

Clinical Communications

Patient versus allergy specialist interpretation of a negative workup for suspected iodinated contrast media allergy

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Clinical Implications

- After a negative iodinated contrast media drug allergy workup, patients often remained convinced to be allergic or uncertain. Additional patient-perception studies are warranted and may indicate the need for better dissemination of information of drug allergy evaluations toward patients and health care workers.

TO THE EDITOR:

Drug allergy workup aspires to validate or invalidate assumed allergies, identify potential cross-reacting drugs, and provide safe alternatives. However, the results obtained and information given by the allergist is not always perceived as such by the patient. Therefore, the label of “allergy” often persists for patients despite a negative workup and can result in unnecessary avoidance or unnecessary use of second-line alternatives.

In the management of iodinated contrast media (ICM) hypersensitivity reactions (HRs), skin testing can be used to identify the subset of truly ICM-allergic patients and to provide safe skin-test–negative ICMs for potential reexposure.

Recently, we contacted 597 patients who underwent skin testing for a potential drug hypersensitivity reaction after exposure to ICM.¹ Using a standardized questionnaire, patients were contacted and questioned whether subsequent exposure to ICM occurred and if this was tolerated. Sixteen of 233 (6.9%) patients who were reexposed experienced reactions, with mostly milder or identical symptoms compared with the initial reaction. No patient with 1 or more positive skin test result reacted to an identified skin-test–negative alternative and a stepwise approach was proposed for future evaluation and care for patients with a potential ICM HR.

In this work, we evaluated how the result of the allergy workup was perceived by patients and if this was concordant or not with the view of the allergist. Therefore, at the end of the questionnaire, patients were asked whether they considered themselves as allergic to ICM or not. Only physically contacted patients were included (n = 387) and patients with positive skin test results (n = 57) or reactions upon reexposure despite negative skin test results (n = 13), or incomplete data (n = 18) were excluded, because they could be perceived as allergic, although this would not always corroborate the opinion of the allergist. The study was approved by the local ethical committee.

In 299 patients with all negative skin test results, 121 (40.4%) were reexposed, all uneventfully, and 178 (59.5%) were not reexposed (Table I). Patients who were reexposed (with

TABLE I. Patient perception after a negative allergy workup for suspected ICM HR

Patient perception	Not reexposed	Reexposed	Total
	60% (178)	40% (121)	100% (299)
“Allergic”	24% (43)	9% (11)	18% (54)
“Uncertain”	44% (78)	15% (18)	32% (96)
“Not allergic”	32% (57)	76% (92)	50% (149)

tolerance) reported “not to be allergic” in 92 of 121 (76.0%) cases, “allergic” in 11 of 121 (9.1%), and “uncertain” in 18 of 121 (14.9%). Those who were not reexposed reported “not to be allergic” in 57 of 178 (32.0%) cases, “allergic” in 43 of 178 (24.2%), and “uncertain” in 78 of 178 (43.8%). The proportion of patients reporting “not to be allergic” was higher in the reexposed group versus the not reexposed group (76.0% vs 32.0%; $P < .0001$ χ^2 test). This might reflect a change in perception after a tolerated reexposure although a lower threshold for reexposure in this subgroup of patients cannot be excluded. The proportion of patients reporting “uncertain” was lower in the reexposed group versus the not reexposed group (14.9% vs 43.8%; $P < .01$ χ^2 test). However, in total still 54 of 299 (18.1%) questioned patients were convinced to be “allergic” despite a negative allergy workup and 96 of 299 (32.1%) remained “uncertain.”

Although skin testing can identify safe alternative(s) for ICM reexposure and potentially discriminate between allergic and nonallergic ICM HRs, the allergist and patient interpretation is often not well aligned. It is unclear whether more solid information on the negative predictive value of skin testing in ICM HR at the time of the allergy workup in this study would have reduced the number of patients continuing to perceive themselves as “allergic” or “uncertain.” However, our study indicates the need for better dissemination of information of the allergy workup toward patients and health care workers.

Similar work in penicillin allergy indicates that the *allergy* label often persists despite a negative workup²⁻⁴ and that many patients and/or physicians remain reluctant to readminister penicillins despite a negative evaluation.⁵ In a survey in patients who underwent a penicillin allergy workup, Gerace and Philips³ observed that 12 of 49 (41%) patients with negative skin test results continued to avoid penicillins because of either personal (42%) or the primary care physician’s (58%) concerns. Picard et al⁵ observed that the parents of 24 of 170 (18%) children who had negative penicillin skin and provocation testing refused readministration of penicillins in their children because of fear for a reaction, similar to the 9% of patients considering themselves as allergic despite negative skin test results and a tolerated rechallenge in our work.

To our knowledge, this is the first study to evaluate patient interpretation of an ICM drug allergy workup and we would suggest that this be implemented in future work to better evaluate the impact and limitations of the allergy specialist advice.

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