

2. VIRTANEN T, VILHUNEN P, HUSMAN K, MÄNTYJÄRVI R. Sensitization of dairy farmers to bovine antigens and effects of exposure on specific IgG and IgE titers. *Int Arch Allergy Appl Immunol* 1988;**87**:171–177.
3. CHESTER T, STAFFORD MD, STEVEN A. Anaphylaxis to human serum albumin. *Ann Allergy* 1988;**61**:85–88.
4. DIAZ MATEO P, MONEO GOIRI I, ALDAY FIGEROA E. Occupational asthma to mites in jams. *Alergol Immunol Clin* 1992;**7 Suppl** 2:44.

Delayed exanthema to nonionic contrast medium

E. Sedano*, J. M. Vega, S. Rebollo, A. Callejo, T. Asensio, R. Almendros

Key words: delayed exanthema; iohexol; nonionic contrast media.

● ADVERSE reactions after injection of nonionic iodinated contrast media occur in about 3% of patients (1). We present two cases of delayed exanthema with positive patch test to

iohexol.

The first patient was a

54-year-old woman with an ovary neoplasm, who was referred to our service because, 4 months before, she had presented widespread itchy erythema and palpebral edema 24 h after a contrast TAC examination with an intravenous injection of iohexol (Omnitrac[®]). The symptoms disappeared in 4 days with oral antihistaminics, without any residual lesions.

The second patient was a 68-year-old man suffering from aorta aneurysm, who had undergone coronary angiography with iohexol (Omnitrac[®]) as contrast medium. He presented a maculopapular rash of the

trunk and lower extremities 24 h after the examination; cutaneous lesions had disappeared in about 8 days with antihistaminics, leaving a slight desquamation of the affected area.

Both patients were nonatopic, and there were neither previous infusions of radiocontrast media nor adverse reactions to medications.

Skin test results are shown in Table 1. Prick and patch tests to five healthy people were carried out with negative results in all cases.

Late adverse reactions occur more than 1 h after injection of nonionic iodinated contrast media. The pathogenetic mechanism of most of these reactions is not known, but maculopapular eruptions may be based on the delayed-type hypersensitivity reaction.

There are a few well-documented case reports of late skin rashes due to a nonionic contrast medium with positive delayed skin test (1–4). The implicated contrast media were mostly nonionic monomers except for one case in which the

implicated contrast medium was a nonionic dimmer (1, 2, 4).

In all documented cases, as in our two patients, the contact with the contrast medium was by arterial injection, and the median interval between injection of the contrast medium and onset of the symptoms was 24 h (1).

The patch test gave positive results to the contrast medium used in all cases except when a nonionic contrast dimmer was used (1–4). Both of our patients had a positive patch test to iohexol, and also to another nonionic contrast medium (iodixanol) to which the patients had never been exposed. In the first patient, it was positive to another nonionic monomer contrast medium; in the second patient, it was positive to a nonionic dimmer contrast medium. This may be interpreted as the cross-reactivity of structurally related contrast media. There are some case reports of possible cross-reactions between nonionic monomer contrast media (1, 2), but this study also describes the case of a cross-sensitization between dimmer and monomer nonionic contrast media.

Two patients with positive patch tests.

Table 1. Allergologic tests performed in our patients

	Patient 1		Patient 2	
	Prick (15 min/24 h)	Patch (48/96 h)	Prick (15 min/24 h)	Patch (48/96 h)
<i>Ionic</i>				
Amidotrizoate	–	–	–	–
Iopanoico	NT	–	NT	NT
<i>Nonionic</i>				
Monomers				
Iohexol	–	++/++	–	+/+
Ioversol	–	++/++	–	–
Dimmer				
Iodixanol	–	–	–	+/+
Additives				
Trometamol	NT	–	NT	–
EDTA	NT	–	NT	–
True test [®]		–		–

NT: not tested.

*C/ Cervantes 22
8° D
47005 Valladolid
Spain
Tel. 983-306263

Accepted for publication 5 June 2001
Allergy 2001; 56:1015–1016
Copyright © Munksgaard 2001
ISSN 0105-4538

References

1. COURVOISIER S, BIRCHER AJ. Delayed-type hypersensitivity to a non-ionic, radiopaque contrast medium. *Allergy* 1998;**53**:1221–1224.
2. GALL H, PILEKAM H, PETER RW. Late-type allergy to the x-ray contrast medium Solutrast® (iopamidol). *Contact Dermatitis* 1999;**40**:248–250.
3. BROCKOW K, BECKER EW, WORRET W, RING J. Late skin test reactions to radiocontrast medium. *J Allergy Clin Immunol* 1999;**104**:1107–1108.
4. SCHICK E, WEBER L, GALL H. Delayed hypersensitivity reaction to the non-ionic contrast medium iopromid. *Contact Dermatitis* 1996;**35**:312.

