

CONTACT POINTS

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Positive patch test in hypersensitivity to lamotrigine

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Key words: anticonvulsant hypersensitivity syndrome; cutaneous adverse drug reactions; lamotrigine; patch test.

Anticonvulsant hypersensitivity syndrome (AHS) is a serious idiosyncratic adverse reaction reported to occur with the aromatic antiepileptic drugs and primidone (1). Lamotrigine has also been reported to cause this type of reaction in recent years. The reaction usually develops 2–8 weeks after initiation of therapy and is recognized by the classic triad of fever, rash and internal organ involvement (adenopathy, hepatitis, eosinophilia).

Case Report

A 70-year-old man was seen as an emergency with generalized exfoliative dermatitis, intense pruritus, fever and elevated aminotransferases. He had been on treatment with lamotrigine for the past 4 weeks for vascular epilepsy. He was treated with hydration, antihistamines and oral corticosteroids, and recommended to change his antiepileptic.

Patch tests were positive to lamotrigine (10% pet.) at D2 (++) and D4 (+++) and negative to carbamazepine (10% pet.), phenytoin (10% pet.), phenobarbital (10% pet.) and gabapentine (10% pet.). Patch tests were negative in 5 controls.

Comment

Lamotrigine is a new antiepileptic used in monotherapy in partial and generalized epilepsy. It has been associated with several adverse effects, but rash is the most common, ranging from slight to less frequently, severe rashes such as Stevens–Johnson and Lyell syndrome. AHS from lamotrigine has also been described (1).

Lamotrigine is structurally different from the aromatic anticonvulsants. Cross-reactivity between phenytoin, phenobarbital, carbamazepine and oxcarbazepine is well-known (2), but has not been demonstrated to date with lamotrigine.

Patch testing is a well-known method for diagnostic confirmation in patients with generalized maculopapular Type IV hypersensitivity reactions (3). A positive patch test with lamotrigine has been described before (4) in a patient with a fixed drug eruption. As far as we know, this is the first case of anticonvulsant hypersensitivity syndrome from lamotrigine confirmed by a positive patch test.

References

1. Schlienger R G, Knowles S R, Shear NH. Lamotrigine-associated anticonvulsant hypersensitivity syndrome. *Neurology* 1998; 51: 1172–1175.
2. Moss D M, Rudis M, Henderson S O. Cross-sensitivity and the anticonvulsant hypersensitivity syndrome. *J Emerg Med* 1999; 17: 503–506.
3. Puig L, Nadal C, Fernandez Figueras M T, Alamar A. Carbamazepine induced drug rashes: diagnostic value of patch test depends on clinicopathologic presentation. *Contact Dermatitis* 1996; 34: 435–437.
4. Hsiao C-J, Lee J Y-Y, Wong T-W, Shew H-H. Extensive fixed drug eruption due to lamotrigine. *Br J Dermatol* 2001; 144: 1289–1291.

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Biochemist's occupational allergic contact dermatitis from iodoacetamide and acrylamide

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Key words: acrylamide; CAS 144-48-9; CAS 79-06-1; chloroacetamide; contact allergy; iodoacetamide; laboratory work; polyacrylamide gel electrophoresis.

Case Report

A 27-year-old biochemist with a history of atopic dermatitis carried out research with polyacrylamide gel electrophoresis. She wore vinyl gloves while doing this work. After 9 months' work she developed eczema on her wrists, forearms and face.

Patch tests with a modified European standard series, antimicrobial, medicament and cosmetics series, and the patient's own chemicals gave ++ reactions to thiuram mix, chloroacetamide, 4-chloro-3-cresol, dichlorophene, and acrylamide (1% pet.). The latter 4 test sites formed a confluent papulovesicular area that extended to the test sites of iodoacetamide (+++, 0.1% pet.) and glycine (?+, 10% pet.). She had a + reaction to hexamethylenetetramine and ?+ reactions to formaldehyde, quaternium 15 and glyoxal. The patient's other laboratory chemicals, including *N,N'*-bisacrylamide (1% pet.), were negative.

2 months later, when separately tested, tetramethylthiuram monosulfide (TMTM) and chloroacetamide were positive, as well as dilution series (in pet.) of iodoacetamide and acrylamide (iodoacetamide: 0.1% + + +, 0.032–0.003% + +, 0.001% +; acryl-

amide: 1–0.1% + +, 0.032% +, 0.001% +). Hexamethylenetetramine and glyoxal gave irritant reactions. Formaldehyde, quaternium 15, 4-chloro-3-cresol, dichlorophene and glycine were negative. 21 control tests with 0.01% iodoacetamide and 0.1% acrylamide were negative.

Discussion

The patient had occupational allergic contact dermatitis from iodoacetamide and acrylamide. The reaction to chloroacetamide probably represented cross-allergy to iodoacetamide. The positive reaction to thiuram mix possibly had past occupational relevance.

