Increasing Prevalence of *Rickettsia conorii* Infections in Central Province, Sri Lanka

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Rickettsiosis is a zoonotic disease caused by intracellular, obligate gram negative, rod-shaped bacteria belongs to genus *Rickettsia.* Zoonotic rickettsiosis is categorized in to three groups as spotted fever, typhus, and scrub typhus. These pathogens are commonly transmitted by ticks, fleas, chiggers, lice, and mites. According to clinical history of rickettsial infections in the country, most of the infections were recorded due to tick bites. A previous study on rickettsial infections among suspected patients from eight provinces (except Northern Province) confirmed the re-emergence of rickettsiosis from 2002. Hence, there is a great need of monitoring the prevalence of rickettsial infections. The objective of the current study is to determine the prevalence of rickettsial infections in the Central Province, Sri Lanka. Patients with clinical symptoms of fever more than five days, maculopapular skin rash, skin necrosis and headache with no definite diagnosis were included in the study (n=575). They were reported to the Teaching Hospital, Peradeniya from November 2018 to November 2020. Blood samples were collected, and serum was separated by centrifuging for 10 minutes at 1500 rpm. The samples were subjected to "Indirect fluorescent antibody test (IFAT)" using "vircell" *Rickettsia conorii* IgG antibody kit adhering to manufacturer's guidelines. Out of 575 samples, 395 (68.7%) were confirmed positive for *R. conorii* specific IgG. When comparing the districts of Central Province, 68.5 % positivity rate from Kandy, 70.5% positivity rate from Matale and 75% positivity rate from Nuwara-Eliya was observed. In conclusion, reporting of 395 positive patients within two years is extremely high compared to the previous reports. During the period of 2002-2007, only 6 *Rickettsia conorii* patients were reported in the research conducted in the Central Province. The current study shows an increasing prevalence of *Rickettsia conorii* in the Central Province of Sri Lanka.

Keywords: Rickettsiosis, *Rickettsia conorii*, IFAT, IgG, Central Province