1019 Accelerated Reaction to Acyclovir: A Case Report

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Although acyclovir has the potential to cause adverse cutaneous reactions, these are rare and the mechanisms implicated are not well understood.

We present a case of a 52 years old woman who developed a generalized urticaria after treatment with oral acyclovir in the course of an herpes virus infection. Application of topical acyclovir also induced a contact lesion. In the allergological study we found a positive delayed response in the patch test with acyclovir. A controlled challenge showed a generalized erythema two hours after the administration of 30 mg of oral acyclovir that progressed in the following 24 hours and disappeared in 72 hours. The reaction was treated with oral antihistamines needing no steroid therapy.

To monitor this challenge reaction several immunological parameters were assessed sequentially by flow cytometry and RT-PCR. Mononuclear cells from heparinized blood were isolated by density gradient centrifugation. Cell subsets and homing receptor expression were assessed with the following Mo Ab: CD3-PerCP, CD4-PE, CD8-FITC, CD45RO-PE, CD45RA-FITC, L-selectin-FITC and HECA-452-FITC (a rat IgM against cutaneous lymphocyte-associated antigen [CLA]). The state of activation of these cells was evaluated with PE-conjugated CD25 (IL-2 receptor) and PE-conjugated CD69 (early activation marker). Five-parameter analysis was performed on a Facscalibur flow cytometer and analysed with Cell Quest software using FITC, PE, and PerCP as the three fluorescent parameters. Negative isotype controls were used to verify the staining specificity of the antibodies used. Expression of cytokines such as IL-2, IL-4, IL-5, IFN-γ and TNF-α in PBMC cells was performed by semiquantitative RT-PCR.

No relevant modifications in the homing receptors expression were found but an increase in CD25 expression in T lymphocytes at each determination was observed. CD69 expression was also increased initially. The patient expressed IFN-γ and IL-4 mRNA during the whole course of the reaction, although IL-4 expression tended to decrease in the last determination. TNFα could only be detected in the last determination and IL-2 and IL-5 were not detected at any time.

The enhanced state of activation of T lymphocytes and the cytokines expression pattern suggest that an immunological mechanism was taking part in the induction of this reaction.

1020 Antioxidant Activities And Oxidative Levels In Patients Suffering From Allergy To Drugs

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Free radicals production and disturbance in the redox status can modulate the expression of different inflammatory molecules. There are a wide array of enzymatic and non-enzymatic antioxidants defenses including superoxide dismutase (SOD), glutathione peroxidase (GSHPx), catalase (CAT), vitamin A and vitamin C that protect cells from toxic oxygen. The aim of the study is to evaluate the interrelationship of different antioxidant enzymes, general oxidative status and inflammation in subjects who experienced allergic drug reactions.

Twenty subjects having an allergic reaction to different drugs were included in the study. PBMC were obtained by lymphoprep. SOD, GSHPx and CAT and lipid peroxidation were determined as reported (1). Statistical comparisons between groups were made by one way ANOVA:

In mononuclear cells the CAT activity was higher in allergic patients than in controls. Amongst the patient group important differences were found. Similar results were found in Cu, Zn SOD and Mn-SOD. A significant decrease was observed in GSHPx activities.

In erythrocytes higher values of CAT, GSHPx and SODs were found in the patients group with significant differences between the levels. Also significant differences in the levels of TBARS in mononuclear cells and erythrocytes were observed.

In this study different ways of detoxification were observed in mononuclear cells and erythrocytes. Heterogeneous levels of the enzymatic activity was observed in each patient that can be related to the individual pathology generated by the suspected drug.