

Generalised delayed desquamative exanthema after intradermal testing with betalactam antibiotics

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A 83-year-old woman, with a history of a long-lasting asthma (under treatment with inhaled budesonide) and allergic rhinitis sensitised to house dust mite, received oral amoxicillin/clavulanic acid for a respiratory infection 10 years ago. After 4 days of treatment, 6 h after the

13th dose, she developed pruritic and slightly painful generalised erythema, which became desquamative

in 36–48 h. She was treated with oral corticosteroids and antihistamines. Symptoms lasted for 3 weeks. No other symptoms were present (no lymphadenopathies, hepatomegaly or fever) and no other medication was taken. Blood sample was not drawn at the Emergency Department. Previous tolerance to betalactam antibiotics (amoxicillin) was good.

The clinical history suggested a nonimmediate hypersensitivity to amoxicillin/clavulanic acid according to drug allergy mechanisms (1).

A complete allergological study (10 years after the reaction) was carried out. Blood count and biochemical values were within the respective reference ranges. Basal serum tryptase was normal, 3 µg/l (Phadia immunoCap, Uppsala, Sweden), total serum IgE was 16 U/ml (Phadia ImmunoCap), and negative specific serum IgE to amoxicillin, penicilloyl V and penicilloyl G (<0.35 KU/l, Phadia ImmunoCap). Physical examination findings were normal at the time of consultation.

Intradermal tests (IDT) were performed according to standardised diagnosis of nonimmediate reactions to betalactams (2), under controlled conditions, on the left forearm with: histamine 10 mg/ml, sodium chloride 0.9%, (Penicilloyl-Poli-Lysine) (Diater TM, Madrid, Spain), Minor Determinant Mix (Diater TM), amoxicillin (2 and 20 mg/ml), cefuroxime (2 and 20 mg/ml) and amoxicillin/clavulanic acid (2/0.5 and 20/5 mg/ml).

A delayed reading of IDT, 48 h after the tests, demonstrated erythema with blisters at the site of amoxicillin (at 2 and 20 mg/ml) and amoxicillin/clavulanic acid IDT (at 2/0.5 and 20/0.5 mg/ml) (Fig. 1), the other IDT were negative. Therefore, the clinical diagnosis of nonimmediate hypersensitivity to amoxicillin was established.

The next day the patient returned to our hospital because she developed a generalised desquamative exanthema, sparing the face, which the patient referred as being similar to the previous reaction. A short course of oral corticosteroids was started. Symptoms lasted for 1 week. Given that patient did not present other symptoms such as fever, lymphadenopathies or hepatomegaly to think about drug-induced hypersensitivity syndrome and as the reaction was already remitting,

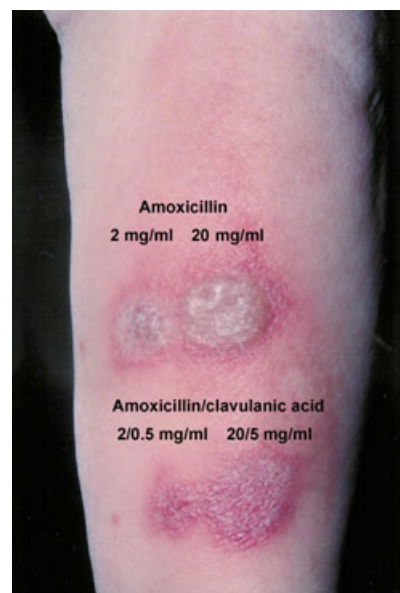


Figure 1 Positive results at 48 h of intradermal test with amoxicillin (2 and 20 mg/ml) and amoxicillin/clavulanic acid (2/0.5 and 20/5 mg/ml).

laboratory tests were not performed. The patient refused a challenge test to determine tolerance to alternative betalactams such as cephalosporins and refused any further studies.

Allergic reactions to betalactams are the most common cause of adverse drug reactions mediated by specific immunological mechanisms. The diagnosis of betalactam allergy is well established and can be determined using the standardised diagnostic procedures of the European Network for Drug Allergy (ENDA) (2).

Urticaria and rarely anaphylaxis (even fatal anaphylactic shock) are known to have occurred after IDT, in particular with drugs (3, 4). These unwanted side-effects occur in IgE-mediated immediate hypersensitivity

reactions. Systemic reactions after skin testing for nonimmediate drug eruptions seem to be rare, although a few cases have been reported (5, 6).

This case illustrates the need for individual risk evaluation when undertaking drug allergy testing. Although in this case the clinical history was suggestive of a desquamative nonimmediate reaction to amoxicillin/clavulanic acid, which is a contraindication for performing a challenge test with the suspected drug, the positivity of skin tests is useful to confirm the clinical suspicion and to find alternative options. IDT should always be performed cautiously, as severe local reactions or systemic side-effect may occur.

The possibility of performing patch tests prior to IDT or the use of higher dilutions should be assessed, not only in patients who have suffered severe skin reactions (e.g. TEN, severe bullous exanthema, AGEP, SJS) or systemic reaction (e.g. DRESS), but also in

patients who have presented a less severe but desquamative eruption, even though the sensitivity of these tests would be lower.

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