Acta Derm Venereol (Stockh) 1992; 72: 436–437

Cyclosporin A Responsive Chronic Severe Vesicular Hand Eczema

CARSTEN SAND PETERSEN and TORKIL MENNÉ

Department of Dermatology, Gentofte Hospital, Copenhagen, Denmark

A patient with an otherwise recalcitrant chronic vesicular hand eczema responded with a dramatical improvement within 2 weeks of cyclosporin A (CsA) therapy 5.0 mg/kg daily. The patient was still free of eczema in spite of reducing the CsA dose to 2.5 mg/kg daily. CsA therapy was finally stopped due to a moderate increase in blood pressure, resulting in rapid recurrence of the hand eczema. The case report clearly demonstrates that oral CsA should be considered in patients with severe hand eczema that cannot be controlled on conventional immunosuppressive treatments.

(Accepted May 25, 1992.)

Acta Derm Venereol (Stockh) 1992; 72: 436–437.

C. Sand Petersen, Department of Dermatology, Gentofte Hospital, DK-2900 Hellerup, Denmark.

Oral cyclosponin A (CsA) has documented effects in several skin diseases such as psoriasis, atopic dermatitis, lichen planus and alopecia areata (1, 2).

Activation of T-lymphocytes plays a crucial role in the maintenance of the inflammatory reaction of patients with allergic contact dematitis and hand eczema. Theoretically, CsA is therefore a candidate as an immunosuppressive agent in patients with chronic aggressive hand eczema. Studies on allergic contact dermatitis in animals (3, 4), in humans (5, 6) and studies on alopecia areata (7, 8) indicate that topically administered CsA can inhibit the elicitation of allergic contact dermatitis. However, the response rate of topical CsA in allergic contact dermatitis is low (9, 10).

To the best of our knowledge, no publications describing oral CsA treatment of such patients have, so far, been published. We report here a male patient with severe chronic vesicular hand eczema, unresponsive to conventional treatment modalities, that cleared during oral CsA therapy.

CASE REPORT

A 68-year-old male patient with a chronic vesicular hand eczema of more than 40 years' duration was referred to the department in 1987. Previous patch tests had shown positive reactions to nickel, chrome, formalin and cholefonium. Intensive local treatment with potent steroids and tar preparations had only a modest transient beneficial effect. The hand eczema did not clear on the following treatment modalities; azathioprine 100 mg daily alone or in combination with prednisolone 15–25 mg daily for several months, methotrexate 25 mg weekly for 6 months and PUVA phototherapy. A diet with low nickel content did not improve the eczema. The patient did not use any products containing formalin. A clinical picture of the hand eczema is shown in Fig. 1.

In October 1991, treatment with CsA 400 mg daily (5.0 mg/kg) was started; within 1 week vesicles disappeared and after 2 weeks only minimal scaling remained. Total clearing of the eczema with normalization of the fine texture of the palms was obtained after 4 weeks of therapy (Fig. 2A). The CsA dose was then reduced to 200 mg daily (2.5 mg/kg) and further reduced to 150 mg daily 4 weeks later. At that time minimal scaling and some vesicles reappeared, but still the hands had improved compared with previous status. Due to a moderate increase in blood pressure, from 140/90 to 170/100, treatment was stopped in March 1992, resulting in prompt recurrence of the hand eczema (Fig. 2B). No other side effects, notably no renal toxicity, were observed during the treatment period.

DISCUSSION

To our patient, who had not experienced any eczema-free periods for the past 40 years, it was a great relief finally to obtain a normalization of the skin of the palms during CsA therapy. Previous aggressive systemic immunosuppressive treatments had been unsuccessful. A low dose of CsA of 2.5 mg/kg daily seemed to be sufficient to control the eczema in our patient. This is of the utmost importance since the nephrotoxicity is limited in patients receiving such low doses of CsA (11). Dose-titration studies, however, should be performed to evaluate this aspect further.

We were surprised by the very rapid onset of the anti-inflammatory action of CsA in our patient. However, recurrence of the eczema took place within a few days after stopping CsA therapy, which in this respect mimics the phenomenon observed among CsA-treated psoriatic patients.

The inefficacy of topical CsA formulations in patients with contact dermatitis is probably related to inadequate skin penetration (6, 9), and this fact does not exclude the possibility of oral CsA having an effect on these patients.

The moderate hypertension diagnosed in our patient could easily have been treated with anti-hypertensive drugs. However, we decided to stop the experimental therapy. The patient clearly would have preferred to continue on CsA under simultaneous anti-hypertensive medication.

We conclude that CsA treatment should be considered in patients with othervise therapy-resistant chronic hand eczema

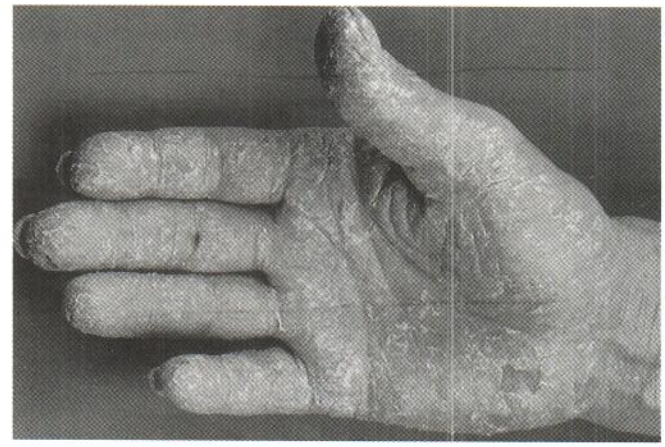

Fig. 1. Chronic vesicular hand eczema before oral cyclosporin A therapy.

