

HV 02

Maternal measles antibody measured by plaque reduction neutralization test in infants during the first year of life

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Background: There have been measles epidemics in 1989~1990, 1993~1994 and 2000~2001 in Korea. In order to prevent measles outbreaks, it is necessary to keep high immunization rates in an optimal schedule which should be chosen in consideration of epidemiology of the disease and the duration of maternal antibody persisted in infants. During the 2000~2001 measles epidemic, more than 50,000 cases were reported and the highest attack rate occurred in infants less than one year of age, indicating the necessity of measles immunization before 12 month of age when measles outbreaks occur again. Until now, maternal measles antibody in infants has been measured by convenient serologic tests such as enzyme immunoassay in Korea. Therefore, maternal measles antibody in infants was measured by plaque reduction neutralization (PRN) test, which has been known to be more sensitive and more relevant in predicting protection from the disease, to find the optimal schedule for measles vaccination before the first birthday when necessary.

Methods: Sera were obtained from 89 infants younger than 12 months of age who were healthy or recovered from mild illnesses, and had not had measles vaccination, measles infection, or blood transfusion. Measles antibody was measured by plaque reduction neutralization assay.

Results: Geometric mean titers (GMTs) of measles PRN antibody and seropositive rates were 879.7 mIU/mL (100.0%) at <1 month, 756.9 mIU/mL (80%) at 1 month, 176.5 mIU/mL (50.0%) at 2 month, 64.6 mIU/mL (37.5%) at 3month, 32.3 mIU/mL (0.0%) at 4 month, 32.2 mIU/mL (0.0%) at 5 month, 18.6 mIU/mL (0.0%) at 6 month, 45.6mIU /mL (25.0%) at 7 month, 27.1mIU /mL (0.0%) at 8 month, 48.4 mIU/mL (0.0%) at 9 month, 54.3 mIU/mL (0.0%) at 10 month, and 27.1 mIU/mL (0.0%) at 11 month. Maternal measles antibody was decreasing as infants were getting older and did not persist after 4 months of age in almost all cases.

Conclusions: Placentally transferred measles antibody measured by PRN test was detected in all newborns tested, was decreasing reciprocally to the age of infants, and was negative in almost all infants older than 4 months old. This result indicates that measles vaccination at 6 months of age or older, which is the current recommendation for the period of epidemic issued by the Korean Society of Pediatrics, should not cause the primary vaccine failure

HV 03

Application of RT-PCR detecting dengue virus for early diagnosis of dengue hemorrhagic fever

Results from the study done
at Thoaison medical center

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From 6 June 2001 to 2 July 2001, 48 patients mainly children with fever and no sign of bacterial infection demonstrated by the normal of leukocyte count and formula of the peripheric blood sample, were enrolled into the study to detect the virus *Dengue* in sera by RT-PCR. From the results of RT-PCR, 29 patients were diagnosed as Dengue infection even though they had no clearly clinical and paraclinical manifestations of *Dengue* hemorrhagic fever (DHF). One patient was diagnosed as DHF degree III, based on the clinical and paraclinical manifestations, and the RT-PCR of this patient serum were also [+] with *Dengue* [-]. There were 18 patients with RT-PCR detecting *Dengue* [-]. Among them, 3 were diagnosed as DHF based on clinical and paraclinical manifestations, but all 3 were [-] with serological MacELISA, and all 3 these patients were completely recovery with non specific follow-up and treatments. Only 17 sera which were [+] with RT-PCR detecting *Dengue* were available to send to the laboratory of molecular biology at the University of Medicine and Pharmacy in HCMC to do the RT-PCR detecting and typing \pm , the results demonstrated that 13 were type D3, 4 were type D2, and this results revealed that the predominant type causing DHF in Mekong delta now are still mainly D3.