Basotest® and suxamethonium allergy

I. M. Aly Hassan*, A. D. Crockard,
M. S. Asghar, J. D. M. Edgar, S. Atkinson

Key words: anaphylaxis; basophil; CD63; suxamethonium.

● THE identification of the drugs causing anaesthesia-induced adverse reactions is problematic and dependent on clinical history, detection of specific IgE antibodies, and skin testing. Flow cytometric assessment of drug-induced basophil activation may offer an additional aid to diagnosis.

A 44-year-old woman was admitted for elective endometrial ablation. She had no history of adverse drug reactions, and

previous general anaesthetic procedures had been uneventful. Anaesthesia was induced with intravenous propofol (150 mg) and alfentanil (750 µg). Muscle relaxation was achieved with intravenous suxamethonium (100 mg). Within 1 min of intubation, the patient became cyanosed, with a heart rate of 45 beats/min. Cardiac arrest was

A dose/response expression of CD63 upon allergen challenge.

diagnosed and cardiopulmonary resuscitation commenced. Surgery was cancelled, and the patient transferred to the intensive care unit.

Laboratory results were as follows: mast-cell tryptase, 1000 ng/ml; urinary methylhistamine, 86 ng/µmol creatinine; serum IgE, 1412 kU/l; suxamethonium-specific IgE (RAST), 3.

Skin prick testing, performed 5 weeks after the reaction, gave a positive reaction to suxamethonium (confirmed at 1:10

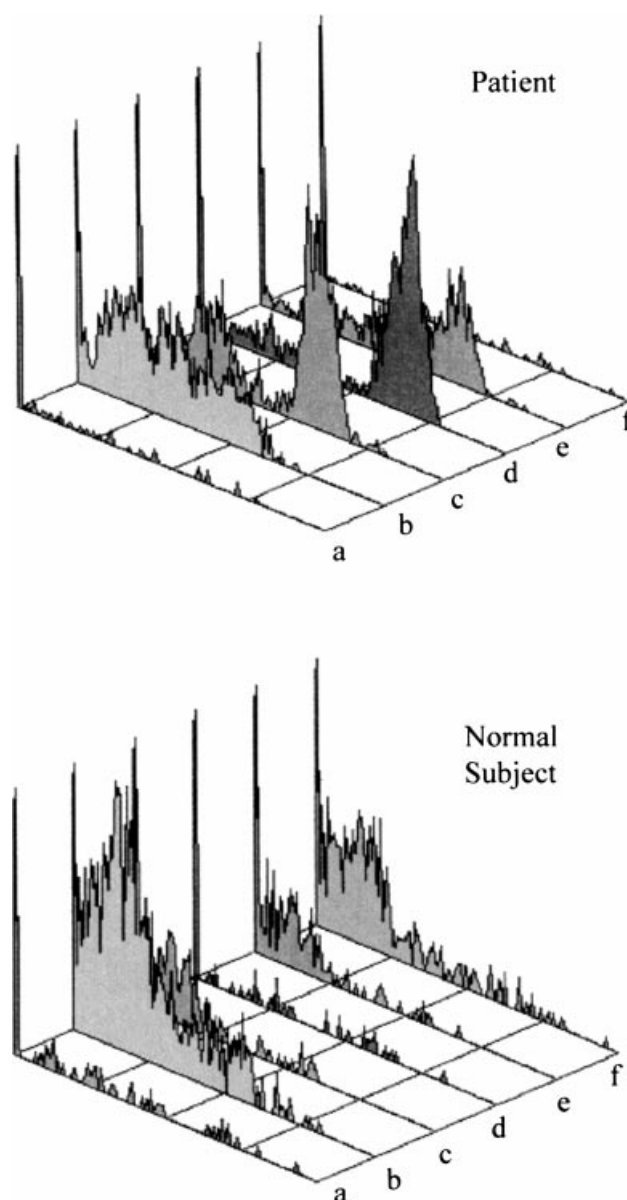


Figure 1. Cumulative fluorescence profiles demonstrating CD63 positivity in response to (a) no stimulus; (b) fmlp; and suxamethonium at following concentrations: (c) 2.0 mmol/l; (d) 1.0 mmol/l; (e) 0.1 mmol/l; (f) 0.01 mmol/l.