

Blackwell Synergy

[Home](#) [Browse](#) [Search](#) [My Synergy](#) [Register](#) [Help](#)

Username:

Password:

[Athens Login](#)

[Login](#)

[Forgotten Password?](#) [Logout](#)

You are at: [Home](#) > [List of Issues](#) > [Table of Contents](#) > Full Text

CONTACT DERMATITIS

ENVIRONMENTAL AND OCCUPATIONAL DERMATITIS

Univ di Roma Due Tor Vergata

Full Article

[Download](#) to reference manager

[Order Permissions](#)

[Alert me](#) when this article is cited



[View/Print PDF article \(38K\)](#)

Contact Dermatitis

Volume 47 Page 251 - October 2002

doi:10.1034/j.1600-0536.2002.470422.x

Volume 47 Issue 4

Anaphylaxis following prick testing with natural rubber latex

Nicolas Nicolaou and Graham A. Johnston

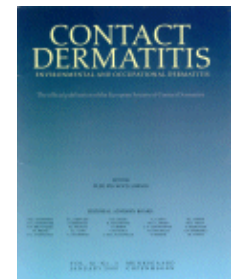
[List of Issues](#)

[Table of Contents](#)

[◀ Prev Article](#) [Next Article ▶](#)

[Add to Favorite Articles](#)

[E-mail this to a Friend](#)



QuickSearch in:

- ☒ Synergy
☐ PubMed (MEDLINE)
☐ CrossRef

for

Authors:

- ☐ Nicolas Nicolaou
☐ Graham A. Johnston
☐

Key words:

- ☐ anaphylaxis
☐ *Hevea brasiliensis*

Case Report

Go to:

Choose

Go



A 39-year-old housewife with lifelong mild atopic dermatitis was referred for patch and prick testing. She had regular contact with household irritants but had used rubber gloves for wet tasks without problems. She also had long-standing mild asthma. She was not on oral or topical antihistamines. She had a strong family history of atopy. She felt that nickel, fragrances and adhesives had exacerbated her dermatitis in the past.

A year previously, while painting the exterior of her house, she had developed facial and peri-ocular swelling requiring treatment with systemic corticosteroids and antihistamines from her local accident and emergency department. She had been wearing a different brand of rubber household gloves and attributed her reaction to wiping her face with these gloves while working. On examination, she had widespread low-grade dermatitis in an atopic distribution without hand involvement.

She was patch tested to the BCDS standard series, and bases and preservatives and medicaments series (Chemotechnique Diagnostics, Malmö, Sweden) and all were negative at both D2 and D4. On D2 she was prick tested to 100 HEP *Hevea brasiliensis* (natural rubber latex) (NRL) with positive histamine control and negative saline control [Soluprick, ALK Abello (UK), High Wycombe, UK].

Less than 3 min after prick testing the patient complained of dizziness and difficulty with breathing and developed wheezing and tachypnoea. On examination she had a sinus tachycardia of 120 per min, a blood pressure of 80/60 mmHg, a tachypnoea of 30 breaths per min and a widespread expiratory wheeze on auscultation. The NRL prick test site showed a 6-mm weal reaction (positive histamine control 4 mm, negative saline control no reaction).

She was treated with 10 mL adrenaline 1 : 10 000 solution (1 mg per 10 mL) i.m., followed by 1 mL chlorpheniramine (10 mg per 1 mL) i.m. The tachypnoea and wheeze resolved within 3 min and her blood pressure and tachycardia normalized over the next 10 min. She was kept for monitoring for a further 60 min, after which she was allowed home.

A subsequent RAST for latex IgE was elevated at 2.87 k μ L (0–0.34 k μ L). The total IgE level was markedly raised at 1047.0 k μ L (0–122 k μ L).

She was counselled to avoid latex, her health care team informed and she has had no further problems to date.

Discussion

Go to:

Choose

Go



NRL is made from the milky sap of the rubber tree, *Hevea brasiliensis*, and contains isoprene monomer. Many compounds contain 2–3% NRL protein in the raw state, together with isoprene, glycols and water. On processing, the proportion of isoprene increases to 60% and NRL protein decreases to 1%.

Type I hypersensitivity to latex was first reported in 1979 (1) and, since then, has become increasingly recognized. Presentation may range from contact urticaria, allergic rhinitis, conjunctivitis and asthma to life-threatening anaphylaxis (2).

2.9–16% of healthcare workers have latex hypersensitivity (3, 4) and 3.8% of atopics (5), compared to 1% of the general population (5).

Diagnosis by RAST is 80% sensitive and 100% specific (6). Prick testing either with 1 g of glove soaked in 5 mL saline for 15 min or with commercially available extracts, as used in this case, is thought to be 98% sensitive and 100% specific.

