

**Serodiagnosis of Clinically Suspected Cases of Rickettsial Infections Presented at Teaching Hospital, Peradeniya**

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Rickettsial infections are well established in Sri Lanka and the number of patients with rickettsial infections from central hills of the island has been increasing every year. This study was planned to describe positive indirect fluorescent antibody (IFA) titers against several rickettsia serotypes in patients presented to the Teaching Hospital, Peradeniya.

All patients clinically diagnosed with rickettsial infections who were admitted to the Medical Unit, General Hospital, Peradeniya from 2008-2010 were included in the study. Blood samples were collected at the acute phase of the disease and IFA tests were performed for disease confirmation by detecting specific rickettsial IgM and IgG antibodies. Fluorescein-conjugated anti human heavy chain immunoglobulins were used in IFA and Eriochrome Black was used to counterstain. Ethical clearance for the study was obtained from ethical review committee, Faculty of Medicine, Peradeniya.

A total of 220 patients were confirmed by IFA to have secondary rickettsial infections within the study period. Out of this group 111 (50.45%) were males and 109 (49.54%) were females. Mean age of the group was 45 years (SD-18) ranging from 13 to 87 years. Seropositivity was detected for all three rickettsial antigens tested (*Rickettsia conorii*, *Orientia tsutsugamushi* and *Rickettsia typhi*). Of the 220 confirmed cases, 200(91%) cases were positive only for *Rickettsia conorii*, 3 (1.4%) cases were positive only for *Orientia tsutsugamushi* and a single case (0.45%) was positive for *Rickettsia typhi*. Mixed infections were seen among 17 (8%) patients. Spotted fever group infection was detected among all the mixed infections. Commonest co-infection was seen with *Rickettsia conorii*, and *Orientia tsutsugamushi* in 14 (6.4%) cases. Antibodies to all three species were detected in a single patient.

Spotted fever rickettsioses predominated during the three year period. Males and females were equally affected and the disease was detected in a wider age range with the majority in the middle aged. The occurrence of mixed infections can be either due to co-infections in the same disease episode or due to re-infection following a previous infection