Iodoacetamide (2-iodoacetamide, CAS 144-48-9) is a crystalline laboratory chemical. In her research, it was used for the alkylation of proteins after cleavage of disulfide bonds. To our knowledge, there are no previous reports of contact allergy to iodoacetamide. The manufacturer's material safety data sheet contains a warning of sensitizing capacity (R42/43), though the European Commission has not classified the chemical (European Commission Dangerous Substances Directive 67/548/EEC, Annex 1). We recommend iodoacetamide to be patch tested at 0.003% – 0.01% pet.

Acrylamide (2-propenamide, CAS 79-06-1) is a crystalline laboratory chemical that is used in polyacrylamide gel electrophoresis. There are 3 previous reports of contact allergy to acrylamide (1–3). Our patient is the 4th reported case of contact allergy to acrylamide, and the 3rd case from exposure to the chemical in polyacrylamide gel electrophoresis.

Patients allergic to secondary acrylamides used in Nyloprint® printing plate may react to acrylamide on patch testing (4). Piperazine diacrylamide, a cross-linker of acrylamide gels, can also sensitize (5). Our patient did not react to *N,N'*-bis-acrylamide, to which she had also been exposed.

References

1. Lambert J, Matthieu L, Dockx P. Contact dermatitis from acrylamide. *Contact Dermatitis* 1988; 19: 65.
2. Doooms-Goossens A, Garmyn M, Degreef H. Contact allergy to acrylamide.

ide. Contact Dermatitis 1991; 24: 71–72.

3. Beyer D J, Belsito D V. Allergic contact dermatitis from acrylamide in a chemical mixer. *Contact Dermatitis* 2000; 42: 181–182.
4. Pedersen N B, Chevallier M A, Senning A. Secondary acrylamides in Nyloprint® printing plate as a source of contact dermatitis. *Contact Dermatitis* 1982; 8: 256–262.
5. Wang M T, Wenger K, Maibach H I. Piperazine diacrylamide allergic contact dermatitis. *Contact Dermatitis* 1997; 37: 300.

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Contact allergy to topical corticosteroids 1995–2001

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Key words: contact allergy to topical corticosteroids; corticosteroid mix; Portugal.

Since 1959 (1), many cases of contact allergy to topical corticosteroids have been described in the literature. In 1992, Doooms-Goossens & Morren (2) found a frequency of 2.9% in 2073 patch tested patients. In 1993, a frequency of 5.4% was reported by Degreef & Doooms-Goossens (3). In 1996, a European multicentre study (4), in which Portugal participated, showed an overall frequency of 2.6%, different centres varying from 6.4% in Belgium to 0.6% in Portugal.

Guided by Coopman *et al.*'s classification of corticosteroid molecules (5), several countries added to their standard series 2 or 3 screening

markers of corticosteroid allergy, the most frequently used being tixocortol pivalate, budesonide and hydrocortisone 17-butyrate.

In 1992, the Portuguese Contact Dermatitis Research Group (GPEDC) added to its standard series a corticosteroid mix (CM) 3% pet., comprising tixocortol pivalate (1%), budesonide (1%) and hydrocortisone butyrate (1%). With the introduction of the CM, the number of cases of corticosteroid allergy diagnosed increased and the frequency rose to 1.8% (6). Besides the CM, in 1996 the GPEDC added 2 screening markers, one from group A (tixocortol pivalate 0.1% pet.) and the other from group B (budesonide 0.1% pet.).

Patients and Methods

In 1995, the Portuguese standard series included only the CM as a marker of corticosteroid allergy. Since 1996, the series also included tixocortol pivalate and budesonide. Between 1995 and 2001, patch testing with the standard series was carried out in 2838 patients in our contact dermatitis unit. Patients were diagnosed as having allergic contact dermatitis if they reacted to at least 1 corticosteroid molecule in the standard series. All these patients were later retested with our corticosteroid series (Table 1). Patch test readings were performed on day 2 (D2), D4 and D7.

Results

The frequency of contact allergy to corticosteroids found was 2% (57/2838 patients). There was an increase

Table 1. Corticosteroid series

Hydrocortisone acetate 1% pet.
Prednisolone acetate 1% pet.
Fluocinolone acetonide 0.25% pet.
Flucuronide 0.5% pet.
Halcinonide 1% pet.
Triamcinolone acetonide 1% pet.
Flumetasone pivalate 0.2% pet.
Dexamethasone 1% pet.
Desoximetasone 2.5% pet.
Difluocortolone valerate 1% pet.
Betamethasone valerate 1% pet.
Clobetasol propionate 1% pet.
Hydrocortisone 17-butyrate 0.1% pet.
Alclometasone dipropionate 1% pet.

in the last 2 years, from 2.5% in 2000 to 3% in 2001. The mean age of these patients was 48 (14–75). 93% (53/57) of such patients reacted to the CM. 68% (39/57) reacted to the CM and at least 1 of the individual corticosteroids present in the standard or in the corticosteroid series. 16% (9/57) were positive only to the CM. They did not react to the individual corticosteroids. 7% (4/57) were positive only to individual corticosteroids (tixocortol pivalate or budesonide). They did not react to the CM. Budesonide was the most common allergen (37 patients).

