

SEROLOGICAL EVIDENCE OF DENGUE FEVER IN THE BANGLADESSH REPUBLIC

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Dengue fever is widespread in south-east Asia, in particular in India. Since Bangladesh borders on three sides on India, has the same climate and is in the distribution area of the vector of infection *Aedes aegypti*, it could be assumed that dengue fever also occurs in Bangladesh. But experimental data in this respect were missing.

We examined 197 blood sera taken from febrile patients in the Dakka hospital in four serological tests. The haemagglutination inhibition (HI) and complement-fixation (CF) tests were done by routine micromethods. The indirect haemagglutination inhibition (IHI) and radial haemolysis in gel (RH) tests were carried out as described (1, 2, respectively).

Antigens of dengue type 1 and 2 and of the antigenically related Japanese encephalitis (JE) viruses used in these reactions were prepared by sucrose-acetone extraction from infected suckling mouse brains.

Of 147 sera examined in HI tests, 83, 86 and 86 reacted positively with dengue types 1 and 2 and JE virus, respectively. Of 43 sera examined in CF tests, the respective numbers of positive sera were 16, 15 and 8. Of 93 sera examined in IHI tests, 32 reacted positively with dengue type 1 and 2 each and none with JE virus. Of 93 sera examined in RH tests, 23 reacted positively with dengue type 1, 32 with dengue type 2 and none with JE virus.

These results showed a high incidence of antibodies to dengue virus types 1 and 2 among inhabitants of Bangladesh. A part of the dengue-positive sera reacted also with JE antigen in HI and CF tests. Because no positive reactions with JE antigen were obtained in IHI and RH tests, it is justified to assume that a group reaction between serologically related viruses became manifested in the HI and CF tests. The novel method of RH tests may be recommended for serological diagnosis of dengue fever.

References

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2. Gaidamovich, S. Ya., and Melnikova, E. E., *Vop. Virusol.* 24: 530, 1979.