

Delayed hypersensitivity to deflazacort

DEFLAZACORT is a recently marketed systemic oral glucocorticoid (Fig. 1) derived from prednisolone and distinguished by a 16- α -17- α -2 metil-oxazolinic condensation ring.

■ On several occasions, a 34-year-old woman had observed the local appearance of vesicular and pruriginous lesions with inflammatory component, in areas affected by mosquito bites, after the topical administration of Celestoderm Gentamicina (betamethasone valerate 0.1%, gentamicin sulfate 0.1%, Schering Plough). In order to improve this medical record, deflazacort, which the patient had never used before, was prescribed. An hour after the first dosis of 15 mg oral Dezacor 30 (Marion Merrel Dow), the patient started to experience nasal fossae edema, vesicular lesions and scabs subsequently appearing in the following days, and dermatitis in the extremities. This condition improved after administration of 40 mg of 6-methylprednisolone i.m.

■ Patch tests were carried out with a commercial preparation of corticoids and with their components (Table 1), special attention being paid to the additives of allergologic interest. Since we could not find any references on deflazacort and did not have experience with the drug, it was tested in five controls, giving negative results. From corticosteroid powders (not commercial formulations), we prepared solutions in ethanol or petrolatum (1-3), obtaining positive results with hydrocortisone, budesonide, and betamethasone dipropionate, and negative results with tixocortol pivalate, prednisone, and dexamethasone. We also carried out epicutaneous tests with corticoid commercial formulations, obtaining positive results with dexamethasone, hydrocortisone, and negative results with 6-methylprednisolone, paramethasone, and momethasone furoate.

■ For the prick test and intradermal reaction, a deflazacort extract in saline solution was also prepared, but could not be used since it was not totally soluble except in acetic acid. An aqueous solution of betamethasone sodium phosphate was tested. The prick material was purified and dilutions of a saline solution from 1/1000 to 1/10 were made for the intradermal reaction. Immediate prick and intradermal tests were negative. After 24 h, the patient observed the appearance of pruritus, vesicu-

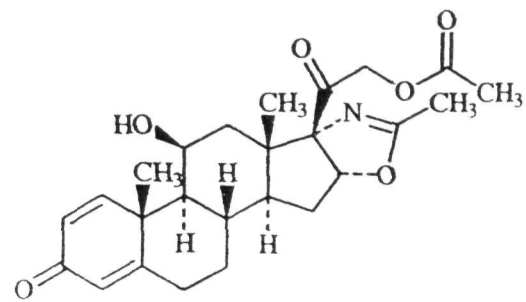


FIGURE 1 Deflazacort: chemical structure.

lar and indurated, with a more intense reaction in the puncture areas, and a delayed positive reaction.

■ In the provocation test, the administration of momethasone furoate topical commercial formulations (Elocom, Schering-Plough) and parenteral 6-methylprednisolone (Urbason, Hoechst) was tolerated.

■ When a patient presents type IV hypersensitivity to one corticoid, the drug usually cross-reacts with others, especially those belonging to the same structural group (4). In other cases, polysensitivity to different corticoids may exist (5, 6). Deflazacort is similar in structure to methylprednisolone (a drug tolerated by the patient) with an oxazolinic C17 bond. The fact that the reaction occurred the first time that the patient took this drug could be explained if a cross-reaction with other topical corticoids, such as betamethasone, previously administered was present. At any rate,

Contact dermatitis to several corticosteroids may indicate cross-reactivity.

Table 1. Patch tests with commercial formulations and their components

	48 h	96 h
Celestoderm Gentamicina Crema	+++	+++
Betamethasone valerate 0.1%		
Gentamicin sulfate 0.1%		
excp.		
Dezacor 30 comp. vaseline 20%	++	++
Deflazacort		
excp.		
Drugs		
Betamethasone valerate 1% ethanol	+++	+++
Gentamicin sulfate 10% vaseline	—	—
Deflazacort 1% ethanol	+++	+++
Deflazacort 10% petrolatum	++	++
excp.		
Chlorocresol 2% vaseline	—	—
Petrolatum	—	—
Cornstarch 10% vaseline	—	—
Magnesium stearate 10% vaseline	—	—

deflazacort generally follows the same metabolic route of all the corticoids.

