

Contact allergy to mometasone furoate with cross-reactivity to group B corticosteroids

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Mometasone furoate is a synthetic 16 alpha-methyl analogue of beclomethasone and classified as a potent topical glucocorticoid with low risk of skin atrophy in spite of strong anti-inflammatory activity (1). Contact allergies to mometasone furoate have only been recognized rarely (1–5). Mometasone furoate is not mentioned in the Coopman classification (Table 1), which divides corticoids into 4 cross-reactive chemical groups A–D (6–8).

Case Report

A 70-year-old patient presented with distinct contact dermatitis on the right forearm and hands 7 days after application of Ecural Fettcreme® (mometasone furoate 0.1%) because of Granuloma anulare.

After 4 weeks patch testing (Finn chambers on Scanpor® from Hermal, Reinbek, Germany) with the standard-, ointments-, preservatives-, and corticosteroid series as well as Ecural Fettcreme® (as is) showed positive reactions at the 2 D and 3 D readings to Ecural Fettcreme® (–/+), budesonide 0.1%/pet. (–/++), amcinonide 0.1%/pet. (?/++), and a doubtful reaction to triamcinolone acetanide 0.1% (–/?), all being classified as group B. No reactions were recognized to hydrocortisone-17-butyrate 0.1%/pet., betamethasone-17-valerate 0.12%/pet., and clobetasone-17-butyrate 0.25%/pet. (all group D) or other corticosteroids of the series. A subsequent repetitive open application test with Ecural Fettcreme® induced massive contact dermatitis after 3 days. Further, occlusive patch testing with mometasone furoate showed clearly positive reactions

Table 1. Classification of corticosteroids (6)

Group	Corticoid name
A	Hydrocortisone
	Tixocortol pivalate
	Prednisone
	Medprednisone
	Prednisolone
B (acetone group)	Methylprednisolone
	Triamcinolone acetone
	Amcinonide
	Budesonide
	Desonide
C	Betamethasone
	Dexamethasone
	Desoximetasone
	Hydrocortisone-17-butyrate
D (ester group)	Prednicarbate
	Alclometasone-17-propionate
	Clobetasone-17-butyrate
	Betamethasone-17-valerate

(0.01%/pet.: -/+/, 0.1%/pet.: -/+/, Fig. 1). The patient denied ever using amcinonide or budesonide topically or systemically before. He described a rash after Advantan® milk (methylprednisolone aceponate 0.1%) in the past. In contrast, he later tolerated Laticort® ointment (hydrocortisone butyrate 0.1%) well.

Discussion

Our case implicates a possible preference of cross reactions between

mometasone furoate and corticosteroids of the acetone-like group B, because our patient denied having ever been in contact to amcinonide and budesonide to which he was also sensitized, as well as to triamcinolone. In contrast, he did tolerate ester-like group D substances.

Commonly, mometasone furoate is considered as a drug of low allergenic potential (1–5). Chow describes a patient with cross-reactions between mometasone furoate and group D corticosteroids (3). Additionally, a positive reaction to budesonide (group B)

was recognized, which is known as an allergen being cross-reactive to group B and D corticoids (3, 8). Other literature reports a mometasone furoate-sensitized patient with multiple reactions to group B, C, and D corticoids (7). Thus, it is difficult to classify mometasone furoate because of the Coopman's classification or predict allergic reactions of possible eluding preparations, respectively. However, mometasone should be considered as contact allergen in exceptional cases.

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Fig. 1. Patch test results to mometasone furoate (a, 0.01% at 3 D; b, 0.1% at 3 D; and c, 0.1% at 4 D).