

Case report

Delayed hypersensitivity to 6-methyl-prednisolone in Henoch Schönlein syndrome

Astone A, Romano A, Pietrantonio F, Garcovich A, Venuti A, Barone C. Delayed hypersensitivity to 6-methyl-prednisolone in Henoch Schönlein syndrome. *Allergy* 1992; 47: 436–438.

We report a case of allergic reaction to oral 6-methyl-prednisolone in a patient with Henoch Schönlein syndrome. When this syndrome was first diagnosed the patient was started on 6-methyl-prednisolone orally and after 4 days he developed a pruriginous generalized maculo-papular eruption. The rash disappeared 1 week after withdrawal of 6-methyl-prednisolone. The skin tests performed 1 month after with main food allergens were negative. Patch test with 0.10 ml of solution containing 6-methyl-prednisolone 40 mg/ml was positive after 48 and 72 h. The cutaneous biopsy on the patch tested skin revealed a perivascular infiltrate of lymphocytes, histiocytes and eosinophils.

The most common hypersensitivity reaction to corticosteroid is contact allergy from topical use (3). A few cases of systemic reactions to parenteral hydrocortisone therapy have been reported, mainly in asthmatic patients. Here we report a case of allergic reaction to oral 6-methyl-prednisolone in a patient with Henoch Schönlein syndrome.

Case report

A 40-year-old man presented with purpuric skin lesions on the lower extremities associated with oedema, itching, joint and muscular pain. On admission VES was 21 mm/h, hematological and biochemical findings were within the normal range except for polyclonal increase in serum IgA (702 mg/dl) and slight albuminuria. Circulating immune-complexes and complement serum levels, during the cutaneous eruption, were within the normal range. Biopsy of the kidney revealed segmental glomerulonephritis with mesangial deposition of IgA and C3. A Henoch Schönlein syndrome with renal involvement was diagnosed.

The patient was started on 6-methyl-prednisolone (Urbason Retard®) at a dose of 48 mg/die orally.

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One tablet of Urbason Retard contains 6-methyl-prednisolone (8 mg) and the following additives: saccharose, lactose, talc, cornstarch, calcium carbonate, cellulose acetophthalate, liquid glucose, gum arabic, castor oil, gelatine, magnesium stearate, polyethylenglycole 6000, glycerine. After 4 days the patient developed a pruriginous generalized maculo-papular eruption. 6-methyl-prednisolone was immediately withdrawn and the rash disappeared in 1 week. The patient was submitted to therapy with Betametasone (Bentelan®) (1.5 mg/day orally), after which the maculo-papular eruption and all clinical symptoms disappeared.

Allergological studies

The patient was first examined for food allergy. The skin tests (prick, intradermal injection, prick by prick), performed 1 month after drug withdrawal, with main food allergens (milk, egg, fish, wheat, soya, vegetables) were negative. The radioimmuno-logical assay for food allergens specific serum IgE (RAST-Pharmacia) was negative, whereas the total amount of serum IgE (PRIST – Pharmacia) was 8 kU/l. Skin tests (prick, intradermal injection)

performed with 6-methyl-prednisolone were negative. Patch test, performed with 0.10 ml of solution containing 6-methyl-prednisolone sodium hemisuccinate 40 mg/ml, sodium phosphate and monosodium phosphate in bidistilled water, was positive after 48 and 72 h. Five control patients, one of whom with Henoch Schönlein syndrome, were negative. The oral challenge tests with the additives contained in the tablet of Urbason Retard and in the solution used for the patch test were negative.

The cutaneous biopsy on the patch-tested skin revealed a dense inflammatory cell infiltrate around the superficial vascular plexus, focal spongiosis of epidermis and slight exocytosis. The inflammatory cell infiltrate consisted mainly of lymphocytes, histiocytes and numerous eosinophils.

Discussion

Although still controversial for non-eczematous reactions, the patch test is a valuable *in vivo* test for confirming a delayed hypersensitivity. In patients with penicillin hypersensitivity positive patch tests were found only in the group with late onset of symp-

toms; these patients had protean clinical patterns which more frequently consisted of maculo-papular rashes (2). Our patient had a maculo-papular eruption beginning 4 days after the consumption of 6-methyl-prednisolone medication; these clinical findings combined with patch test positivity and the histological picture of the tested skin strongly suggest a delayed hypersensitivity to 6-methyl-prednisolone.

