

## Dermatology series: A child with an acne-like rash on the face

Annette W CALLAN

### Case history

You are asked to see a 2-year-old child with a 3-month history of a facial eruption. The parents state that he had previously had eczema affecting the trunk and lower limbs but until a few months ago it had not involved the face. When the face rash appeared the mother applied the medium potency corticosteroid ointment which had been prescribed for the child's eczema and initially there was excellent clearing. However, the rash recurred repeatedly, in spite of further applications of the corticosteroid ointment, and had now spread to the skin around the eyes. It seemed to cause the child no distress and did not seem itchy. Examination reveals a fine papular rash around the alae of the nose, on the chin and below the lower eyelids (Fig. 1) Although there is a superficial resemblance to acne there are no comedones, the lesions are micropapules with a few micropustules and are all relatively uniform in size. Examination shows no other problems with the child's skin.

### Could this be infantile acne?

You establish that there is no significant family history of acne which makes a diagnosis of infantile acne less likely. In addition, there are no comedones present and, in acne, the lesions tend to vary in their morphology so that inflammatory papules are seen alongside non-inflammatory comedones and postinflammatory macules rather than the uniformity of lesions seen in this child.

### What is the diagnosis?

This is perioral dermatitis due to prior use of a fluorinated steroid on the face. The child may well have had facial atopic eczema initially and the repeated application of the relatively potent topical corticosteroid ointment induced the current eruption.<sup>1</sup> The differential diagnosis includes irritant type contact dermatitis as a result of contact with saliva and food around the lips and on the chin which may occur in young children particularly if there is a history of atopic eczema but this eruption is usually more diffuse and may be dry and scaly, lacking the typical micropapules and micropustules seen in this child.

### What causes this?

The reason why this eruption follows the application of potent topical corticosteroids to the facial skin is unknown. Postulated mechanisms include corticosteroid induced damage to the sebaceous gland and possible effects on the mite *Demodex folliculorum* which, although it is part of the normal flora, is encouraged to proliferate within sebaceous follicles as a result of the corticosteroid applied topically. In spite of the response of this eruption to antibiotics, studies have failed to confirm the role of bacterial infection. The occlusive effect of the applied ointment may also play a role. In infants and children the condition seems identical to perioral dermatitis in adults.

### How should this be treated?

- 1 Stop application of topical steroid.
- 2 Metronidazole 0.75% cream or gel topically once or twice daily until clearing.<sup>2</sup>
- 3 In more severe cases low dose oral erythromycin 20–30 mg/kg per day for 1–2 weeks. (Tetracycline antibiotics are the treatment of choice in adults but are contra-indicated in children).
- 4 Ensure that in future any facial eczema is treated with non-fluorinated topical corticosteroid ointment (hydrocortisone 1% ointment).

Correspondence: Dr Annette W Callan, 325 Wattletree Road, East Malvern, Victoria 3145, Australia.

Email: malverndermatology@bigpond.com

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**Figure 1** Papular acne like rash in a toddler.

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## References

- 1 Manders SM, Lucky AW. Perioral dermatitis in childhood. *J. Am. Acad. Dermatol.* 1992; **27**: 688-92.
- 2 Miller SR, Shalita AR. Topical metronidazole gel (0.75%) for the treatment of perioral dermatitis in children. *J. Am. Acad. Dermatol.* 1994; **31**: 847-8.