

Status of Currently Circulating Dengue Virus Responsible
for the Epidemic in Bangladesh in the Year 2002

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【Introduction】 Dengue fever and dengue hemorrhagic fever (DF/DHF) has appeared in Bangladesh as an outbreak since the year 2000. To analyze clinical features of DF/DHF in Bangladesh and to get detailed information about the currently circulating dengue viruses, we conducted clinical data collection, sero-epidemiological surveillance and virus isolation. This is the first report on molecular biological analyses of dengue viruses isolated in Bangladesh.

【Patients and Methods】 A total of 200 serum samples were collected from the dengue clinically diagnosed patients in Shaheed Suhrawardi Hospital, Shere-e-Bangla Nagar, Dhaka, Bangladesh in 2002. All the serum samples were measured the anti-dengue antibody level by IgM-capture ELISA and indirect IgG ELISA. For dengue virus isolation, serum samples were inoculated into mosquito derived C6/36 cells. Isolated dengue viruses were sero-typed by RT-PCR. Based on the envelope gene sequencing data, phylogenetic analysis was done. To clarify the clinical feature of DF/DHF in Bangladesh, clinical records of 200 dengue patients collected in 2002 were analyzed. **【Results and Discussion】** IgM positives and IgG positives against dengue virus were 59.5% and 65.5%, respectively. Eight strains of dengue virus were isolated and all of them were DEN-3. All 8 DEN-3 Bangladeshi strains clustered within genotype II along with some DEN-3 strains from Myanmar, Thailand and Malaysia and they were closely related to Thailand's isolates from the 1990s. It suggests that DEN-3 might entered Bangladesh from Thailand during the last decade. Besides, 8 isolates presented in a distinct sub-cluster of the genotype, indicating some independent evolution occurred in Bangladesh. Clinical profiles of 200 dengue patients indicated that most patients showed high frequency of prodromal symptoms such as fever, headache and vomiting. Also relatively high percentage (70%) of patients showed hemorrhagic manifestation. Six patients (3%) also showed plasma leakage (edema and ascities). Peak age distribution of the dengue patients belongs to 21-30 years old age group. Most of the dengue cases were reported in August and September.

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