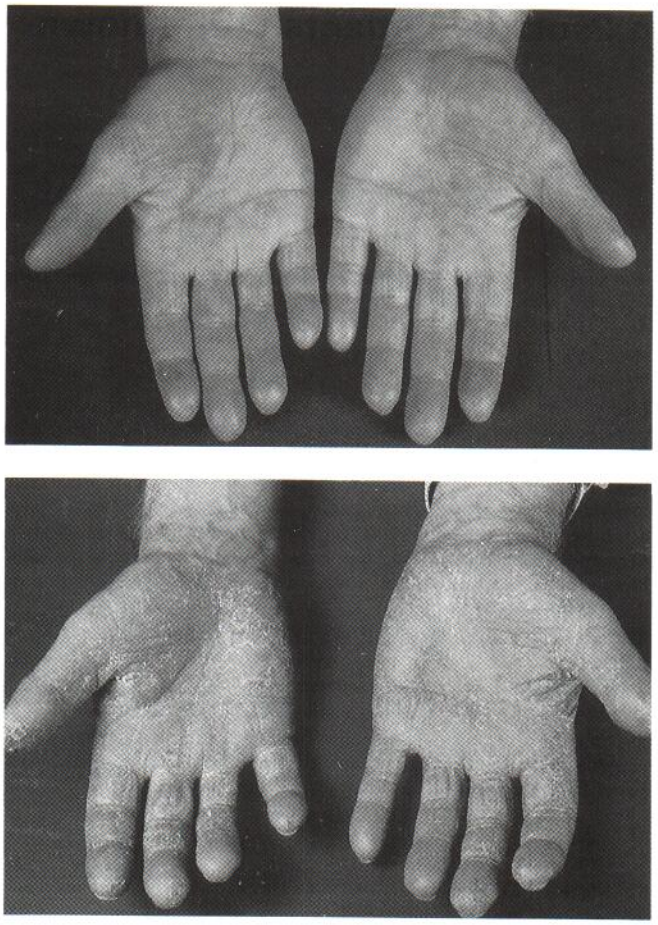

Fig. 2. Total clearing of hand eczema during oral cyclosporin A 2.5–5.0 mg/kg daily (A). Recurrence of hand eczema 2 weeks after stopping cyclosporin A therapy (B).

or where other forms of immunosuppressive therapy have produced unacceptable adverse effects. However, only the results of larger controlled studies will enable us to determine the role of oral CsA therapy in patients with severe hand eczema.

REFERENCES

1. Gupta AK, Ellis CN, Nikoloff BJ, et al. Oral cyclosporin in the treatment of inflammatory and non-inflammatory dermatoses. Arch Dermatol 1990; 126: 339–350.
2. Bos JD, Meinardi MMHM, Van Joost T, et al. Use of cyclosporin on psoriasis. Lancet 1989; *ii*: 1500–1502.
3. Aldridge RD, Thomsen AW, Rankin R, et al. Inhibition of contact dermatitis to DNFB by cyclosporin application in guinea-pig. Clin Exp Dermatol 1986; 59: 23–28.
4. Nakagawa S, Oka D, Jinno Y, et al. Topical application of cyclisporin on guinea pig allergic contact dermatitis. Arch Dermatol 1988; 124: 907–910.
5. Aldridge RD, Sewell HF, King G, at al. Topical cyclosporin A in nickel contact hypersensitivity: results of a preliminary clinical and immunochemical investigation. Clin Exp Immunol 1986; 66: 582–589.
6. Cole GW, Shimomaye S, Goodman M. The effect of topical cyclosporin A on the elicitation phase of allergic contact dermatitis. Contact Dermatitis 1988; 19: 129–132.
7. Thomsen AW, Aldridge RD, Sewell HF. Topical cyclosporin in alopecia areata and nickel contact dermatitis. Lancet 1986; *ii*: 971–972.
8. De Prost Y, Teillac D, Paquez F, et al. Placebo-controlled trial of topical cyclosporin in severe alopecia areata. Lancet 1986; *ii*: 803–804.
9. De Rie MA, Meinardi MMHM, Bos JD. Lack of efficacy of topical cyclosporin A in atopic dermatitis and allergic contact dermatitis. Acta Derm Venereol (Stockh) 1991; 71: 452–454.
10. Henle F, Laijendecker R, Van Joost Th. Topical cyclosporin A treatment in psoriasis and other dermatological diseases: theoretical and practical aspects. J Dermatol Treat 1992; 2: 149–153.
11. De Rie MA, Meinardi MMHM, Bos JD. Analysis of side effects in medium and low-dose cyclosporin A maintenance therapy in psoriasis patients. Br J Dermatol 1990; 123: 347–353.