, and 5 mg each for 2 days) and an extended course of doxycycline 100 mg twice a day, noting significant improvement 3 weeks after starting this regimen (Fig 2, *B*).

DISCUSSION

Rosacea fulminans (RF) follows an explosive clinical course with progression of centrofacial plaques and interconnecting sinuses within 1-2 weeks.[1,4] Onset is often reported after a trigger, including hormonal shifts such as pregnancy, emotional stress, medications, or, as in our case, alcohol consumption.[1] *Rosacea fulminans* is distinguished from severe acne by lack of comedones among the erythematous papules and nodules associated with the eruption in most cases.[4] Further, 92% of RF cases occur in women, and 80% of cases report a prior history of flushing or rosacea.[1] Although it does not feature in the National Rosacea Society

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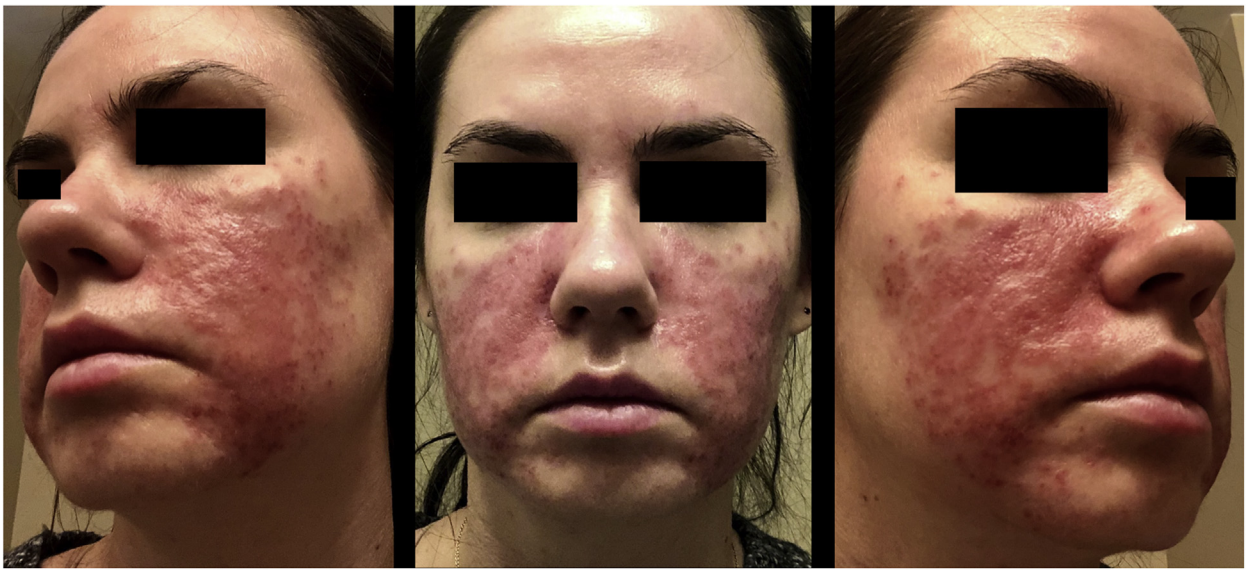

Fig 1. Presentation at symptom onset.

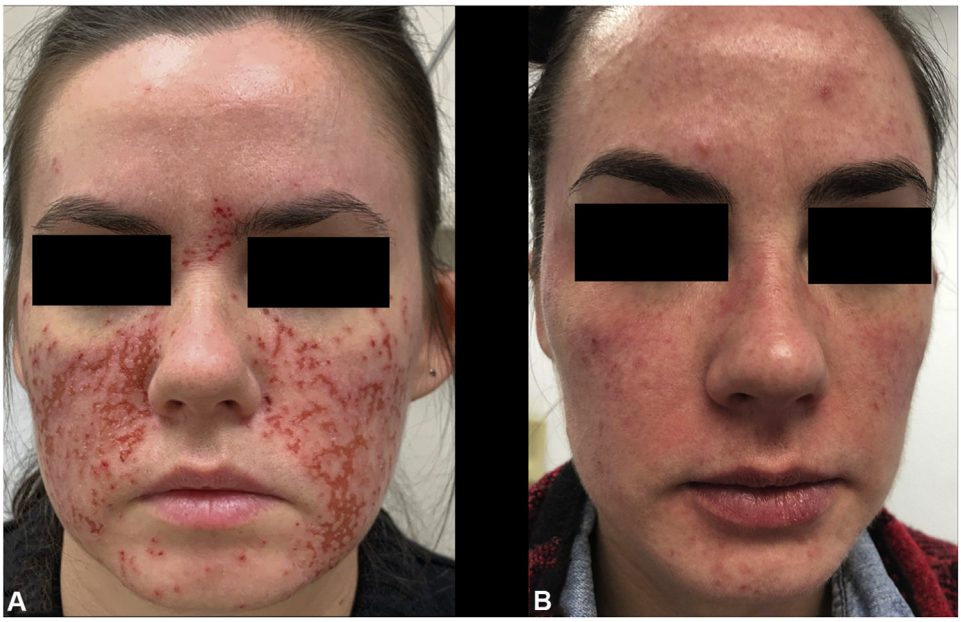

Fig 2. Presentation of patient (**A**) at dermatology clinic and (**B**) at 1-week follow-up.

classification at present, it appears likely that RF is an extremely inflammatory variant of rosacea.[1,3]

Treatment of RF has developed greatly over time. Currently, a combination of systemic corticosteroids and/or isotretinoin is recommended.[1,5] Withdrawal of systemic corticosteroids can lead to flaring of symptoms; therefore, a slow taper over 2-3 weeks is advised.[4] Oral antibiotics, such as tetracyclines, macrolides, and dapsone, have been used but are often ineffective as monotherapy. Erythromycin is preferred in pregnant patients but rarely leads to resolution of symptoms.[1] Isotretinoin is initiated in many cases after delivery to facilitate the resolution.

So far, *rosacea fulminans herpeticum* has not been reported in the literature. However, Kaposi varicelliform eruption is a well-documented phenomenon and refers to a disseminated cutaneous infection of HSV 1 or 2, coxsackievirus A16, or vaccinia virus in association with an underlying dermatosis.[6] *Eczema herpeticum* is specific to atopic dermatitis with superimposed HSV.[7] Most commonly seen in the setting of atopic dermatitis, both *Eczema*

herpeticum and Kaposi varicelliform eruption have been reported in patients with psoriasis, keratosis follicularis, bullous pemphigoid, contact dermatitis, second degree burns, and skin grafts among others.[6,8] Skin barrier impairment is the greatest risk factor for development of *Eczema herpeticum* and Kaposi varicelliform eruption, and with the added pervasiveness of latent HSV infection, recognition of those at risk is critically important.[7]

The prevalence of HSV 1 among young women, who comprise the population most commonly affected by RF, has been reported to about 50% in 18— to 24—year-olds.[9] It surpasses 90% in both men and women over the age of 70 in the United States. Up to 40% of those affected are susceptible to viral reactivation, sharing several triggers in common with RF, including stress and hormonal shifts.[10] Management relies on early recognition and institution of antiviral medications, such as acyclovir and valacyclovir, as well as treatment of the underlying dermatologic condition compromising the integrity of the skin barrier.[10]

Conflicts of interest

None declared.

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