

ibuprofen (800 mg with 4 h of observation) to which he had no reaction.

Modified radioallergosorbent test (RAST) testing was performed with the patient's serum to naproxen and no specific IgE was identified (Quest Diagnostics, Teterboro, NJ, USA). He was also skin-prick tested to 1/100, 1/10 and full-strength liquid naproxen (125 mg/5 ml), without wheal and flare reaction.

This case demonstrated reproducible anaphylaxis to naproxen without cross reactivity to rofecoxib, aspirin or ibuprofen. Without this patient's insistence and his professional and athletic performance requirements we would not have challenged him with naproxen, but would have challenged him with the later three drugs to provide his alternative NSAIDs.

Anaphylaxis to naproxen is not rare. A recent study by van Puijenbroek (3), reported naproxen as the second leading cause of NSAID-induced anaphylaxis between 1985 and 2000 in the Netherlands. The mechanism of the reaction to naproxen is not well defined. A case report by Cistero (4), in 1983, reported a positive intradermal skin test in a naproxen specific anaphylaxis case. This same report also demonstrated a positive basophil release assay to naproxen. To date, there have been rare reports of cross-reactions to NSAIDs in normal individuals who have anaphylaxis (1).

Although we used liquid naproxen for challenge, we feel his reaction on challenge was consistent with his prior reaction and is specific for naproxen. We have been unable to demonstrate naproxen-specific IgE either by RAST or skin testing but this does not rule out the probability that an IgE-mediated reaction occurred.

*Allergy Department (Room IJ)
Walter Reed Army Medical Center
6900 Georgia Ave, NW Washington DC
20307, USA
Email: mary-klote@na.amedd.army.mil

Accepted for publication 20 April 2004
Allergy 2005; 60:260–261
Copyright © Blackwell Munksgaard 2004
DOI: 10.1111/j.1398-9995.2004.00630.x

References

1. Stevenson DD. Anaphylactic and anaphylactoid reactions to aspirin and other non-steroidal anti-inflammatory drugs. *Immunol Allerg Clin North Am* 2001;**21**: 745–768.
2. Perrone MR, Artesani MC, Viola M, Gaeta F, Caringi M, Quarationo D et al. Tolerability of rofecoxib in patients with adverse reactions to nonsteroidal anti-inflammatory drugs: a study of 216 patients and literature review. *Int Arch Allergy Immunol* 2003;**132**:82–86.
3. van Puijenbroek EP, Egberts A, Meyboom R, Leufkens H. Different risks for NSAID-induced anaphylaxis. *Ann Pharmacother* 2002;**36**:24–29.
4. Cistero A, Urias S, Guindo J, Lleonart R, Garcia-Moll M, Geli A et al. Coronary artery spasm and acute myocardial infarction in naproxen-associated anaphylactic reaction. *Allergy* 1992;**47**:576–578.

Urticaria due to mepivacaine with tolerance to lidocaine and bupivacaine

A. Prieto*, T. Herrero, M. Rubio, P. Tornero,
M. L. Baeza, A. Velloso, C. Pérez, M. De Barrio

Key words: amide group; cross-reactivity; drug allergy; local anesthetics; mepivacaine; type I hypersensitivity.

Local anesthetics included in the amide group (LAAG) are drugs widely used in dentistry, deliveries and minor surgery.

Although adverse reactions to them are frequently reported, allergic reactions

are uncommon and little is known about cross-reactivity among these drugs.

A 35-year-old woman presented pruritus and hives on her face, neck and legs, 15 min after mepivacaine administration during a nevus extirpation 1 year ago. She was treated with an oral antihistamine and urticaria was completely resolved in 1 h. Povidone iodine

(Betadine®; Viatrix Pharm, Burdeos, France), after being well tolerated, was used as a local antiseptic. She was administered no further LAAG. She denied having any allergic symptoms to latex exposure.

Prick and intradermal tests with undiluted mepivacaine 1% were negative. Single-blind placebo-controlled subcutaneous challenge test (SBPCST) with mepivacaine was carried out. Fifteen minutes after the administration of 0.3 ml (0.1 ml was previously well tolerated), she developed a local wheal of 23 × 10 mm. A new intradermal test performed with mepivacaine, turned positive (12 × 15 mm) (histamine 10 × 13 mm). Latex-prick test (ALK-Abello, Madrid, Spain) was negative.

In order to evaluate cross-reactivity among different LAAG, prick and intradermal tests were carried out with undiluted lidocaine 1%, bupivacaine 0.5%, and ropivacaine 1%. Intradermal test with ropivacaine resulted positive (12 × 6 mm). SBPCST with lidocaine and bupivacaine, up to doses of 2 ml, were negative. All LA used were free of excipients (sulfites or parabens).

LAAG can produce allergic reactions although these are rare (1). Formerly, cross-reactivity among them was considered non-existent (1). In recent reports, type IV hypersensitivity reactions have been described, showing a high degree of cross-reactivity between lidocaine and mepivacaine but not bupivacaine (2). There are only a few reports to establish the grade of cross-reactivity in immediate hypersensitivity reactions among LAAG. Some authors have reported cross-reactivity among lidocaine, bupivacaine, ropivacaine and mepivacaine in one patient (3); others found cross-reaction among lidocaine, bupivacaine and mepivacaine in another patient (4); and others among prilocaine, bupivacaine, and articaine in one patient (5). Our patient reacted to mepivacaine, had a positive skin test to ropivacaine and tolerated lidocaine and bupivacaine. We suggest that an accurate allergologic study should be performed in order to know which LAAG could be used in these patients.

