

Table 1. Specific (classical) immunotherapy during 15-year period (1985–99)

Allergen	No. of patients
Grass-pollen mixture	77
Cocksfoot (<i>Dactylis glomerata</i>)	5
Tree-pollen mixture	6
Birch (<i>Betula verrucosa</i>)	2
Ragweed (<i>Ambrosia elatior</i>)	23
House dust	38
House-dust mite (<i>Dermatophagoides pteronyssinus</i>)	31
Animal fur	2
Feather	1
Total	185

CBC (eo), nasal swab (eo), liver-function tests, RIST, RAST, CAST-ELISA, IgG, CIC, ECP and tryptase, CD4, CD8, CD23, and CD28. A decrease in specific IgE (total IgE was unaltered), CD4, CD23, and CD28 and an increase in IgG (IgG1, IgG4) and CD8 were recorded as early as at 6 months of therapy.

During the course of treatment, there was a diminution of IgE in favor of IgG, and a reduction in eosinophil count induced by specific provocation. These effects may be related to a decrease in the production of IL-4 and IL-5, as shown in some recent studies (4). Allergen SIT requires high motivation and collaboration from the patient.

In our study, as shown in Table 1, the best results by SIT were achieved in patients with the diagnosis of allergic rhinitis treated with grass-pollen allergen mixture. The number of patients who were subjected to SIT (in the analyzed period) was significantly increased, due to the introduction of various allergens such as ragweed, tree-pollen mixture, birch, and house-dust mite. In a limited number of patients who suffered from allergic rhinitis, atopic bronchitis, and atopic dermatitis, SIT was also successfully applied. During the SIT, no case of anaphylactic reaction was recorded.

In conclusion, a better understanding of the mechanisms of allergic reactions will

offer new ways of treatment based on the use of antigenic peptides, cytokines, and cytokine inhibitors, with remarkable reduction of side-effects (5, 6).

*Department of Dermatology and Venereology
Zagreb University Hospital Center
Šalata 4
HR-10000 Zagreb
Croatia
Tel. +385-1-455 23 33/128
Fax: +385-1-492 00 14
E-mail: andreja.milavec1@zg.hinet.hr

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Spontaneous allergy to ampicillin and local anesthetics

E. Scala*, M. Giani, L. Pirrotta,
E. C. Guerra, C. R. Girardelli, O. De Pità,
P. Puddu

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● It is widely reported that adverse reaction to local anesthetics (LA) might be the result of vasovagal, anxiety, or panic reaction (1). Furthermore, pharmacologic toxicity due to both epinephrine side-effects and local anesthetics might occur.

In fact, allergic reaction to LA is extremely rare, although some cases of immediate (2) or delayed reaction to LA have been described (3).

We report the case of a 60-year-old woman who presented itchy dermatitis over her forearm 36 h after an injection of lidocaine hydrochloride, which had been given for the removal of a melanoma.

Selective delayed reaction to lidocaine and mepivacaine in a patient with delayed hypersensitivity to ampicillin.

After the patient gave written consent, she underwent allergologic evaluation with several LAs belonging to the amide group (lidocaine, mepivacaine, and carbocaine). The conventional patch test with lidocaine, mepivacaine, and carbocaine was negative at 48 and 72 h. A reaction to latex was excluded by evaluating both the epicutaneous prick test with natural ammoniated latex (ALK-Abelló A/S, Hørsholm, Denmark) and specific IgE. An intracutaneous test with xylocaine (2% lidocaine), carbocaine (2% mepivacaine), and marcaine (0.5% bupivacaine) was also negative. An intradermal test was carried out with a 1/100 dilution of each LA tested. The saline solution produced a negative result, and the histamine 1 mg/ml epicutaneous prick test resulted in an 8-mm wheal with flare. Itching and erythematous patches developed 48 h after the test at the lidocaine and mepivacaine injection sites, but no reaction was observed at the bupivacaine injection sites. The negative patch test results in the presence of delayed intradermal test positivity might be due to the fact that not all LA are available in an optimal pharmacologic preparation or for the known limitations of sensitivity and specificity in epicutaneous testing. We then performed a subcutaneous challenge test up to a cumulative dosage of 1.6 ml 1% bupivacaine by the method of Schatz (4), finding neither an immediate nor a delayed type of reaction. Several months later, bupivacaine was administered to the patient for the removal of a sebaceous cyst without any adverse reaction.

It was reported that lidocaine and mepivacaine, but not bupivacaine, the third member of the amide type of LA, have a high degree of cross-reactivity (5). In fact, in this case also, the patient could tolerate bupivacaine, despite delayed hypersensitivity to lidocaine and mepivacaine.

As previously reported, drugs can trigger an oligoclonal expansion of CD4+ T cells bearing certain TCRV β chains (6). We then sought to determine whether any modification could be detected in the peripheral blood T-cell V β repertoire in the course of a delayed reaction to LA. FACS analysis revealed an expansion of activated CD8+ CD69+ CD25+ T cells bearing TCRV β 1 (about 21% of total CD8+ T cells) and TCRV β 9 (about 20% of total CD8+ T cells). Because the patient refused a skin biopsy, we could not determine a direct relationship between CD8+ T-cell expansion in the peripheral blood and the delayed reaction to LA. Interestingly, such a population was not detectable at all in the peripheral blood after 30 days. The oligoclonal expansion of T cells might be associated with a restricted hapten specificity (5). Therefore, in this case, we can hypothesize that a selective use of certain TCR V β , into which lidocaine and mepivacaine fit better than bupivacaine, occurs.

Furthermore, on the basis of the patient's history, given that maculopapular rashes had occurred during aminopenicillin treatment several years earlier, we carried out a skin test with penicilloyl polylysine, minor determinant mixture, benzylpenicillin, ampicillin, and amoxicillin, as well as a patch test with the last three drugs. Delayed hypersensitivity to ampicillin was therefore diagnosed on the basis of both patch test and delayed intradermal positivity.

Contrasting data are available on the possibility that certain individuals are more likely than others to develop an adverse drug reaction. The case we presented of a patient with delayed hypersensitivity to both LA and ampicillin seems to support the existence of a multiple drug allergy syndrome (7).

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*Via dei Monti di Creta, 104
00167 - Rome
Italy
Tel. +39 0666464435
Fax: +39 06 66464435
E-mail: e.scale@idi.it

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