



P 43 Molecular diagnosis of rickettsial infections in a resource-limited country: status quo

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Rickettsial infections are a group of emerging infections in Sri Lanka according to public health records based on clinical data. As the cultivation of rickettsiae requires category III containment level facilities, establishment of laboratory diagnosis of rickettsial infections remains a challenge in Sri Lanka. We describe the difficulty encountered in trying to establish molecular methods for the diagnosis of rickettsial infections in a resource-limited country.

A conventional PCR for the diagnosis of spotted fever was selected to be established. Primers and assay parameters were selected according to a previously established in-house assay. As organisms could not be cultivated in-house, positive controls were obtained from the Rickettsial Reference Laboratory in Marseilles, France. A dilution series of the positive control was carried out to determine the detection limit of the study.

The assay was carried out on 68 EDTA whole-blood samples collected from patients with clinically suspected spotted fever group rickettsioses with no success. Conditions for sample collection and transportation were found to be suboptimal. Different DNA extraction methods were being tried out as the kits used most widely in literature were found to be expensive.

Technical, monetary, and resource limitations hinder the rapid optimization and application of molecular assays for the laboratory diagnosis of rickettsial infections.