Facial rash

A case study

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Keywords
skin diseases; infectious skin diseases; dermatitis

Case study

A male university student, 24 years of age, presented to his general practitioner because of a facial rash. He had a past history of eczema but no other significant past medical history and no allergies. He was not taking any regular medications.

One week earlier, he had experienced a low grade fever and a sore throat associated with a flare-up of his eczema. At that time, he had seen another GP who prescribed mometasone furoate 0.1% (1 mg/g) ointment, one application daily, and oral cephalexin 500 mg, two tablets twice daily. The patient was compliant with this treatment but now reported that since the initial consultation, the rash had worsened (*Figure 1*).

Figure 1. Facial rash on patient

Question 1

Describe the rash shown in *Figure 1*.

Question 2

What physical examination would you perform?

Question 3

What is the differential diagnosis?

Question 4

What investigations would you perform?

Case study continued

The patient was afebrile and normotensive with a regular heart rate of 62 bpm. He had cervical lymphadenopathy, which was more significant in the right anterior triangle of the neck. The rash was confined to his face. Eye examination was unremarkable. A skin swab sent for viral polymerase chain reaction showed herpes simplex virus type 1, and microscopy culture and sensitivity results were unremarkable.

Question 5

What is the diagnosis?

Question 6

What other skin disorders may be associated with this condition?

Question 7

What complications can be associated with this condition?

Question 8

What treatment would you prescribe?

Answer 1

Figure 1 shows an erythematous vesiculo pustular rash with crusting and umbilications covering the patient's forehead, cheeks and peri-orbital areas.

Answer 2

It is important to examine the skin on the patient's face, head and neck as well as the torso and limbs. Vital signs and lymph nodes should be assessed and eye examination performed if there is any suggestion of eye involvement.

Answer 3

The differential diagnosis includes eczema, eczema herpeticum, bacterially infected eczema, impetigo, varicella zoster infection and disseminated (systemic) herpes simplex virus (HSV).[1]

Answer 4

Skin swabs should be performed for viral polymerase chain reaction (PCR) and microscopy culture and sensitivity. Serology and skin biopsy are of little diagnostic value and are not recommended routinely.[2]

Answer 5

The diagnosis is eczema herpeticum, also known as Kaposi varicelliform eruption. Eczema herpeticum can occur at any age and is caused by close contact with a person who has active lesions of HSV infection, either clinical or subclinical.[3,4] While the vast majority of eczema herpeticum cases are caused by HSV (HSV1 and HSV2), cocksackie virus A16 and vaccinia virus have also been implicated.[3]

Answer 6

Other skin disorders that may be associated with eczema herpeticum include Darier disease, pemphigus foliaceus, and benign familial pemphigus (Hailey-Hailey disease). Rarer associations include Grover disease, ichthyosis vulgaris, contact dermatitis, psoriasis, Pityriasis rubra pilaris, cutaneous T-cell lymphoma (mycosis fungoides), and Wiscott-Aldrich syndrome.[1]

Answer 7

A primary episode of eczema herpeticum usually resolves in 2–6 weeks.[1] However, early recognition and treatment is important as complications, including herpes keratitis (ocular HSV infection), disseminated infection with visceral involvement, and death, may occur.[5,6] The mortality rate ranges from 10–50%,[1] with the highest risk in immunocompromised patients. Failure to recognise eczema herpeticum and subsequent treatment for an exacerbation of eczema with high dose corticosteroids can result in significant progression of herpes keratitis.[7,8] Delay of initiation of aciclovir has been shown to increase length of stay in hospitalised children with eczema herpeticum.[9]

Answer 8

Recommended treatment for this patient is oral aciclovir or valaciclovir. Aciclovir is generally considered to be safe in pregnancy (pregnancy category B).[10–13]

It may be difficult to distinguish between eczema herpeticum and secondary bacterially infected eczema, especially if the rash has a crusty appearance, as seen in this patient. In these cases it is reasonable to prescribe a course of oral antibiotics.[14] This was not necessary in this patient as the antibiotic (cephalexin) had not been effective and the skin swab was unremarkable.

Case study follow up

The patient was treated with a course of valaciclovir 500 mg, two tablets three times daily and the rash resolved in 1 week (*Figure 2*). The patient continues to regularly use a moisturiser and avoids irritants that exacerbate his eczema.

Figure 2. The patient after treatment

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Conflict of interest: none declared.

Acknowledgement

I would like to thank the patient for his consent to publish this case report, including his photograph.

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