FP02 VALIDATING DENGUE DUAL INFECTION SCORE IN ADULT DENGUE PATIENTS AT HOSPITAL CANSELOR TUANKU MUHRIZ

Mokhtar MF[1], Tan TL[1]

[1] *Universiti Kebangsaan Malaysia Medical Centre, Malaysia*

Clinical features of dengue infection are rather non-specific and can be complicated by concurrent bacterial infection. Ability to perform risk stratification early in the patient's course of illness may guide physicians to early bacterial cultures and empirical antibiotic. We aim to evaluate the usefulness of the Dengue Dual Infection Score (DDIS) as a diagnostic model for identifying bacterial coinfection in adult dengue patients who present to the Emergency Department. The study was conducted between August 2016 to March 2017 whereby adult dengue patients who presented to our department were assigned one point to each of five risk factors for bacterial coinfection; pulse rate at ED ≥90 beats/minute, total white cell count ≥6x10^9/L, hematocrit <40%, serum sodium <135 mmol/l and serum urea ≥5 mmol/L. We defined bacterial coinfection as any clinical diagnosis of bacterial infection or microbiological diagnosis of bacteremia from cultures; or pneumonia from clinical presentation and radiological examination, within 72 hours of admission. Among the frequently treated coinfection in our cohort were leptospirosis and pneumonia. We found a DDIS of ≥4 had a specificity of 95.5%, sensitivity of 25.0% (PPV of 50.0%, NPV of 87.5%) for bacterial coinfection. Patients with bacterial coinfection had longer duration of fever (5 days; p value = 0.047), had higher white cell count (4.8 x 10^9 ; IQR Q_{75}, Q_{25} = 4.8, 3.1; p value = 0.024), had lower sodium level (mean ± SD = 131 ± 5; p value =0.025), and lower hematocrit level (41.1%; IQR Q_{75}, Q_{25} = 44.3, 40.2, p value = 0.009). In conclusion, the use of DDIS would be an advantage in situations where dengue is endemic as it will be a better method for resource allocation in antibiotic selection among dengue patients