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## EPIDEMIOLOGICAL STUDY OF DENGUE VIRUS INFECTION IN JAKARTA, INDONESIA

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### **Background:**

Dengue fever is a common infectious disease problem in Indonesia. Dengue fever is caused by a virus which is known as dengue virus (DENV). There are four serotypes of the virus which are DENV-1, DENV-2, DENV-3, and DENV-4. Previous study showed that morbidity rate and also incidence of dengue fever correlated directly with strains of dengue found within an area. This study aims to evaluate the dengue virus serotypes which is most common in Jakarta.

### **Materials & Methods:**

A prospective study was done on a total of 67 patients from community and primary health care centre in Jakarta who had fever for less than 48 hours and had a clinical diagnosis of dengue infection according to WHO standards. RT-PCR was done in order to identify the serotype of DENV in the patients.

### **Results:**

From this study, the DENV serotype which is most often found in patients in Indonesia is DENV-2 with 35.82%. DENV-3 is the next most common serotype with 20.89% of total patients infected. From all the patients, 17.91% have DENV-1 and 8.95% have DENV-4. Despite the clinical symptoms, 13.43% of the patients are considered dengue negative after the confirmation test. Combined infection of DENV-4 and DENV-1 is detected in 1.49% of the patients and combined infection of DENV-3 and DENV-2 is also detected in 1.49% of the patients.

### **Conclusion:**

The result of this study shows that the most common DENV serotype in Jakarta is DENV-2. This result is different from previous which showed that DENV-3 is the most common serotype in Indonesian patients. This difference is mainly due to the location of the study which is the community and primary health care centre in Jakarta.

### **Keywords:**

Dengue virus, Epidemiology, Serotype