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Preoperative screening for general anesthesia

THE use of anesthetic agents and drugs during anesthesia induces a certain number of anaphylactoid reactions. The incidence of anaphylaxis to intravenous agents used during general anesthesia is about 1/5000 (1). Although systematic preoperative screening with general anesthetic drugs has been recommended by some authors (2, 3), this procedure is controversial (4, 5).

■ We investigated 1000 patients with a history of drug allergy or atopy prior to general anesthesia, using skin prick tests with muscle relaxants (MR), thiopental, latex, and benzodiazepines at the recommended concentrations (Table 1), to assess the validity of a systematic preoperative screening for these substances. Intradermal tests were also performed in patients who reported previous reactions during general anesthesia.

■ The mean age of the studied population was 55.6 years (SD: 16.2). Sixty percent were female. Fifteen percent of the patients were atopic (defined on clinical grounds). Drug allergy was reported by 77.6% of the patients. Previous general anesthesia was reported by 58.8% with a mean number of 1.7 (SD: 1.5), and 35 patients (0.035%) reported previous reactions during general anesthesia, but the agents used were unknown in 23 of them.

Skin tests with latex were positive in 8/1000 patients (0.8%): two nurses, two children with multiple surgery (one with spina bifida), three

Table 1. Concentration used for prick and intradermal tests

		Prick tests	Intradermal tests (dilution factor)
Muscle relaxants	Suxamethonium	50 mg/ml	10^{-4} to 10^{-2}
	Pancuronium	2 mg/ml	10^{-4} to 10^{-1}
	Vecuronium	2 mg/ml	10^{-4} to 10^{-1}
	Atracurium	1 mg/ml	10^{-4} to 10^{-3}
	Thiopental	50 mg/ml	10^{-2}
	Diazepam	5 mg/ml	—
	Latex	10% w/v	—
Controls	Saline	0.9%	0.9%
	Histamine	10 mg/ml	0.1 mg/ml

homemakers, and one male patient with occupational exposure to latex.

Positive skin tests to MR were observed in six patients: in four cases, only to atracurium; in two cases, to both suxamethonium and atracurium. Four of them had previous reactions to general anesthesia; the two patients with latent sensitization to MR (no previous reactions to MR) had adverse reactions to cosmetics and eye-drops containing benzalkonium, respectively. In one patient with intraoperative anaphylaxis, sensitization to cephalosporin was demonstrated.

The 11.4% (4/35) of the patients who reported previous reactions to general anesthesia showed positive results, whereas only 0.2% (2/965) of the patients without previous reactions presented positive results (Table 2).

Patients with positive skin tests to anesthetic agents or latex were advised to use alternative drugs or latex-free products, respectively. No allergic reactions were reported by avoiding these substances in further surgical procedures.

■ The prevalence of latex sensitization in this population was low (0.8%). However, preoperative

Our study in 1000 subjects suggests that preoperative skin tests with anesthetic drugs are useful in patients exposed to latex or with previous intraoperative reactions.

screening for latex should be performed in patients with repeated exposure such as health-care workers, subjects with occupational exposure, and patients with myelodysplasia or multiple surgical procedures (6-8).

Since positive skin tests to MR were observed in six patients (in five

cases to atracurium and in two cases to suxamethonium), and four of them had had previous reactions

Table 2. Patients with positive results to drugs used in anesthesia

Patient no.	Sex/age (years)	PA*	Intraoperative AR† (symptoms/drug)	Drug allergy	Atropy	Positive skin tests	Remarks
1	F/29	1	Bronchospasm/suxamethonium	No	Yes	Suxamethonium (ID‡) Atracurium (ID)	—
2	F/47	2	Disorientation/unknown	No	No	Atracurium (prick)	—
3	F/31	2	None	Yes	No	Suxamethonium (prick) Atracurium (prick)	AR to cosmetics
4	M/73	3	Hypotension/atracurium	No	No	Atracurium (prick)	—
5	M/61	1	None	Yes	No	Atracurium (ID)	AR to eye-drops
6	M/32	0	Anaphylactic shock/atracurium	No	No	Atracurium (prick)	—
7	M/74	1	Anaphylactic shock/cephazolin	No	No	Cephazolin (ID)	—

* Number of previous administrations of anesthesia.

† Adverse reactions.

‡ Intradermal.

to general anesthesia, allergy evaluation with MR should be performed in all patients with a history of anaphylactoid reactions during general anesthesia (9). The two patients with latent sensitization to MR had had adverse reactions to cosmetics and eye-drops containing benzalkonium, respectively, suggesting the possible implication of quaternary ammonium ions. The prevalence of latent sensitization to MR is similar to that of previous reports (9, 10). Therefore, preoperative screening may be advisable in patients with a history of adverse reactions to cosmetics or drug preservatives containing quaternary ammonium.

Key words: latex; muscle relaxants; screening.

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Ascites in hereditary angioedema

HEREDITARY angioedema (HAE) is a rare hereditary immunodeficiency with decreased levels or function of C1 inhibitor (C1INH). It is characterized by recurrent episodes of soft-tissue swelling, with nonpruritic, nonpitting edema which may occur at any anatomic location.

Severe abdominal pain due to intestinal involvement is frequently seen during an HAE attack, sometimes being the sole manifestation of HAE (1). In these cases, a wrong diagnosis of acute abdomen is frequent, leading to unnecessary surgery (1).

Although rare, ascites may also appear during HAE attacks (2-5) and can constitute another confounding factor if the correct diagnosis is not suspected.

■ A 17-year-old white boy was admitted to our hospital for severe abdominal pain. This patient had already been diagnosed as having HAE, which

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