

Brief communications

Latex hypersensitivity after natural delivery

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Latex antigens can produce symptoms after inhalation.¹ We have observed a case of anaphylactic shock after vaginal delivery, and we want to emphasize the risk induced in allergic patients by direct mucous contact with latex gloves, even without surgery.

CASE REPORT

Mrs. A. S. is a 33-year-old housewife, with seven prior pregnancies and four deliveries. The three first deliveries were uneventful (Nov. 24, 1978, Jan. 6, 1983, and Nov. 24, 1986). In particular, no urticaria nor asthma was observed. During the fourth delivery (after a pregnancy of 36 weeks), labor was induced with a peridural anesthesia. After 1 hour of labor, a boy was born weighing 4.010 kg. The American Pediatric Gross Assessment Record score was 10 1 minute after the birth. One half hour later, the placenta was normally evacuated. A few minutes later, Mrs. S. developed generalized itching, predominantly in the palms, followed by severe nasal irritation with sneezing. These symptoms were followed by cutaneous maculopapules, facial and glottis edema, and then severe bronchospasm, collapse, and loss of consciousness. Epinephrine injection and other intensive care measures were successful, but the patient did not regain normal consciousness until 2 hours later. No basis was found for a diagnosis of septic or hemorrhagic shock. The delay between anesthesia and the beginning of anaphylaxis should be emphasized. There were repeated contacts with latex gloves during the delivery and, above all, during the placental removal, up until a few minutes before the beginning of anaphylaxis. Hypersensitivity to natural latex had been known for 10 years in this patient. Within a few minutes, latex gloves used for housework could induce severe itching on the contact areas and, if the contact was not interrupted, urticaria developed. During the last episode, angioedema, spasmodic coryza, and conjunctivitis were observed. Moreover, contact with condoms has also induced pruritus and local intolerance.

For several years the patient has experienced rhinitis linked to hypersensitivity to house dust and contact urticaria with edema of the lips caused by bananas. Prick tests (Laboratoire des Stallergerenes, Fresnes, France) were positive with latex (wheal/flare, 7/40), banana (4/12), house dust (12/50), and *Dermatophagoides pteronyssinus* (8/35). Intradermal tests (with lidocaine and bupivacaine used as anesthetic drugs) were negative at concentrations up to 1:10 (wt/vol). The serum IgE level (immuno enzymatic assay) was 150 IU/L. There were increased specific IgE levels (RAST) against latex (140 PRU/ml) and banana (80 PRU/ml), suggesting a cross-reaction, as recently described by Charpin et al.²

DISCUSSION

Axelsson et al.³ reported a case of anaphylactic shock during a vaginal examination with latex finger cot in a sensitized patient. Turjanmaa et al.⁴ reported four cases of anaphylaxis after latex contact during delivery; only one case of shock was observed, occurring after a cesarean section. Two similar cases were then reported by Leynadier et al.⁵ However, no shock has previously been reported after vaginal delivery.

To evaluate the prevalence of latex sensitization in atopic patients, we prick tested 111 consecutive patients (with latex extract 1:100, Laboratoire des Stallergerenes) investigated in our allergy department. The test was positive (at 20 minutes with a wheal diameter at least 3 mm greater than wheal diameter of the negative control) in 17 patients (15%), and a significant difference was observed in female patients with a history of gynecologic surgery in the last 3 years: 4/13 versus 3/65; chi-square, 7.06; $p < 0.01$. However, 3 or 4 days after delivery, the prick test was positive in only five of 121 consecutive patients, suggesting that such sensitization is uncommon among nonatopic women.

However, these results suggest that a mucous contact with latex could lead to sensitization in patients with a history of allergy. Prophylaxis appears essential; allergy and latex hypersensitivity must be considered before surgery, delivery, and even vaginal examination (Table I). If latex sensitization is suspected, it should be investigated by prick test. A positive test should lead to the use of polyvinyl materials.

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TABLE I. Latex anaphylaxis during surgical intervention or after obstetric delivery:
Review of literature

Authors	No.	Sex	Occupation	Age (yr)	Allergy history	Causal factor	Clinical manifestation
Turjanmaa et al. ⁴ 1988	1	F	Nurse	?	?	Vaginal delivery	Urticaria
	2	F	Surgeon	?	?	Vaginal delivery	Urticaria
	3	F	Dental surgeon	?	?	Vaginal delivery	Urticaria
Leynadier et al. ⁵ 1988	4	F	Secretary	?	?	Vaginal delivery	Urticaria
	1	F	Clerk	32	Food allergy	Salpingoplasty	Anaphylactic shock
	2	F	Accountant	29	Atopic dermatitis Asthma	Cesarean after epidural anesthetic	Anaphylactic shock
	3	F	Nurse	30	—	Oophorectomy	Anaphylactic shock
	4	F	Nurse	32	Food allergy Asthma	Cholecystectomy	Anaphylactic shock
Slater 1989*	5	F	Nurse	28	Food allergy	Cesarean intervention	Anaphylactic shock
	1	F	—	11	?	Spina bifida intervention	Anaphylactic shock
Charpin et al. ² 1989	2	F	—	11	?	Spina bifida intervention	Anaphylactic shock
	1	F	Health professional	?	Quincke's edema with banana	Intervention	Anaphylactic shock
	2	F	Health professional	?	?	Intervention	Bronchospasm Urticaria Quincke's edema

*Slater JE. N Engl J Med 1989;320(17):1126-30.

REFERENCES

1. Baur X, Jager D. Airborne antigens from latex gloves. *Lancet* 1990;335:912.
2. Charpin D, M'Rai L, Giffon E, Vervloet D. Anaphylaxie au latex [Abstract]. *Rev Fr Allergol* 1989;29:100-1.
3. Axelsson JG, Johansson SGO, Wrangsjö K. IgE mediated anaphylactoid reactions to rubber. *Allergy* 1987;42:46-50.
4. Turjanmaa K, Reunala T, Tuimala R, Karkkainen T. Allergy to latex gloves: unusual complication during delivery. *Br Med J* 1988;297:1029.
5. Leynadier F, Pecquet C, Dry J. Anaphylaxis to latex during surgery. *Anaesthesia* 1989;44:547-50.