

Fixed drug eruption caused by amoxicillin– clavulanic acid

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Introduction

Fixed drug eruption (FDE) is a non-immediate reaction that is well described in the literature. Although numerous drugs and certain foods have also been reported as causative agents, FDE caused by penicillin derivatives is unusual.

Patch tests on residual cutaneous lesions may be helpful in diagnosing FDE with certain drugs (1). We report

a fixed drug eruption caused by amoxicillin–clavulanic acid that was only confirmed by oral challenge.

Methods, Materials and Results

A 41-year-old woman, with no known allergies, had been treated with amoxicillin–clavulanic acid 500 mg, and 6 hr later developed pruritus and an erythematous macule on her left hand, which disappeared after 7 days with no residual pigmentation. Previously, she had experienced a similar episode in the same location with the same medication. Prick and intradermal tests (late reading within 24 hr) with benzylpenicilloyl polyllysine (as the major determinant) at a concentration of 0.4 mg/ml, and the minor determinant mixture at 0.5 mg/ml (Diater Lab., Madrid, Spain) gave negative results.

Skin tests (prick and intradermal tests) with benzylpenicillin 10 000 UI/ml (Lab Normon SA, Madrid, Spain), amoxicillin 20 mg/ml (Lab Glaxo Smith Kline SA, Madrid, Spain), ampicillin 20 mg/ml (Lab. Normon SA), cefuroxime 2 mg/ml (Lab. Glaxo Smith Kline SA) and ceftazidime 2 mg/ml (Lab. Combino Pharm SL, Barcelona, Spain) also

gave negative results. Specific IgE antibodies to penicillin V, penicillin G, amoxicillin and ampicillin (CAP-FEIA; Phadia, Uppsala, Sweden) were negative.

The patient was patch tested on her upper back skin and on the residual cutaneous lesion on her left palm. Despite technical difficulties in testing on the palm, we tested with pure amoxicillin–clavulanic acid (10% in pet.), and obtained negative readings at days 2 and 4 (Nonweven Patch Test Strips Curatest®; Lohman & Rauscher International, Rangsdorf, Germany). Amoxicillin was not tested alone, because the patient declined, owing to the inherent difficulties in testing on the palm.

Oral challenge testing was performed with amoxicillin–clavulanic acid (125/31.25, 250/62.5 and 500/125 mg) at gradually increasing doses at 1-hr intervals, following the protocol of the European Academy of of Allergy and Clinical Immunology drugs committee (2).

Six hours after the cumulative intake of 875 mg of amoxicillin–clavulanic acid, the patient developed an erythematous macule on her left hand (Fig. 1). The reappearance of the lesion at the same sites after challenge

in our patient supports the diagnosis of fixed drug eruption caused by amoxicillin–clavulanic acid.

We were not able to perform an oral challenge with amoxicillin in order to determine whether the reaction was caused by amoxicillin or clavulanic acid. The patient did permit a tolerance test with cephalosporins, in order to have an alternative in the β -lactam group. This showed tolerance to cefuroxime 500 mg (cumulative dose of 875 mg) and ceftazidime 1000 mg (cumulative dose of 1750 mg); oral challenges were negative with both.

Discussion

Few cases of FDE with β -lactams have been reported (3–7). The drugs implicated are amoxicillin, amoxicillin–clavulanic acid, and, in one case, ceftriaxone-induced FDE (5). Patch testing is a safe and effective tool for the diagnosis of FDE, especially if residual lesions persist; however, false-negative results may occur. Oral challenge may be necessary to make the diagnosis (3), as in our case. In summary, we report an FDE with amoxicillin–clavulanic acid, with negative patch test results. The diagnosis was confirmed by oral challenge. This is the second reported case of FDE with amoxicillin–clavulanic acid.

Conflicts of interest: The authors have declared no conflicts

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Fig. 1. Fixed drug eruption caused by amoxicillin–clavulanic acid.

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