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ANTIBODY RESPONSES FOLLOWING THE USE OF JAPANESE ENCEPHALITIS VACCINE MANUFACTURED IN KOREA AND JAPAN IN A SAMPLE OF SRI LANKAN CHILDREN

Gaya Colombage, Vasanthi Bandaranayake,
H.D.N. Gunasekera, L. Hettiarachchi,
L.Peiris and Tissa Vitarana
Medical Research Institute, Colombo 8.

Since the isolation of Japanese encephalitis virus at the Medical Research Institute in 1968 it has been found to be the major cause of encephalitis in the country, and of the epidemics in the Anuradhapura and Puttalam Districts since 1985. Cross neutralization tests done with two isolates obtained during the 1985/1986 outbreak showed that the Sri Lankan virus was closely related to the Indian strain 826309. Since Nakayama vaccine has been successfully tested in India it was decided to use the vaccine in Sri Lanka in May 1988. The vaccine was obtained from Korea and Japan and used in Anuradhapura and Puttalam Districts respectively, among children below ten years of age.

This survey was done to assess the immune responses to each of the vaccines. The Haemaglutination Inhibition test (HI) and mouse Neutralization test (NT) were used to detect the antibodies developed in children between one to four years of age. HI antibodies were detected in only 10 of the second samples of 54 paired sera from Anuradhapura and 13 of the 51 from Puttalam. 11 randomly selected second samples from Anuradhapura and 10 of those from Puttalam were tested for NT antobodies and all of them were positive. In the same two groups HI antobodies were present in only 3 of the Anuradhapura and 2 of the Puttalam samples.

Both vaccines appeared to be equally effective. The subsequent marked reduction in the number of encephalitis cases in the vaccinated age group tends to support our findings.