British Journal of Dermatology 1996; **135**: 644–646.

Successful treatment for acrodermatitis continua of Hallopeau using topical calcipotriol

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Accepted for publication 14 February 1996

Summary We report a 71-year-old woman who had severe inflammatory acrodermatitis continua of Hallopeau. The administration of local remedies, soft X-rays and a number of systemic treatments resulted only in transient and incomplete resolution of the lesions. The pustules, increased skin fragility, tender oedema and erythema were successfully controlled by the local administration of calcipotriol.

Acrodermatitis continua of Hallopeau[1] is a rare, chronic pustular eruption of the digits. Trauma is often a precipitating factor. Affected individuals suffer from acute episodes, often for no apparent reason, and these may lead to nail destruction and skin atrophy.[2] We report a patient with acrodermatitis continua whose disease was resistant to numerous treatments but was finally controlled by topical calcipotriol.

Case report

A 71-year-old woman with mild, clinically well-compensated congestive heart disease developed red, scaly, pustular and tender plaques on the distal portion of the right hallux (Fig. 1). The lesions spread proximally, following partial avulsion of the nail performed by a general practitioner. There was no family or previous personal history of psoriasis. At the time of diagnosis, the patient suffered from hyperaesthesia of the toe, which necessitated the use of a walking-stick and sometimes a wheelchair. The patient also had problems in finding suitable shoes. A diagnosis of acrodermatitis continua of Hallopeau was made clinically.

Laboratory investigations revealed elevation of the alkaline phosphatase (5·6 μkat/L, normal $< 4{\cdot}7$), gamma-glutamyl-transferase (1.34 μkat/L, normal $< 0{\cdot}80$), and creatinine (125 μmol/L, normal < 110). The erythrocyte sedimentation rate and urate levels were within normal limits. Mycological cultures were negative and an X-ray showed osteopenia but no gout-associated destruction or tophi.

Over a 4-year period, various therapeutic regimens including topical remedies (e.g. emollients, salicylic acid, dithranol, tar, and steroids), soft X-rays (3·9 Gy once weekly $\times 6$, and another 3·9 Gy $\times 6$ after a 6-month interval), colchicine (1·5 mg/day), and sulphasalazine (2000 mg/day) failed to reduce the lesions or symptoms. Etretinate (0·75 mg/kg) gave minor benefit but, after 4 months of treatment, it was stopped mainly because of severe diffuse alopecia. Due to the continuing development of pustules, redness, scaly plaques and soreness, we started calcipotriol. The calcipotriol ointment (50 μg/g, Leo Pharmaceutical Products, Copenhagen, Denmark) was applied twice daily to the right hallux. The therapy was well tolerated. After 6 weeks treatment there were marked reductions in the lesions and symptoms. All other treatments were stopped. The clinical picture, after 6 months of calcipotriol treatment, is shown in Figure 2. To date, after a total of 18 months follow-up, the patient has had only minor recurrences which have responded to calcipotriol treatment. Most subjective symptoms have been greatly reduced; she can walk without a walking-stick, and can use normal shoes.

Discussion

The first lesion of acrodermatitis continue of Hallopeau starts on one digit, and, eventually, other digits may be involved.[3] In our patient, the disease was restricted to one toe. The treatment for acrodermatitis continua of Hallopeau is known to be more difficult than for other chronic pustular diseases, e.g. persistent palmoplantar pustulosis, and numerous local or systemic medications, have been employed, with varying results.

Our patient did not respond to a variety of different treatments including soft X-rays, colchicine and sulphasalazine. Etretinate had to be stopped because of