The patient has shown a positive reaction to betamethasone in three ways of presentation (betamethasone sodium phosphate, belonging to group C, and betamethasone dipropionate and valerate, both included in group D (4). Momethasone also belongs to group D, and is a substance tolerated as well by the patient, confirming in this case that this corticoid does not usually cross-react with others (7).

The final diagnosis was hypersensitivity type IV to betamethasone, dexamethasone, budesonide, hydrocortisone, and deflazacort, but we could not find any bibliographic reference on the last drug. We have indicated for the patient treatment with topical momethasone or 6-methylprednisolone by oral or parenteral administration if needed.

Key words: contact dermatitis; corticosteroid cross-reactivity; deflazacort.

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Anaphylactic-type reaction to hymecromone

HYMECROMONE (H) (7-hydroxy-4-methylumbelliferone, 7-hydroxy-4-2H-1-benzopyran-2-one), a coumarin derivative without anticoagulant effect, has both true choleretic and antispasmodic effect (1-3) when administered orally or intravenously (1, 2). Furthermore, it is used as a reagent in the determination of nitric acid (3). H has a low molecular mass (176.16 Da). It is soluble in meth-

anol and glacial acetic acid, slightly soluble in ether and chloroform, and practically insoluble in cold water (3). This drug rarely produces adverse effects in therapeutic doses. Diarrhea may occasionally occur (2). Accordingly, we reviewed the literature (Medline database from 1966 to January 1996, inclusive) with emphasis on adverse reactions to H, but no associated reactions have been reported; hence, the interest of our case.

A 63-year-old woman, without previous history of allergy, presented cutaneous pruritus, systemic urticaria, and angioedema of the face and hands 20-30 min after eating codfish, eggs, potatoes, lettuce, tomatoes, and cake, and taking one tablet (400 mg) of Bilicanta[®] (hymecromone). The patient had tolerated these foods previously and after the reaction, but she did not remember taking Bilicanta before. Six months after this episode, she was referred to the Allergology Department to determine the cause of the reaction. She had not taken Bilicanta again. The patient gave her written informed consent before the study.

Total serum IgE was 25 UI/ml. Skin prick tests with a standard allergen panel (pollens, mites, molds, animal dander, and food allergens) were negative (ALK Abelló SA, Madrid, Spain).

In addition to H, other drugs with a similar chemical structure were selected for *in vivo* and *in vitro* tests: warfarin and acenocoumarol (coumarin derivatives) and cromoglycate (chromone derivative) (Fig. 1). They were obtained as pure products from the trade-name dealers in Spain. Lymphocyte-transformation tests, human basophil-degranula-

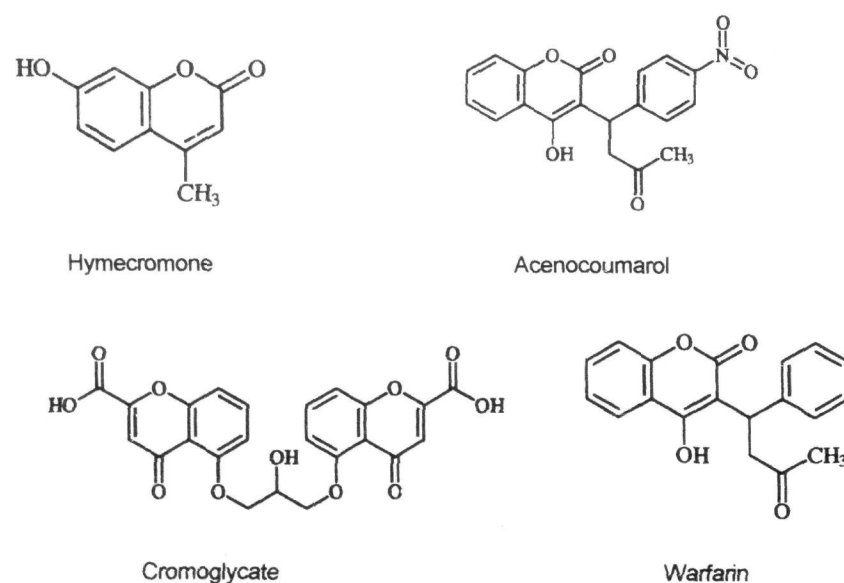


FIGURE 1 Chemical formulas of hymecromone, two other coumarins (warfarin and acenocoumarol), and cromoglycate (chromone derivative).

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