- ☐ hypersensitivity reactions
- ☐ latex allergy
- ☐ prick testing
- ☐

Search

Affiliations

Correspondence

G.A. Johnston
 Department of Dermatology
 Leicester Royal Infirmary
 Leicester LE1 5WW
 UK
 Tel: +0044 116 2585162
 Fax: +0044 116 2586792
 e-mail: Gjohnston@uhl-tr.nhs.uk

To cite this article

Nicolaou, Nicolas & Johnston, Graham A. (2002)
 Anaphylaxis following prick testing with natural rubber latex.
Contact Dermatitis **47** (4), 251-252.
 doi: 10.1034/j.1600-0536.2002.470422.x

Severe Type I hypersensitivity reactions to controlled testing for latex allergy are rare. The only reported case was of a female health care worker who developed tachycardia, flushing, urticaria and light-headedness together with a pronounced local reaction following prick testing with NRL (7). It has been argued that a second report, also in a female health care worker, was in fact a vaso-vagal episode following prick testing and not a true anaphylactic reaction (8). There has only been 1 report of acute anaphylactic hypersensitivity to patch testing with NRL (9).

Many units use a commercially prepared latex preparation for prick testing in 3 strengths (1, 10, 100 HEP) tested in sequence. This may be time consuming in a busy clinic and this report serves to remind clinicians of the importance of starting with a low concentration of latex, especially in those patients who are female, atopic and give a history suggestive of Type I latex hypersensitivity before testing.

References

Go to:

Choose

Go

1. Nutter A F. Contact urticaria to rubber. *Br J Dermatol* 1979; **101**: 597–598.

MEDLINE

MEDLINE

ISI Abstract

ISI Abstract

2. Slater J E. Allergic reactions to natural rubber. *Ann Allergy* 1992; **68**: 203–209.

MEDLINE

MEDLINE

3. Turjanmaa K. Incidence of immediate allergy to latex gloves in hospital personnel. *Contact Dermatitis* 1987; **17**: 270–275.

MEDLINE

MEDLINE

ISI Abstract

ISI Abstract

4. Lagier F, Vervolet D, Lhermit I. Prevalence of latex allergy in operating room nurses. *J Allergy Clin Immunol* 1992; **90**: 319–322.

MEDLINE

MEDLINE

ISI Abstract

ISI Abstract

5. Sommer S, Wilkinson S M, Beck M, English J S C, Gawkrödger D J, Green C. Type IV hypersensitivity reactions to natural rubber latex: results of a multicentre study. *Br J Dermatol* 2002; **146**: 114–117.

SYNERGY

Blackwell Synergy

MEDLINE

MEDLINE

ISI Abstract

ISI Abstract

CSA Abstract

CSA

6. Turjanmaa K *et al*. Latex allergy diagnosis: *in vivo* and *in vitro* standardization of a natural rubber latex extract. *Allergy* 1997; **52**: 41–50.

MEDLINE

MEDLINE

ISI Abstract

ISI Abstract

CSA Abstract

CSA

7. Spaner D, Dolovich J, Tarlo S, Sussman G, Buttoo K. Hypersensitivity to natural latex. *J Allergy Clin Immunol* 1989; **83**: 1135–1137.

CrossRef

crossref

MEDLINE

MEDLINE

ISI Abstract

ISI Abstract

8. Bonnekoh B, Merk H F. Safety of latex prick skin testing in allergic patients (and Sussman GL *In Reply*). *JAMA* 1992; **267**: 2603–2604.

CrossRef

crossref

MEDLINE

MEDLINE

ISI Abstract

ISI Abstract

9. Parry E J, Beck Mh. Acute anaphylaxis resulting from routine patch testing with latex. *Contact Dermatitis* 1999; **41**: 236–237.

MEDLINE

MEDLINE

ISI Abstract

ISI Abstract

This article is cited by the following articles

Go to:

Choose

Go



- J. G. Lowe, C. M. Green and S. M. Nasser
. (2005) Investigative methods for natural rubber latex allergy in the UK. *Contact Dermatitis* **52**:1, 11-13

Abstract

References

Full Text Article

PDF

- James S. Taylor & Emel Erkek
. (2004) Latex allergy: diagnosis and management. *Dermatologic Therapy* **17**:4, 289-301

Abstract

References

Full Text Article

PDF

- V. C. Diba and B. N. Statham
. (2003) Contact urticaria from cinnamal leading to anaphylaxis. *Contact Dermatitis* **48**:2, 119-119

Summary

References

Full Text Article

PDF

Contact Dermatitis

Volume 47 Page 251 - October 2002

Blackwell Synergy® is a Blackwell Publishing, Inc. registered trademark

[More information](#) about Blackwell Synergy - online journals from www.blackwellpublishing.com.

We welcome your [Feedback](#). See our [Privacy Statement](#) and [Terms and Conditions](#).

Technology Partner - [Atypen Systems, Inc.](#)