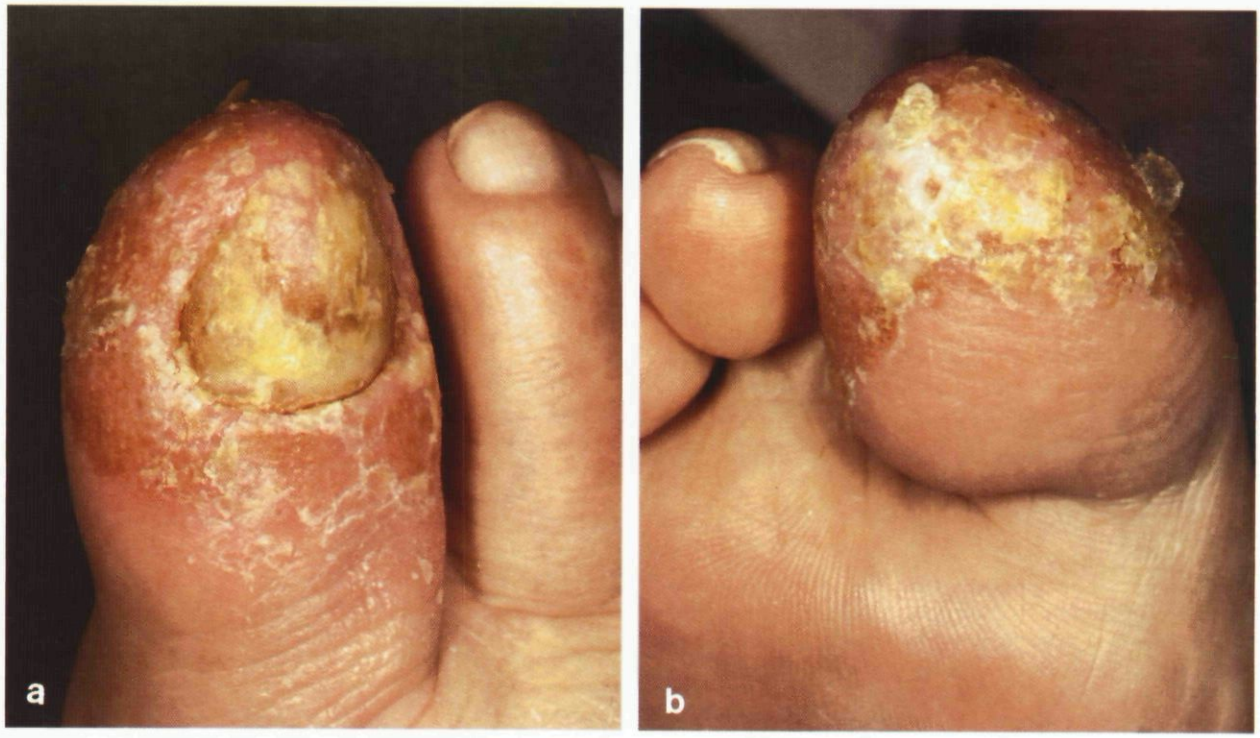

Figure 1. (a,b) Acrodermatitis continua of Hallopeau on the right big toe of a 71-year-old woman.

side-effects. We therefore prescribed calcipotriol, and the formation of new pustules was almost completely suppressed, allowing normal walking and the wearing of normal shoes. The other treatments were discontinued without any increased activity of the disease.

Topical calcipotriol therapy has been successfully employed for various types of psoriasis, mainly chronic plaque, and some anecdotal communications concerning pustular forms have been published.[4,5] However, we have not found any previous paper on the use of calcipotriol for acrodermatitis continua of Hallopeau. It is difficult to speculate about the possible mechanism of the drug in this disease, but it is known that

