

## **Serological surveillance of febrile rash illness with special reference to dengue, measles and rubella viruses in selected cities of Upper Myanmar**

Yee Yee Lwin, Kyaw Htet Aung, Yin Yin Khaing, Theint Theint Zaw, Thein Thein Htwe, PeThetKhin, Tin Myint, Khin Myint kyi, KyawZin Thant

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### **Abstract**

In 2008 and 2009, serological surveillance of febrile rash illness with special reference to dengue, measles and rubella viruses in Upper Myanmar in a hospital-based setting was first introduced in Mandalay and Pyin Oo Lwin, by the Virology Research Division, Department of Medical Research (Upper Myanmar) jointly with Mandalay Children Hospital and Pyin Oo Lwin 300-bedded Hospital. Blood samples were collected from the patients who gave informed consent, and were sent to the Virology Research Division, Department of Medical Research (Upper Myanmar) for virological studies.

A total of 408 blood samples were obtained during two consecutive years (from August 2008 to August 2009) from 388 clinically diagnosed cases of DHF, comprising 388 acute phase samples (S1) and 20 convalescent phase samples (S2). Paired sera were obtained from 20 patients (5.15 % of patients from whom S1 was taken). All samples were tested by Pan Bio Dengue Duo IgM and IgG ELISA tests. Among the tested samples, 314 samples showed positive result for dengue antibody (IgM and/or IgG) which in turn indicates 76.9 % laboratory confirmed cases of dengue infection. Dengue negative samples were tested by Enzygnost Anti-Measles IgM ELISA test and Enzygnost Anti-Rubella IgM ELISA test. Three samples showed positive results for measles antibody (IgM) and six samples showed positive result for rubella antibody (IgM). Although all aetiological agents responsible for febrile rash illness were not tested in this study due to limited diagnostic facilities, it was evident that dengue viruses account for major portion, and the small fractions of febrile rash illness were due to measles and rubella viruses.