Discussion

If we had used only the CM as a marker of allergy to corticosteroids, 7% of corticosteroid-allergic patients would not have been detected. On the other hand, the CM allowed 5 such patients to be identified, who had not reacted to any individual corticosteroids. This could be related to several factors, such as: inadequate concentration of the individual corticosteroids, vehicle influence, or chemical interactions between components of the mix. In these cases, the major problem is what advice to give the patients.

Positive reactions only to individual components and not to the CM could be explained by the anti-inflammatory effect of the individual corticosteroids in the mix. Only 11% of patients reacted to more than 1 corticosteroid of the same group, while 25% reacted to more than 1 structural group. This contrasts with results obtained in some studies (7, 8), which reported that most corticosteroid-allergic patients react more frequently to several corticosteroids of the same group and less frequently to those of different groups.

References

1. Burekhardt W. Kontakteczen durch Hydrocortison. *Hautarzt* 1959; 10: 42–43.
2. Doms-Goossens A, Morren M. Results of routine patch testing with corticosteroid series in 2073 patients. *Contact Dermatitis* 1992; 26: 182–191.
3. Degreëf H, Doms-Goossens A. The new corticosteroids: are they effective and safe? *Dermatologic Clinics* 1993; 11: 155–160.

4. Doms-Goossens A, Andersen K E, Brandão F M et al. Corticosteroid contact allergy: an EECDRG multicentre study. *Contact Dermatitis* 1996; 35: 40–44.
5. Coopman S, Degreëf H, Doms-Goossens A. Identification of cross-reaction patterns in allergic contact dermatitis from topical corticosteroids. *Br J Dermatol* 1989; 121: 27–34.
6. Peçegueiro M. Contact allergy to topical corticosteroids: a screening study with a corticosteroid mix. *Contact Dermatitis* 1995; 33: 196–197.
7. Sasaki E. Corticosteroid sensitivity and cross-sensitivity. *Contact Dermatitis* 1990; 23: 306–315.
8. Dunkel F G, Elsner P, Burg G. Contact allergies to topical corticosteroids: 10 cases of contact dermatitis. *Contact Dermatitis* 1991; 25: 97–103.

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'Canyoning hand': a new recreational hand dermatitis

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Key words: canyoning; friction; hand dermatitis; irritant contact dermatitis; recreational; water.

'Canyoning' is a new popular outside activity, combining water and rock expertise, which includes walking through gorges, scrambling up wet and dry rocks, swimming down water rapids, sometimes technical

roping, and jumping into water. It requires special equipment including neoprene wet suit, helmet, shoes, and chest and seat harness. Its principal risks are falls onto rocks (or rock falls), drowning (sudden immersion, rising water level, remaining trapped under water) and hypothermia. To avoid these risks and to ensure the safety of this activity it is advisable to be accompanied by a competent guide.

Combining cold water and rock activities causes also a typical hand dermatitis (Fig. 1). Skin lesions are confined to the hands and only involve the fingertips and palms. An erythema with painful punctate erosions and oedema can be seen on the fingertips, and thenar and hypothenar eminences.

Several factors might account for this contact dermatitis. Repeated water immersion with periods of drying in between is frequently involved in occupational hand dermatitis, such as in hairdressers, and house or hospital cleaners. Repeated contact with rocks on a wet skin is very abrasive, resulting in horny layer destruction followed by cutaneous erosions. Cold water and emotion reduce the sensation of pain during the activity, cutaneous lesions often being discovered at the end of the



Fig. 1. 'Canyoning hand': erythema and erosions on the fingertips, and thenar and hypothenar eminences.

day. This recreational hand dermatitis is so common and striking that it has to be known by doctors, though it has never before been reported. Wearing gloves can be proposed to avoid 'canyoning hand' but sweating and occlusion may also have detrimental effects.

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Announcement

BEES Evidence-Based Dermatology course 19th–31st January 2003
BEES annual educational meeting March 6th 2003
Postgraduate Centre, Nottingham

BEES (British Epidermo-Epidemiology Society) are a group that is interested in promoting high quality research into epidemiology and health services research in relation to dermatology. The 3-day BEES course aims to introduce the principles of evidence-based practice to dermatologists through group work and by using dermatological examples throughout. Overseas dermatologists are especially welcome.

The BEES annual educational meeting at Nottingham is comprised of a number of guest talks and up to 6 submitted research abstracts. Guest talks planned include pattern recognition in dermatology, colour blindness and diagnosis, Buruli ulcer, a systematic review of treatments for basal cell carcinoma and evidence-based homeopathy. For further details about the BEES meeting and the BEES Evidence-Based Dermatology course on 29th–31st 2003, please contact Joanne.Elliot@nottingham.ac.uk or write to:

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