We want to point out the negative results obtained in the first skin tests

A case of urticaria due to mepivacaine with tolerance to lidocaine and bupivacaine.

performed with mepivacaine which turned positive after the challenge test. It could be because of, as it has been reported with other drugs, the loss of immunologic memory, because it had occurred 1 year earlier. Thus, although skin test is useful in the diagnosis, a negative result should be cautiously interpreted when the reaction had not occurred recently.

We encourage the study and reporting of IgE-mediated reactions to LAAG for a better knowledge of cross-reactivity among these drugs (6).

*Servicio de Alergia

Hospital General Universitario Gregorio Marañón

C/Dr. Esquerdo, 46
28007 Madrid

Spain

Tel: 91 5868268

Fax: 91 5868018

E-mail: jmdmiguél@i4con.com

Accepted for publication 16 May 2004

Allergy 2005; 60:261–262

Copyright © Blackwell Munksgaard 2005

DOI: 10.1111/j.1398-9995.2005.00648.x

References

- Schatz M. Skin testing and incremental challenge in the evaluation of adverse reactions to local anesthetics. *J Allergy Clin Immunol* 1984;**74**:606–616.
- Scala E, Giani M, Pirota L, Guerra EC, Girardelli CR, De Pita O et al. Simultaneous allergy to ampicillin and local anesthetics. *Allergy* 2001;**56**:454–455.
- Morais-Almeida M, Gaspar A, Marinho S, Rosado-Pinto J. Allergy to local anesthetics of the amide group with tolerance to procaine. *Allergy* 2003;**58**:827–828.
- Cuesta-Herranz J, DE LAS Heras M, Fernández M, Lluch M, Figueredo E, Umpierrez A et al. Allergic reaction caused by local anesthetic agents belonging to the amide group. *J Allergy Clin Immunol* 1997;**99**:427–428.
- Warrington RJ, McPhillips S. Allergic reaction to local anesthetic agents of the amide group. *J Allergy Clin Immunol* 1997;**100**:855.
- Demoly P, Kropf R, Bircher A, Pichler WJ. Drug hypersensitivity: questionnaire. EAACI interest group on drug hypersensitivity. *Allergy* 1999;**54**:999–1003.

Hypersensitivity to local anaesthetics

R. B. Jacobsen, J. E. Borch*, C. Bindslev-Jensen

Key words: amide; drug allergy; local anaesthetics; skin testing.

Our aim was, through comparison of history and investigation, to characterize observed reactions, and thereby facilitate decision making on predictability of allergy to local anaesthetics.

Thirty-eight females, median age 40.5 (7–72) years; 10 males, median age 41 (12–62) years referred during the period January 1994 to January 2003. The majority of patients were referred by dentists and the

Hypersensitivity to local anaesthetics (LA) are frequently reported by patients but rarely confirmed upon investigation.

remainder from GPs, and hospital departments. Reactions ranged from dizziness and fainting to manifest anaphylaxis (Table 1). Immediate reactions were reported in 112 of 118 reactions, occurring within 24 h after administration of LA. Forty-five patients experienced the adverse reaction during dental procedures.

In 29, 1, 13 resp. 7 cases, the suspected drug was lidocaine, bupivacaine, prilocaine and mepivacaine. All patients were tested by skin prick test (SPT), intradermal test (IDT) and subcutaneous challenge (SCC) with lidocaine, irrespective of the drug previously administered. Patch testing with LAs were only performed in selected cases of delayed reactions on IDT (patient no. 8). Patch testing was performed with concentrations of LAs of 5 and 15% pet.

Three patients representing four case histories tested positive on IDT (eight controls). None tested negative by SPT and IDT reacted to SCC. Histories in these cases were two of local swelling and two of a general rash. One patient

Table 1. Reported reactions in 48 patients. Figures in brackets are number of reactions, reported for patients, tested positive

Reaction	Number of reactions in history: all/ (test positive)	Reaction occur within 24 h	Reaction occur after 24 h
Local			
Rash	7 (0)	6	1
Swelling	14 (2)	13 (2)	1 (0)
Generalized			
Rash	10 (2)	8 (2)	2 (0)
Swelling	1 (0)	1	0
Astmalike	10 (0)	8	2
Gastrointestinal	7 (0)	7	0
Anaphylactic	5 (0)	5	0
Unspecific*	64 (0)	64	0

* Unspecific reactions:

Rash: urticaria, itching, wheal, flare and rash.

Swelling: swelling, angioedema, swelling of throat/mucous membrane and Quinckes oedema.

Local is defined as delimited to the face, neck or hands (not to the injection site).

Gastrointestinal: nausea and vomiting.

Astmalike: difficulty in breathing and dyspnoea.

Palpitations (5), fainting (6), claustrophobia (1), 'blood ran out of head' (1), cold sweat (7), dizzy (7), discomfort (9), Constricting feeling/a weight on the chest (4), tingling/pricking sensation (5), quivering (2), hyperventilation (2), confusion (1), restlessness (1), distant (3), extreme tiredness (2), burst into tears (1), amnesia (2), weak pupil reaction (1), blisters on tongue (1), fever (1), elevated blood pressure (1).