CORRESPONDENCE

Latex sensitization in patients with myelomeningocele undergoing urological procedures: prevalence and associated factors

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To the Editor,

Natural latex is a compound retrieved from the rubber tree (*Hevea brasiliensis*) that is widely used in medical materials. Since 1980, the increasing incidence of latex allergy has paralleled the widespread use of those materials. Its prevalence is currently decreasing, however, because of the improved quality of the latex and allergy prevention.¹ Patients with myelomeningocele (MMC), a malformation of the neural tube, may exhibit a widely ranging prevalence of sensitization to latex.

We studied the prevalence of latex sensitization in patients with MMC undergoing repeated urological surgery. We interviewed MMC patients of both sexes, ten years of age or older, who had undergone at least one surgery and who had had a venous blood sample collected.² All of the blood samples were analyzed using the ImmunoCAP® 100 Phadia method (Phadia AB, Uppsala, Sweden) to detect specific immunoglobulin (IgE) with values $\geq 0.10 \text{ KUA} \cdot \text{L}^{-1}$ (kilo allergen-specific antibodies per litre). The higher the value, the greater was the IgE concentration in the sample. Values $>0.7 \text{ KUA} \cdot \text{L}^{-1}$ were considered markers of sensitization.³ The project was approved by the Ethics Committee for Research Projects of the Faculty of Medicine, University of São Paulo (Protocol 0767/08, 20 March 2013).

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Table Symptoms of latex allergy and sensitization in patients with myelomeningocele

	Non-sensitized (n=29)	Sensitized (n=22)
Age (yr)*	19 [11-35]	19.5 [10-40]
Sex**		
Male	16 (55%)	10 (45%)
Previous surgeries*	6 [2-30]	10 [4-26]
History of anaphylaxis	4 (14%)	9 (41%)
ASA questionnaire**		
Asthma	3 (10%)	6 (27%)
Eczema	5 (17%)	6 (27%)
Autoimmune diseases	2 (7%)	-
On-the-job exposure to latex	2 (7%)	3 (14%)
Catheterized to urinate	24 (83%)	22 (100%)
History of previous allergies	8 (28%)	14 (64%)
History of food allergies	4 (14%)	5 (23%)
Bananas [#]	3 (10%)	3 (14%)
History of latex allergy	9 (31%)	17 (77%)
Self-reported symptoms		
Hives	9 (31%)	12 (54%)
Itching	8 (28%)	9 (41%)
Wheezing	2 (7%)	7 (32%)
Difficulty breathing	4 (14%)	9 (41%)
Watery eyes	4 (14%)	10 (46%)
Edema	7 (24%)	15 (68%)
Non-characterized	8 (28%)	15 (68%)
Blowing up balloons	8 (28%)	15 (68%)
Dental/medical examinations	1 (3%)	2 (9%)
Wearing rubber gloves	7 (24%)	11 (50%)

* Median [interquartile range]; ** Number (%); [#] No history of allergies to kiwi fruit, avocados and chestnuts. ASA = American Society of Anesthesiologists

Of 212 patients with MMC, 68 had undergone at least one surgical procedure. In all, 51 patients agreed to participate, and 22 (43%) of them had K82 antibody levels ≥ 0.7 KUA·L⁻¹. They were thus considered to be latex-sensitive. Although the age and sex of patients with and without K82 antibodies were similar, those considered sensitized reported more surgeries and were more likely to self-report symptoms of latex sensitization (Table).

Although a history of allergy may not be entirely reliable, these data show that some symptoms could be used to help the clinician identify latex sensitization in an at-risk population. It is interesting to note that, although 26 patients (51%) claimed a history of latex allergy, only 17 tested positively for sensitization, and nine were negative.

The specificity of the relation between spina bifida and the repeated exposure to surgery probably refers to a combination of genetic and environmental factors. Some data indicate that potent allergens (e.g., latex) in high-risk groups (e.g., those with spina bifida) can induce sensitization, and, conversely, avoidance can reverse it.⁴ Therefore, the early recognition of sensitized patients, even when already in a risk group, may benefit from a focused interview. Indeed, in one study, a brief questionnaire better identified suspected latex sensitivity than a standard verbal inquiry (e.g., “Are you allergic to medications or latex?”).⁵ The results presented herein suggest that key symptoms may identify those sensitized to latex even when already in an at-risk condition.

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Competing interests None declared.

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