

Correspondence

Selection of contrast media in patients with delayed reactions should be based on challenge test results

To the Editor:

Recently, Hasdenteufel et al¹ described a retrospective study of 11 patients with delayed hypersensitivity reactions to iodixanol and positive skin test results. In the study all patients with negative skin test results to iobitridol tolerated a challenge with this iodinated contrast medium (ICM). We present a patient with a delayed reaction to iodixanol and negative skin test results to iobitridol who had a delayed reaction to iobitridol.

A 64-year-old nonatopic man with an acute coronary syndrome underwent a percutaneous coronary intervention with administration of iodixanol. Four days later, a second percutaneous coronary intervention was performed. Forty-eight hours later, he had a severe, generalized, itchy erythematous rash and fever. A routine blood test showed 12,900 leukocytes/mm³ with 10% of eosinophils. Liver and renal functions were normal. He received steroids and antihistamines, and the exanthema evolved to desquamative lesions that lasted 30 days. He had not previously received an ICM.

Twelve weeks after the reaction, skin tests were performed according to European Academy of Allergy and Clinical Immunology recommendations.² Skin prick and patch tests (with undiluted ICMs) and intradermal tests (with 1:10 diluted ICMs) were performed with iohexol (Omnipaque; GE Healthcare, Fairfield, Conn), ioversol (Optiray; Covidien Spain, Barcelona, Spain), iobitridol (Xenetix; Guerbert, Roissy, France), and iodixanol (Visipaque, GE Healthcare). Patch test results were positive to iodixanol at D2 and D4 readings and negative to the rest of the ICMs. Immediate skin prick and intradermal test results were negative. Intradermal test results with iohexol, ioversol, and iodixanol were positive at 48 and 96 hours. The intradermal test result with iobitridol was negative (up to 10-day reading). After informed written consent, a controlled challenge test with up to 25 mL of iobitridol (Xenetix; a quarter of the dose) was performed. Forty-eight hours later, the patient had an itchy erythematous rash on the genitalia and legs with widespread maculopapular lesions without systemic symptoms. The clinical picture resolved in 4 days with steroids and antihistamines.

International guidelines recommend skin tests as a useful tool for diagnosis of ICM-induced delayed reaction.³ Furthermore, several studies⁴⁻⁶ have shown that patients with negative skin test results to an ICM do tolerate it. This was also the case in

the study by Hasdenteufel et al.¹ They suggested that negative skin test results to ICMs could provide guidance with regard to the choice of alternative ICMs. In addition, they also suggested the use of iobitridol in patients with delayed reactions to iodixanol because it has a quite different chemical structure compared with that of iodixanol. Our patient had both positive patch and delayed intradermal skin test results with iodixanol. In spite of negative skin test results to iobitridol, he had a delayed skin reaction to this ICM. We only found one case of a delayed reaction to iobitridol in a patient with negative skin test results to several ICMs in a series of cases of immediate and delayed reactions.⁶ Nevertheless, the culprit agent was unknown, and it could have been the same that produced the reaction.

In conclusion, we suggest that all patients with delayed reactions to ICMs and negative skin test results should undergo a controlled challenge test before recommending the use of an ICM.

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