

CASE REPORT

Effective use of methylprednisolone aceponate 0.1% in a 9-month-old infant with atopic eczema and sleep disturbance

S. Machado*

Department of Dermatology, Hospital de Santo António, Centro Hospitalar do Porto, Porto, Portugal

*Correspondence: S. Machado. E-mail: susanamlmachado@gmail.com

Abstract

A 9-month-old infant, with no family history of atopy, presenting with erythematous, itchy plaques, and sleep disturbance, was diagnosed with atopic eczema (AE). Previous treatment with topical hydrocortisone and emollients had little effect. The infant was treated nightly with methylprednisolone aceponate (MPA) 0.1% (Advantan®) cream, in addition to emollients and an oral antihistamine. After 1 week of once-daily MPA 0.1% treatment, followed by 1 week of alternate-day treatment with Advantan, significant improvements in AE symptoms and sleep were observed. The patient's caregiver reported overall treatment satisfaction and no side effects of Advantan. For this infant with newly diagnosed AE, Advantan improved symptoms and sleep quality in a safe and well-tolerated manner.

Introduction

Atopic dermatitis (AD) is an itchy and relapsing inflammatory skin disease. Most (60%) paediatric patients with AD present with symptoms before the age of 1 year; an additional 10% present symptoms before the age of 2 years.¹ AD is often associated with asthma and allergic sensitization. The pathophysiology of AD is complex, involving a combination of genetic factors and immune dysregulation with environmental factors and skin barrier alterations. The acute phase consists of erythematopapulous lesions, sometimes vesicular, with a tendency toward oozing and crust formation. In the chronic phase, AD is usually manifested by scaly plaques. The pruritus leads to persistent rubbing and scratching, thus inducing skin thickening and lichenification. Infants typically present with erythematous papules and vesicles on the cheeks, forehead or scalp, which are intensely pruritic. These lesions can extend over the whole body surface, mainly on the face and the extensor surfaces of limbs and trunk, but generally spare the nose, the nasolabial and the napkin area. During childhood, the lesions occur preferentially in the flexures of the limbs, and afterwards also predominate in the hands and feet.²

Patient presentation and history

A 9-month-old male infant presented with erythematous and itchy plaques resulting in sleep disturbance over a period of 3 months. The patient had been previously treated with topical hydrocortisone 1% and emollients with little improvement. There was no family history of atopy.

Clinical examination

Upon physical examination, the patient had widespread erythematous, scaling plaques on the trunk and limbs, with severe eczema on the nipple areas (Fig. 1). Immunological study showed high IgE level (710 KU/L; normal <153), with no other abnormal laboratory results.



Figure 1 Appearance of erythematous, scaling plaques on the trunk of a 9-month-old infant prior to treatment.



Figure 2 Significant improvement and clearing of AD symptoms on the trunk after after 1 week of once-daily MPA 0.1% cream treatment, followed by 1 additional week of treatment on alternate days.

Diagnosis

Atopic eczema.

Treatment and follow-up

Application of methylprednisolone aceponate (MPA) 0.1% (Advantan[®], Intendis, Berlin, Germany) cream at night, in addition to emollients and an oral antihistamine, was prescribed once daily for 1 week, and on alternate days for one additional week.

Disease course

After 2 weeks of treatment, the patient experienced significant improvement in the dermatitis with an almost clear result (Fig. 2), as well as improvement in sleep quality. No side-effects were reported by the boy's caregiver.

Discussion

The prevalence of AD varies widely between different countries. In Portugal, according to the ISAAC (International Study of Asthma

and Allergies in Childhood), the prevalence is 9.3% in children aged 6–7 years and 5.2% between 13- and 14-year olds.³ Topical corticosteroids (TCs) are the first-line treatment in AD. Lower potency TCs may be sufficient in younger children, but lichenified AD usually requires more potent preparations, sometimes over longer periods of time. There is little evidence that the application of TCs twice daily is more effective than once-daily applications; in fact, a more frequent use may cause more local side-effects.⁴ Rapid, effective treatment of AD in infants is important for alleviating AD symptoms (i.e. scratching, sleep/feeding problems) in the short term, and to prevent more intractable complications [i.e., chronification of AD, decrease in quality of life (QoL)] in the long term. In this case, treatment with once-daily MPA 0.1% cream significantly cleared the scaling, erythematous lesions and improved sleep quality of an infant suffering from a widespread flare. Treatment was well tolerated and the patient's caregiver reported overall treatment satisfaction.

Conflicts of interest

SM has declared no conflicts of interest.

References

- 1 Kay J, Gawkrödger DJ, Mortimer MJ *et al.* The prevalence of childhood atopic eczema in a general population. *J Am Acad Dermatol* 1994; **30**: 35–39.
- 2 Akdis CA, Akdis M, Bieber T *et al.* Diagnosis and treatment of atopic dermatitis in children and adults: European Academy of Allergology and Clinical Immunology/American Academy of Allergy, Asthma and Immunology/PRACTALL Consensus Report. *J Allergy Clin Immunol* 2006; **118**: 152–169.
- 3 Lopes C, Duarte AF, Correia O *et al.* Atopic dermatitis, innate immunity and infection. *Dermatol Online J* 2011; **17**: 4.
- 4 Williams HC. Atopic dermatitis. *N Engl J Med* 2005; **352**: 2314–2324.