

Delayed type hypersensitivity reaction

A 27-year-old woman presented to her GP with a pruritic rash on her trunk on the third day of using amoxicillin/clavulanic acid for sinus infection. Physical examination revealed a maculopapular rash but no desquamation, blisters or pustules. Acute general blood tests (full blood count, liver and renal function) and mast cell tryptase levels were all normal. The antibiotic was discontinued and a prescription of oral steroids and antihistamines was given. Her symptoms resolved within a week.

The patient recalled that she had had a similar, but milder, skin rash at the end of an amoxicillin course three years before. No other history of suspected drug allergy was reported. A mild, delayed, immunological, T-cell mediated reaction seemed most likely.

There was debate as to whether testing was necessary, as there was no reason not to avoid penicillins in favour of alternative antibiotics as and when required. However, the patient was keen to undergo testing and was referred to a specialist in a private clinic where both skin prick and intradermal testing with penicillins were negative, as expected.

Patch testing was judged not to be worthwhile. However, the patient was advised to monitor test injection sites over the next few days and to photograph any skin changes. An erythematous infiltration around both the amoxicillin and the amoxicillin/clavulanic acid intradermal testing site was noticed at 72 hours. Clinical history and skin test pointed to a type IV (delayed, T-cell mediated) reaction to amoxicillin. She was advised to avoid all beta-lactam antibiotics. Cross-reactivity between penicillins and cephalosporins is predicted to be very low for T-cell mediated responses.

A MedicAlert application (delayed allergy to penicillin) and a copy of the clinic discharge letter were given to the patient and her GP.