

Molecular characterisation and disease severity of leptospirosis in Sri Lanka

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Leptospirosis is a re-emerging zoonotic disease all over the world, important in tropical and subtropical areas. A majority of leptospirosis infected patients present as subclinical or mild disease while 5-10% may develop severe infection requiring hospitalisation and critical care. It is possible that several factors, such as the infecting serovar, level of leptospiraemia, host genetic factors and host immune response, may be important in predisposition towards severe disease. Different Leptospira strains circulate in different geographical regions contributing to variable disease severity. Therefore, it is important to investigate the circulating strains at geographical locations during each outbreak for epidemiological studies and to support the clinical management of the patients. In this study immunochromatography, microscopic agglutination test and polymerase chain reaction were used to diagnose leptospirosis. Further restriction fragment length polymorphism and DNA sequencing methods were used to identify the circulating strains in two selected geographical regions of Sri Lanka. Leptospira interrogans, Leptospira borgpetersenii and Leptospira kirschneri strains were identified to be circulating in western and southern provinces. L. interrogans was the predominant species circulating in western and southern provinces in 2013 and its presence was mainly associated with renal failure.

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