

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/23442084>

A preliminary study on prevalent serovars of leptospirosis among patients admitted to teaching hospital, Kandy, Sri Lanka

Article in *Indian Journal of Medical Microbiology* · October 2008

DOI: 10.4103/0255-0857.43557 · Source: PubMed

CITATIONS

11

READS

54

5 authors, including:



Suneth Buddhika Agampodi
Yale University

224 PUBLICATIONS 1,273 CITATIONS

[SEE PROFILE](#)



Vasanthi Thevanesam
University of Peradeniya

79 PUBLICATIONS 475 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



AHEAD, GEEPMD [View project](#)



Melioidosis , lab methods [View project](#)

A Preliminary Study on Prevalent Serovars of Leptospirosis among Patients admitted to Teaching Hospital, Kandy, Sri Lanka

Dear Editor,

Leptospirosis is an emerging infectious disease with worldwide distribution.^[1] It is endemic in most tropical and subtropical countries. In Sri Lanka, leptospirosis is a notifiable disease and around 1500 cases are reported annually to the epidemiology unit.^[2] Almost all the cases are reported on clinical suspicion without laboratory confirmation.^[3] Seroepidemiological data on leptospirosis in Sri Lanka is scarce. Hence, this study was conducted to identify circulating serovars among hospitalised patients with pyrexia for more than five days.

From October 2002 to November 2003, all patients admitted to teaching hospital Kandy, with suspected leptospirosis were included in the study. IgM ELISA was performed on all suspected cases and positive samples were confirmed using MAT. Twenty two reference strains belong to serovars australis, ballum, bataviae, bulgarica, canicola, celledoni, copenhageni, cynopteri, djasiman, grippotyphosa, hardjo, hursbridge, javanica, kremastos, medenensis, pomona, panama, robinsoni, shermani, szwajizai, tarassovi, and zanoni were included in MAT analysis. Positive MAT was defined as a single titer of greater than or equal to 400.

Out of 473 suspected cases, 74(15.6%) were positive, 25(5.3%) were equivocal and 374(79.1%) were negative for IgM ELISA test. Age distribution of the IgM positive cases showed an equal distribution among all age groups. Out of the 74 positives 48(64.9%) were males and 26(35.1%) were females. Around one third (35.1%) of these positive cases were either housewives or unemployed males. Common occupational categories were manual labourers (14.9%), agricultural workers of farmers (10.8%) and soldiers (5.4%). In MAT analysis, 31 serum samples

showed anti-leptospira antibodies of which 18 (24.3%) had a MAT titer greater than or equal to 400. The serovars identified included medenensis (4), australis (2), ballum (2), canicola (1), celledoni (1), cynopteri (2), hardjo (3), pomona (1) and robinsoni (2).

Our findings showed that the predominant serovars among the study sample were serovar medenensis and hardjo. Interestingly serovars copenhageni, which belongs to serogroup icterohaemorrhagiae was not detected in the samples. Previous studies have identified serogroup icterohaemorrhagiae as the commonly circulating serovar causing human infection in Sri Lanka.^[4] Accordingly, disease control activities targeted the rodent population.^[5] The present study raises the probability that other peidomestic animals may be the reservoirs for human leptospirosis in Sri Lanka. In addition, the traditional target group (farmers) accounted for only a part of risk group identified in the study.

According to these observations it is evident that epidemiology of human leptospirosis in Sri Lanka is either changing or not yet properly understood. We recommend a prospective study with proper sample size to provide evidence, which could be used for diagnosis, control, and preventive activities.

Acknowledgements

The authors would like to thank, Dr. K. Ranasinghe, Dr. P. Kurukulasoriya, Dr. M. R. F. Ruzla, Mr N. B Kulatunge and Panbio (Australia) for technical and material support.

References

1. Leptospirosis worldwide, 1999. *Wkly Epidemiol Rec* 1999;74:237-42.

2. Epidemiology Unit. Leptospirosis Surveillance Report - 2003. Vol. 45. Colombo: Epidemiological Bulletin Sri Lanka Epidemiology Unit; 2004. p. 16.
3. Epidemiology Unit. Sentinel Surveillance of Leptospirosis. Vol. 34. Colombo: Weekly Epidemiological Report Epidemiology Unit; 2007. p. 1-3.
4. Babudeiri B, Jagels G. Serological research on the presence of leptospirosis in Ceylon. Ceylon Med J 1962;7:213-4.
5. Epidemiology Unit. Prevention and Control of Leptospirosis. Colombo: Epidemiology Unit; 2007. p. 1-2.

*SB Agampodi, V Thevanesam, H Wimalarathna,
T Senarathna, MH Wijedasa

Department of Community Medicine (SBA), Department
of Microbiology (VT,TS, MHW), Faculty of Medicine,
University of Peradeniya, Sri Lanka and Consultant Physician
(WH), General Hospital, Kandy, Sri Lanka

*Corresponding author (email: <sunethagampodi@yahoo.com>)

Received: 27-02-2008

Accepted: 05-07-2008