

## **Abstract**

The cases of dengue fever/dengue hemorrhagic fever dropped since 1946. The activity of dengue virus was silent in Taiwan since then till 1987 when dengue cases appeared in Pingtung and spread widely to Kaohsiung in 1988 with total 4389 confirmed dengue cases and true case number was over 10,000. In 1994, TsaoYin appeared dengue hemorrhagic fever case. In 2002, Taiwan suddenly abruptly the largest epidemic of dengue hemorrhagic in past sixty years with total of 5387 dengue fever cases, >242 dengue hemorrhagic fever cases and 21 deaths.

Asymptomatic infection and epidemiological studies have NOT been paid attention by public health administrators in past years once dengue epidemics do NOT occur. This study focus on school children to establish fever alert surveillance and cohort study for future monitoring possible dangerous areas for DHF. The study design is to select those areas with high DF/DHF cases in the year of 2001-2003 dengue epidemic plus the considering of population density. After communication to the school administrators, 11 elementary schools participated and only those grade 2-3 students with informed consent had their blood samples taken on June 29, 2004. Among 1321 serum samples, the overall dengue IgG sero- prevalence rate was 4.618%(61/1321), male/female ratio of infected children was 1.102 (629/571). District-specific rate analysis found that Sanmin district was the highest 8.82% (9/102), Chienjen district was the next [6.73% (29/431)], Linya district ranked the third [4.78%(10/209)], FungShan City in KaoHsiung County was 3.13%(3/96), NanChe district was 2% (2/100), GuShan District was 2.52%(4/159), TsaoYin District was the lowest [1.28% (1/78)], and the control area ChiJin District was 0% (0/27). The overall seroincidence rate of dengue-IgM among these school children was as low as 0.76% (1/1321), and only one child without fever those dengue symptoms/signs was seropositive, implying that silent transmission of dengue virus is unavoidable and the virus might have possibility to be active on campus.

Since dengue epidemic was still on-going till this December and 2 DHF cases occurred in ChienJen District, we would like to have more financial support this type seroepidemiological study to monitor dengue virus activities and comparing with dengue cases in the same year for better evaluation on our current dengue surveillance system.

**Keywords :** Dengue Virus ; DHF ; seroepidemiology ; cohort study ; surveillance