

Evaluation of children admitted with a history of antibiotic allergy: from claim to confirmation

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Background: Parent or self-reported drug allergy is a frequent claim in daily clinical practice and has a considerable impact on prescription choices. A detailed and algorithmic diagnostic evaluation of drug hypersensitivity allows a proper diagnosis or exclusion. **Objectives:** This study aimed to determine the real frequency of drug hypersensitivity in children for a presumptive diagnosis of drug allergy, using a standardized diagnostic protocol.

Methods: Children with a reported drug allergy admitted to clinics of Mersin University, Department of Pediatrics between May 2009–November 2010 were included in the study and evaluated with a standardized diagnostic protocol for drug allergy. Children with immediate manifestations underwent immediate-reading skin prick (SPT) and intradermal tests (IDT) and drug provocation tests with the culprit drugs. Children with nonimmediate manifestations were assessed with drug patch tests, immediate-reading prick and intradermal, and delayed-reading intradermal skin tests and drug provocation tests.

Results: We evaluated 67 children with a history of hypersensitivity reactions to antibiotics. Thirty one (46.2%) of them were female, 36 (53.8%) were male. Mean age was 6.8 ± 4.3 . 19 (28.4%) of the subjects were atopic. Fifteen (22.3) of the subjects had family history of drug allergy. Among all, 38 (56.7%) had experienced immediate manifestations (anaphylaxis, urticaria, angioedema) and 29 (43.3%) nonimmediate manifestations (erythematous, maculopapular rash). Among 38 subjects with immediate reaction history to antibiotics, 13 (19.4%) demonstrated positive immediate-reading SPT or IDT results; two with PPL, six with MDM, two with benzyl penicillin, one with ampicilin, and two with the culprit drugs. Six (9.3%) had positive provocation tests with the culprit drugs. Among 29 subjects with non-immediate reaction history to antibiotics, 7 (10.4%) demonstrated positive immediatereading SPT or IDT results; 2 with MDM, 3 with amoxicillin, 1 with ampicilin, and 1 with the culprit drugs. Six (9.3%) had positive provocation tests with the culprit drugs. Among six subjects with immediate reaction history to macrolides three demonstrated positive immediate-reading SPT or IDT results. In total, 52.2% of children with a parent-reported allergy to antibiotics had test-proven drug allergy.

Conclusions: Children with parent-reported antibiotic allergy should be evaluated with an exhaustive diagnostic work-up including oral provocation tests, before strict diagnosis and drug prohibitions are made.