

Summarization of the Symposium

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The International Symposium on Current Situation of Dengue Virus Infection and its Control was held on 10 to 12 October 1993 at Nagasaki City. One hundred seventeen participants including pathologists, epidemiologists, biologists, chemists and medical entomologists attended to this symposium. Reports and discussions made during these 2 days and a half symposium are summarized.

Epidemiology of DF/DHF : Expansion of dengue endemic area has been made during 1960 to 1990. The distribution of *Aedes aegypti* is also expanded in parallel with DF/DHF endemic. The reason of expansion of distribution of *Aedes aegypti* is not known. However, incidence of human cases of DHF/DSS is limited in South-Asian countries and in Caribbean Islands. It is pointed out that the incidence of DF cases (i. e. classic type of dengue) should be separated in the statistics from that of DHF/DSS cases in order to clarify nature of dengue infection. Cases of DF/DHF will tend to increase in future in spite of various effort to control its epidemic while case fatality rate will be steadily come down by the progress of medical treatment. Principal vector of DF/DHF is *Ae. aegypti*, but the role of *Ae. albopictus* in the epidemic of DF/DHF can not be disregarded and is hoped to be carefully evaluated.

Dengue vaccines : Research on live attenuated vaccines is slowly but steadily progressing with all 4 types of dengue viruses by Dr. Natth Bhamarapavati and his associated group in Thailand. Four vaccine candidate strains are applied to men as a phase I trial and effectiveness and safety are successfully demonstrated. Expanded phase I trial is expected to start soon. Research and development of dengue vaccine of the second generation is going on in various aspects. However, they are still in the stage of laboratory experiment.

Vector control : Effective insecticides have been successfully developed in the laboratories and have entered to the field trial with some encouraging results. However, application of the existed insecticides for control of DF demonstrated that insecticide spray only could not contribute apparently to minimize or stop dengue epidemic in nature though it was one of the effective tools for control of dengue. Experience in Taiwan reported a successful example which clearly demonstrated the effective use of insecticide for control of dengue.

Elimination of breeding source of vector mosquito seems to be the most reasonable measure to affect DF/DHF epidemic in the community.

Dengue control : The extensive effort aiming at overall control of dengue epidemic made by researchers and governmental or voluntary personnels was reported. It is generally agreed that the most important way to control dengue virus transmission is to establish a system of community participation in coordination to control strategies made by the government and some international organizations such as WHO, UNICEF or Rockefeller Foundation. General education on the meaning of vector control to the individuals seemed a key to establish indefatigable community participation for dengue control.

Finally, participants in the present conference had a consensus that further patient and continuous effort is needed to attain the final goal to get rid of the fear of dengue.