Since the first report by King (4), an immediate-type hypersensitivity pattern has been associated with allergic reaction to parenteral corticosteroids. The same pattern has been produced either by intravenous 6-methyl-prednisolone or by intravenous and intra-articular hydrocortisone (1, 5, 6, 7, 8). All these reports concerned asthmatic patients, mostly with a history of aspirin sensitivity, and the authors suggested that anaphylactoid reactions to intravenously administered hydrocortisone are more common in such patients.

Apart from the different pattern of hypersensitivity, other features should be emphasized in our patient. He was not asthmatic and he never presented allergic reactions to drugs, particularly to aspirin. However, he was affected by Henoch Schönlein

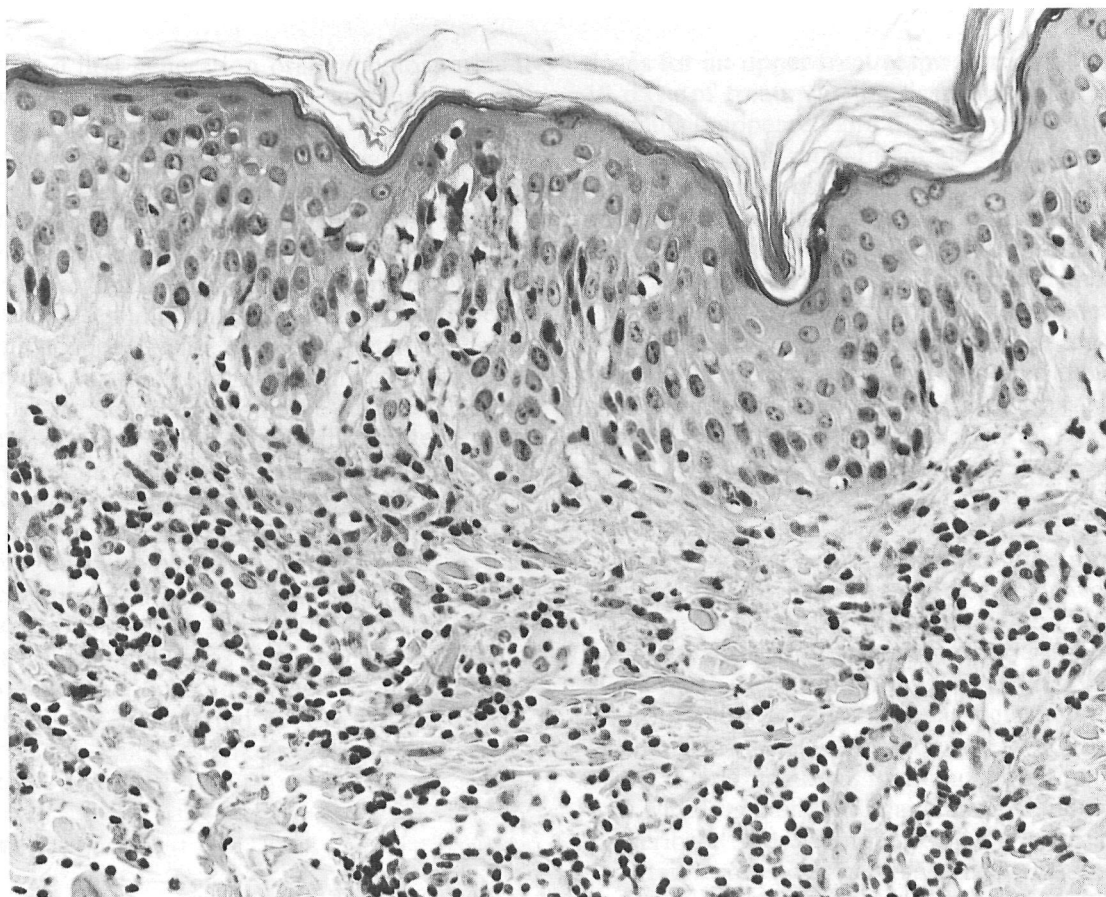


Fig. 1. Cutaneous biopsy shows a dense inflammatory cell infiltrate around the superficial vascular plexus, focal spongiosis of epidermis and slight exocytosis.

disease, that can be associated with food or pharmacological hypersensitivity. A pathogenetic linkage between Henoch Schönlein disease and delayed drug hypersensitivity has never been demonstrated. We consider that the pattern of hypersensitivity to 6-methyl-prednisolone could somehow be related to the other clinical features in our patient, but, for the present, the nature of such a relationship remains unknown.

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