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Allergic contact dermatitis to cetearyl glucoside from a topical drug

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We hereby report two cases of allergic contact dermatitis to cetearyl glucoside from the hyaluronic acid cream Ialuset[®].

Case reports

Patient 1 : a 59-year-old male with no past medical history was referred for subacute eczema on his right foot occurring after application of several topical drugs on the site of a flap reconstruction surgery.

Patient 2 : a 20-year-old female with allergic rhinitis reported a 12-month history of extensive eczema on both hands after treatment of a mild wound with several topical drugs.

Patch tests were first performed in both patients using IQ Ultra patch test chambers with the European baseline series, along with additional series from the REVIDAL-GERDA group and cosmetic series. Patient 1 was also tested with corticosteroids (Chemotechnique, Vellinge, Sweden), a series of hospital-made antiseptics, fragments of the patient's slippers and several topical drugs (superpotent topical steroids, FUCIDINE cream[®] (Mylan, USA), CICAPLAST baume[®] (La Roche-Posay, Paris), IALUSET[®] cream (Laboratoires Genevrier, France), applied "as is". Patient 2 was also tested with rubber series, coco glucoside and personal products including IALUSET[®] cream and fragments of her gloves. Patch tests were read on day (D) 2 and D3 according to ESCD guidelines.

Additional patch-tests were further performed in both patients with the components of the IALUSET[®] cream, kindly provided by the manufacturer, including 2 mixes of cetearyl glucoside and cetearyl alcohol 5%, 10% and 20% pet (SEPINEO SE 68[®] from the manufacturer of IALUSET[®] and from Laboratoire Gravier, France, respectively), cetearyl glucoside 5% pet (Chemotechnique) and 2 different cetearyl alcohol 20% pet (Chemotechnique and La Saponaria, Italy). For patient 1, the manufacturer could not provide us with the components of the FUCIDINE cream[®]. Results of the different patch-tests (Figure 1, Table 1) showed relevant sensitization with cetearyl glucoside in both patients.

Figure legend:

Figure 1. Patch tests reading on D3 in both patients.

A. Patient 1: cetearyl glucoside 5% pet (Chemotechnique) 2+; cetearyl alcohol 20% pet (Chemotechnique)

B. Patient 1: SEPINEO SE 68® 5, 10, 20% pet (Manufacturer of Ialuset® cream) all 2+

C. Patient 2: SEPINEO SE 68® 5, 10, 20% pet (Laboratoire Gravier) all 2+

	Case 1	Case 2
IALUSET cream®	1+ on D2, 2+ on D3	1+ on D2, 2+ on D3
Decyl glucoside (5 % pet) (Chemotechnique)	-/- on D2 and D3	-/- on D2 and D3
Lauryl glucoside (3 % pet) (Chemotechnique)	-/- on D2 and D3	-/- on D2 and D3
Coco glucoside (5% pet) (from personal collection)	Not tested	-/- on D2 and D3
SEPINEO SE 68® (5% , 10%, 20% pet) (from the manufacturer of IALUSET cream®)	All 1+ on D2 and D3	All 1+ on D2 and 2+ on D3
SEPINEO SE 68® (5%, 10%, 20% pet) (Laboratoire Gravier, France)	All 1+ on D2 and D3	All 1+ on D2 and D3
Cetearyl glucoside (5 % pet) (Chemotechnique)	1+ on D2 and D3	1+ on D2 and D3
Cetearyl alcohol (20 % pet) (Chemotechnique and La Saponaria, Italy)	-/- on D2 and D	-/- on D2 and D3

Table 1. Main results of patch testing in both patients with Ialuset® cream-related eczema (D

= day, pet = petrolatum)

Discussion

Alkyl glucosides, elected “allergens of the year 2017” in North America (1), are widely used as surfactants/emulsifiers in cosmetics, topical drugs and household products. Allergic contact dermatitis was mostly reported with decyl and lauryl glucosides, and more rarely with arachidyl and

coco glucosides (2). Only few cases of allergic contact dermatitis have been reported with cetearyl glucoside (CAS Number 246159-33-1)(3), a newly available hapten for patch testing. Previous sensitization to alkyl glucosides may favor further reactivity to other glucosides and cross-reactivity is not uncommon (4), though absent in our cases. Although allergic contact dermatitis to IALUSET[®] cream (5,6) was previously reported, identified allergens were then sodium dehydroacetate or cetearyl alcohol (7) as a component of Lanette SX[®] (cetearyl alcohol, sodium lauryl sulfate and sodium cetearyl sulfate). No sensitization was observed with these two products in our cases.

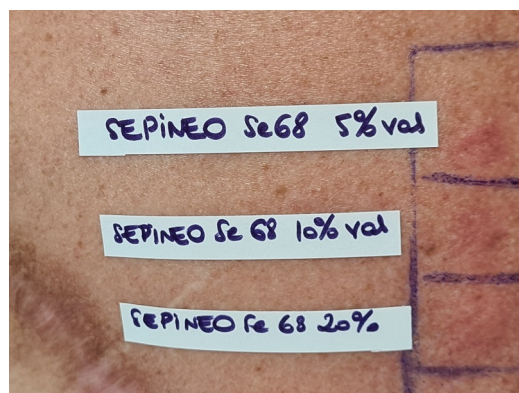
This report highlights that when many ingredients are used and subsequently tested as mixes (8), the identification of individual haptens is often complex and time-consuming but necessary to provide the patient with accurate advises on which specific products to avoid.

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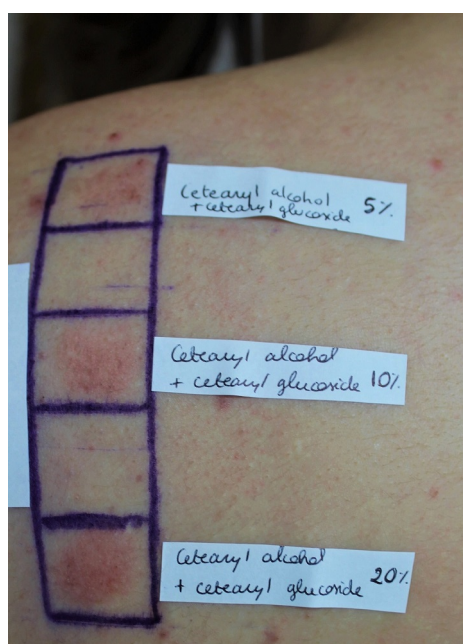
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