## Final Remarks

## Minoru Okuda, Tokyo, Japan

RAST-based immunotherapy was presented by Nalebuff. The criticism that immunotherapy for nasal allergy is uneconomical, unsafe, time-consuming and ineffective, does not apply to his method. Conventional immunotherapy can cause too many side effects and, therefore, we cannot expect to obtain satisfactory results.

His method, though aggressive, is safer than the conventional method, and could withstand the existing criticism to immunotherapy.

Local immunotherapy was also presented by Johansson to improve conventional immunotherapy. In this method the patients administer the allergen extracts themselves. This method is less expensive, easy and safe to a systemic reaction when it is compared to immunotherapy by injection. However, as he pointed out, many problems concerning dose, type of antigen to be applied, preservation method of antigen solution by patients and rescue from side-effects occuring in patient's house still remain to be solved. In case of overdosage symptoms could be aggravated because of an increase in the number of nasal basophilic cells and mucosal histamine sensitivity.

The concept of mast cell stabilizing agents, reviewed by Van Cauwenberge, resulted as for the field of immunopharmacology in the introduction of disodium cromoglycate (DSCG). DSCG inhibits an anaphylactic histamine release from mast cells and is undoubtedly effective in nasal allergy. The mechanism of the inhibition, however, is not yet fully understood. Since the inhibitory effect of DSCG varies according to mast cells of different species and different tissues, and also to different experimental conditions, I hope that the effects and mode of action of the stabilizing agents are studied using human nasal mucosal mast cells. Many pharmaceutical laboratories are striving to produce new oral stabilizing agents but until now a satisfactory compound which can be put into practice is not yet developed. The question is in which way the drug for nasal allergy can best be administered (orally or locally). Local steroid treatment was reviewed by Wihl relating to the action, indication and efficacy. This treatment is accepted today as the most potent method for nasal allergy.

Questions, however, are still arising as to how long we can continue this treatment without side effects occuring and whether or not we can expect a patient with nasal allergy to be cured by this treatment.

Finally, Saito talked about the present treatment for nasal allergy in his clinic, and

concluded that, as new potent antiallergic drugs are being developed, the use of both conventional  $H_1$  blockage and immunotherapy is becoming less frequent. In the treatment of nasal allergy we are progressing, but we are still searching.

M. Okuda, M.D. Dept. of Otolaryngology Nippon Medical School 1-1-5, Sendagi, Bunkyo-ku Tokyo, Japan