

Comments on the ^3H -Basophil Histamine Release Technique

To the Editor,

In relation to the publication of Barazarte et al. (1) which contains a critical evaluation of the new ^3H -histamine release technique developed in our laboratory (3), we would like to make some comments.

The principle of the new method for detecting type I allergy is an *in vitro* incorporation of labelled histamine in the leukocytes of the patient, whereafter release of ^3H -histamine is measured after provocation of the cells with the suspected allergen. Some important discrepancies have been found between the results obtained in the two laboratories. Therefore, it must be emphasized that the method used by Barazarte et al. is not identical with our method. Firstly, we have used a lenient technique for incorporating ^3H -histamine into the cells. Thus, the incorporation was not performed on the basophil-enriched mononuclear fraction, because the isolation procedure would disturb the basophil cell function towards the incorporation of histamine. The incorporation was therefore performed on whole blood preserved for storage by addition of the cell culture medium RPMI, Series 1640. Secondly, we found that maximal histamine incorporation was not obtained until 16-18 h after the addition of labelled histamine and that a period of 4 h would only permit a low and unreliable uptake. The uptake of radiolabelled histamine was also depressed by alcohol in the $2.5\text{-}^3\text{H}$ -histamine dihydrochloride (Amersham), and alcohol was therefore removed by freeze-drying.

These differences between the method of Barazarte et al. and our method would account for the important discrepancies in the results

obtained by the two methods. Thus, with our method we observed basophil histamine release by specific allergens in asthmatic patients suspected of type I allergy (3), and anti-IgE was found to release histamine in about half of both intrinsic asthma patients and normal individuals (2). Barazarte et al. (1) observed histamine release by the calcium ionophore A23187 with their method, but surprisingly a release could not be demonstrated by anti-IgE in the two donors, although an anti-IgE-induced histamine release was obtained in these donors by the classical fluorometric analysis of histamine. It would therefore be of interest to know whether the method of Barazarte et al. could demonstrate release of histamine by specific allergens in asthmatic patients.

Although our method seems to fulfil the need for a rapid, simple, and inexpensive method for detecting type I allergy, the screening of many patients now demands a more precise estimation of cell sensitivity in the large-scale screening of patients, thereby ensuring a more certain determination of the degree of allergy. This we have now achieved by a new and simple histamine release technique which is based on measuring histamine bound to microfibrils. The method will be published in the near future. Among the advantages of this method is a greater sensitivity, and it is also rapid and inexpensive. Therefore, we would prefer this new method in the screening of allergic patients.

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