

Table 1. Frequency of allergic symptoms caused by latex condoms in 94 latex-sensitive patients

Reaction reported →	Localized itching	Localized swelling	Systemic itching/urticaria	Other systemic complaint	None
N (%) →	67 (71%)	41 (44%)	18 (19%)	24 (26%)	19 (20%)

returned. The respondents ranged in age from 14 to 70 years. Eighty-nine percent of them were female, and 49% were health-care workers. Ninety-two percent reported having had urticaria, 82% rhinoconjunctivitis, 51% cough or asthma, and 35% anaphylaxis related to contact with latex articles. Ninety-four respondents (39%) reported having had contact with a condom since becoming allergic to latex, most fewer than six times.

The large majority, 79 (84%), reported having had a local and/or a general reaction on contact with a condom. Local itching and swelling were the most frequently reported complaints, but at least 25% of them had also had cutaneous urticaria, angioedema, and/or respiratory symptoms.

Latex condom use is an important component of public-health disease-prevention strategies. A total of 126 respondents (53%) reported regular use of some type of contraceptive, but only nine said that they now use condoms. A nonlatex condom is available in the UK and in the USA (Avanti brand, Regent Medical Products), and deproteinized latex condoms are marketed in France (Crystal brand, Laboratoires Degan) and in Japan (Crystal brand, Fuji Latex Co.). We urge physicians to be aware of this problem and of the availability of these alternatives for their latex-sensitive patients.

Key words: allergic reaction; condom; latex; prevalence.

D. A. LEVY*, S. KHOUADER, F. LEYNADIER

*Médecine Interne

Centre d'Allergie

Hôpital Rothschild

33, boulevard de Picpus

75571 Paris Cedex 12

France

Tel. 33 1 40 19 33 62

Fax: 33 1 40 19 33 64

Accepted for publication 30 June 1998

Copyright © Munksgaard 1998

ALLERGY 1998;53:1107-1108

REFERENCES

1. Nutter AF Contact urticaria to rubber. *Br J Dermatol* 1979;101: 597-8.
2. Turjanmaa K, Mäkinen-Kiljunen S, Reunala T, Alenius H, Palosuo T. Natural rubber latex allergy: the European experience. *Immunol Allergy Clin North Am* 1995;15:71-88.
3. Turjanmaa K, Alenius H, Mäkinen-Kiljunen S, Reunala T, Palosuo T. Natural rubber latex allergy. *Allergy* 1996;51:593-602.
4. Turjanmaa K, Reunala T. Condoms as a source of latex allergen and cause of contact urticaria. *Contact Dermatitis* 1989;20:360.

Anaphylaxis by pyridostigmine

PYRIDOSTIGMINE is an anticholinesterase agent used to improve muscular weakness in the treatment of myasthenia gravis. Its properties are due to the inhibition of anticholinesterase in neuromuscular union (1, 2).

We report a case of acute recidivous urticaria caused by pyridostigmine followed by anaphylaxis after oral challenge with this agent.

A 54-year-old woman was referred to our service for evaluation of urticaria. She had been diagnosed as having myasthenia gravis and had started treatment with pyridostigmine 2 months before. She had taken pyridostigmine for 5 months, 4 years before. She also suffered from arthrosis and high blood pressure and was receiving captopril and clortalidone.

Two months before her visit to our service, the patient had complained of daily attacks of urticaria which involved the entire body and worsened in the evening. She also suffered from facial angioedema, which required emergency treatment. Since then, she had been receiving treatment with cetirizine (10 mg/day). Pyridostigmine was not suspended and the skin symptoms improved, but she continued to have symptoms of pruritus.

By our usual procedure, we carried out a complete study of urticaria syndrome, which was absent. The treatment with pyridostigmine was stopped after consultation with a neurologist, and the patient recovered, showing total remission of her symptoms (3).

An allergy study was carried out. Pyridostigmine was dissolved in glycerol, and the skin prick test (SPT) was performed on the patient's volar forearm. Histamine HCl (0.1%) served as positive control; the negative control was NaCl. Reactions were recorded after 20 min. The SPT with pyridostigmine was negative. The total serum IgE (Pharmacia CAP System) was 167 kU/L.

The SPT with pyridostigmine in five nonatopic, healthy subjects was negative. After the patient gave written consent, we performed a single-blind, placebo-controlled oral challenge test with pyridostigmine. After the second dose (23 mg), the patient had general malaise, and also reported a sensation of throat fullness, dysp-

A case of severe allergy and positive oral provocation to this anticholinesterase drug.

nea, and intense hypotension that resolved after treatment with subcutaneous epinephrine, antihistamines, and corticosteroids.

Serum tryptase levels during and after the reaction did not increase significantly.

The patient had a diagnosis of allergy reaction to pyridostigmine, and she received alternative treatment with corticosteroids and immunosuppressive agents (4).

As with other drugs, it is very difficult to extract an antigen adequate for *in vivo* and *in vitro* tests. In many cases, they are low-molecular-weight substances, and they can function as haptens, or the allergen may be a metabolite of the drug. Therefore, provocation with the drug and reproduction of the symptoms is the only way to diagnose these patients.

In our patient, the early onset of the symptoms and the characteristics of the reaction after oral challenges, especially the severe hypotension, suggest an anaphylactic reaction, but it was not possible to verify an IgE-mediated mechanism. Due to these difficulties, it was not possible to demonstrate any other immunologic mechanism.

It is important to point out that the continuous administration of the drug over 2 months could have produced a tolerance state with minimal

symptoms. When the drug was withdrawn, the tolerance disappeared, and the patient had a positive oral challenge with an anaphylactic reaction more severe than expected.

Key words: allergy; anaphylaxis; pyridostigmine.

A. CASTELLANO*, M. CABRERA, T. ROBLEDÓ, C. MARTÍNEZ-CÓCERA, M. CIMARRA, A. ALONSO LLAMAZARES, M. CHAMORRO

*Departamento de Alergia
Hospital Universitario San Carlos
Martín Lago S/N
28040 Madrid
Spain

Accepted for publication 30 July 1998

Copyright © Munksgaard 1998

ALLERGY 1998;53:1108-1109

REFERENCES

1. Taylor P. Agentes colinesterasicos. In: Las bases inmunológicas de la terapéutica. Goodman y Gilman. Panamericana, Cap 6, 121-38.
2. García De Jalón PD. Parasimpaticomiméticos. In: Lorenzo Velázquez B. Farmacología y su proyección a la clínica. Editorial Oteo, Cap 13, 149-56.
3. Wills JH. Toxicity of anticholinesterases and treatment of poisoning. In: Karczmar AG, editor. Anticholinesterase agents. International encyclopedia of pharmacology and therapeutics. Vol. 1. Sect. 13. Oxford: Pergamon Press, 1970:355-471.
4. Engel WK. Myasthenia gravis: corticosteroids and anticholinesterases. Ann N Y Acad Sci 1976;623-30.

This document is a scanned copy of a printed document. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material.