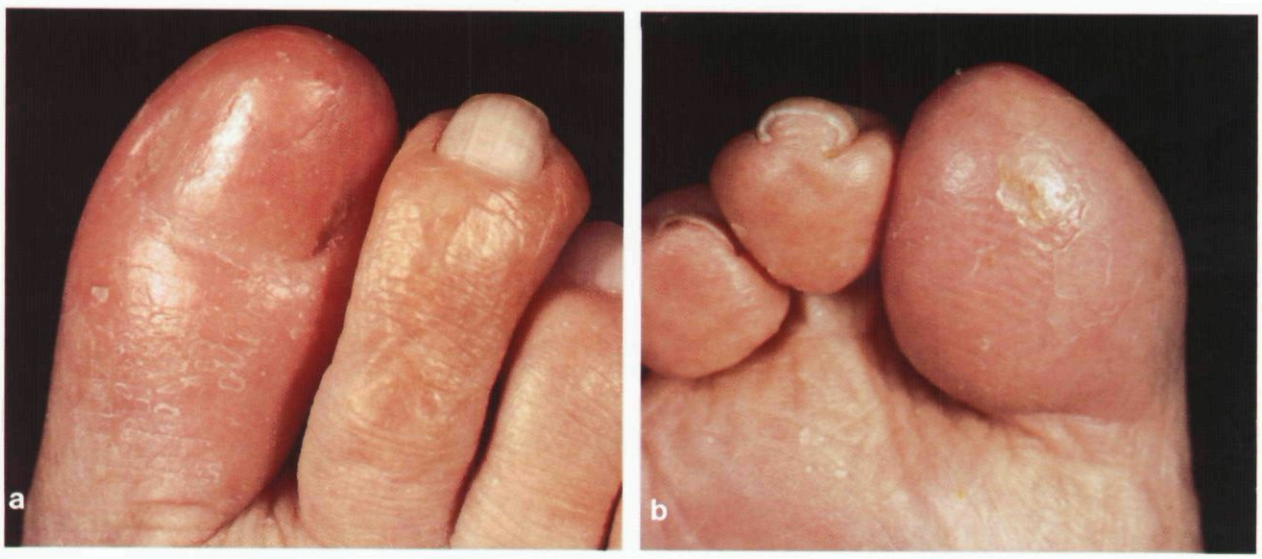

Figure 2. (a,b) Essentially complete healing is seen after 6 months treatment with twice daily calcipotriol (50 μg/g) ointment.

calcipotriol inhibits epidermal proliferation and promotes epidermal differentiation.[6]

The fact that a large number of patients with severe acrodermatitis continua of Hallopeau are non-responsive to standard treatment is reflected by the numerous reports of clinical trials, e.g. with etretinate,[7] acitrecin,[8] cyclosporin,[9–11] sulphones,[12] topical fluorouracil,[13] methotrexate,[14] steroids[15] and hydroxyurea.[16] A comparison of these treatments with calcipotriol is clearly in favour of the latter with regard to patient acceptability and monitoring. When immunosuppressive or other systemic treatments are needed for acrodermatitis continua of Hallopeau, as for psoriasis, dosage reduction might be possible by concurrent use of calcipotriol.[17]

References

1 Hallopeau MH. Sur une asphyxie locale des extremities avec polydactylite suppurative chronique et pousse's ephemeres de dermatite pustuleuse disseminée et symétrique. *Soc Fr Dermatol Syph Bull* 1890; **1:** 39–45.

2 Baker H, Ryan TJ. Generalised pustular psoriasis. A clinical and epidemiological study of 104 cases. *Br J Dermatol* 1968; **80:** 771–93.

3 Camp RDR. Psoriasis. In: *Textbook of Dermatology* (Champion RH, Burton JL, Ebling FJG, eds), 5th edn, Vol. 2. Oxford: Blackwell Scientific Publications, 1992; 1391–457.

4 Berth-Jones J, Bourke J, Bailey K *et al.* Generalised pustular psoriasis: response to topical calcipotriol. *Br Med J* 1992; **305:** 868–9.

5 Berth-Jones J, Hutchinson PE. Efficacy and safety of cacipotriol. *Rev Contemp Pharmacother* 1992; **3:** 367–75.

6 Kragballe K. Vitamin D analogues in the treatment of psoriasis. *J Cell Biochem* 1992; **49:** 46–52.

7 Wolska H, Jablonska S. Etretinate in severe psoriasis. *J Am Acad Dermatol* 1983; **9:** 883–9.

8 van Dooren-Greebe RJ, van de Kerkhof PC, Chang A, Happle R. Acitrecin monotherapy in acrodermatitis continua Hallopeau. *Acta Derm Venereol (Stockh)* 1989; **69:** 344–6.

9 Zachariae H, Thestrup-Pedersen K. Ciclosporin A in acrodermatitis continua. *Dermatologica* 1987; **175:** 29–32.

10 Cecchi R, Bartoli L, Brunetti L *et al.* Cyclosporin A in the treatment of acrodermatitis continua. *Eur J Dermatol* 1993; **3:** 452–3.

11 Lavaroni G, Kokelj F. Hallopeau's acrodermatitis treated with cyclosporin A—a case report. *J Dermatol Treat* 1994; **5:** 209–10.

12 Lang PG. Sulfones and sulfonamides in dermatology today. *J Am Acad Dermatol* 1979; **1:** 479–92.

13 Tsuji T, Nishimura M. Topically administered fluorouracil in acrodermatitis continua of Hallopeau. *Arch Dermatol* 1991; **127:** 27–8.

14 Thomsen K. Pustulosis palmaris et plantaris treated with methotrexate. *Acta Derm Venereol (Stockh)* 1971; **51:** 397–400.

15 Robinson TWE. The treatment of pustular dermatoses of the extremities with oral triamcinolone. *Br J Dermatol* 1966; **78:** 158–60.

16 Hattel T, Søndergaard J. Pustulosis palmoplantaris treated with hydroxyurea. *Acta Derm Venereol (Stockh)* 1974; **54:** 152–4.

17 Lebwohl MG. The evolution of vitamin D analogues for the treatment of psoriasis. *Arch Dermatol* 1995; **131:** 1323–4.