



Section A

101/A

Correlation of clinical presentation and laboratory confirmation of dengue patients

N H Manamperi¹, A M M H Athapaththu¹, G Premawansa², C Wellawaththage¹,
T D S S. Jayarathna¹, W Abeyewickreme¹ and M D Hapugoda¹*

¹ Faculty of Medicine, University of Kelaniya, Ragama

² North Colombo Teaching Hospital, Ragama.

Dengue is one of the most important arthropod-borne diseases in the world and it has become a very important disease in Sri Lanka, today. In Sri Lanka, diagnosis of dengue depends mainly on clinical signs and symptoms. Only a few suspected patients are confirmed by laboratory assays based on aetiological agents. The objective of this study was to determine the correlation between clinical presentation and laboratory confirmation of dengue patients.

Acute serum samples (n=100) collected from patients clinically suspected of having dengue fever (≤ 5 days) warded at the North Colombo Teaching Hospital, Ragama were used for the present study. Serum samples were collected after obtaining informed written consent from patients and samples were tested by RT-PCR which has high sensitivity (10 FFU/reaction) and specificity. Final diagnosis as dengue or non-dengue was assigned based on the results of RT-PCR assay. Differences in clinical and laboratory data were analyzed in dengue and non dengue patients. Chi-square test was used for comparison of data. The proportion of laboratory confirmed dengue patients were 56% (56/100). Mean platelet count and PCV in laboratory confirmed dengue patients were 60 269/mm³ (range 3000-306000) and 41% (range 27-61%) and in non dengue patients were 106 318/mm³ (range 5000-290000) and 41.6% (range 29-53%). Based on WHO criteria for diagnosis of dengue, headache (48/56 vs 41/44, $\chi^2=0.7$, $p=0.38$), retro-orbital pain (30/56 vs 14/44, $\chi^2=3.8$, $p=0.04$), limb pain (51/56 vs 30/44, $\chi^2=7$, $p=0.00$) and external bleeding (29/56 vs 4/44, $\chi^2=18$, $p=0.00$) showed significant association with dengue. Neck pain (10/56 vs 09/44, $\chi^2=0.01$, $p=0.94$), and lymphadenopathy (3/56 vs 02/44, $\chi^2=0.08$, $p=0.78$) did not show significant association with dengue. The infection was confirmed as dengue fever in 11% (6/56) and dengue hemorrhagic fever in 89% (50/56) based on WHO criteria. Surveillance based on clinical diagnosis may result in over estimation of the disease as clinical diagnosis is not specific enough. Laboratory confirmation of dengue suspected patients is important to measure the real incidence of the disease which leads implementation of control measures. Further, this is important for efficient management of patients.

Acknowledgements: Financial and technical assistance from the International Centre for Genetic Engineering and Biotechnology (ICGEB CRP/ SRI08-02) and International Atomic Energy Agency (IAEA SRI 5/042).