



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
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Prevention And Control Of Leptospirosis In Sri Lanka

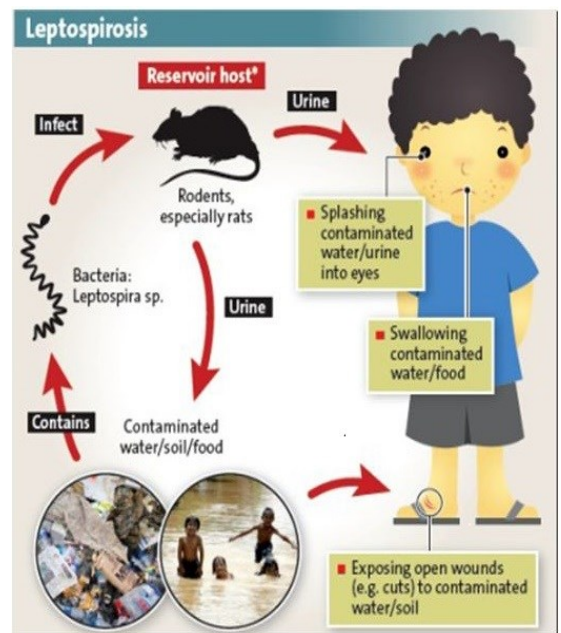
Introduction

Leptospirosis is a worldwide zoonotic infection with a much greater incidence in tropical regions and has now been identified as one of the emerging infectious diseases. It is transmitted through mud or water contaminated by the urine of infected animals (Rats, other rodents and domestic animals). The spectrum of human disease caused by leptospires is extremely wide, ranging from subclinical infection to a severe syndrome of multi-organ infection with high mortality.

The infection can transmit to humans via directly with inoculation with infected animal tissue or body fluids or indirectly with the organisms entering via mucosal surfaces or damaged skin from infected urine or contaminated environments such as moist soil in agricultural lands, lakes, streams and rivers. Leptospirosis can have a markedly varied clinical course. The incubation period is usually 5–14 days, with a range of 2–30 days. Most infections will be asymptomatic or mimic a mild flu like illness often going unnoticed. However, a small number of cases can develop severe forms of illness with multi organ failure.

The clinical presentation of leptospirosis is biphasic with the initial bacteraemic phase (leptospira proliferate and disseminate throughout the body), with an acute onset of fever with chills and rigours, headache, myalgia, nausea, vomiting and conjunctival suffusion followed by immune phase (leptospira are cleared but the tissue damage continues) with fever and other constitutional symptoms. Development of oliguria, jaundice, meningism,

haemorrhage, shock, pulmonary involvement and myocarditis will indicate severe disease with multi organ involvement.



Source :<http://wiki.ggc.edu/images/0/0d/Lepto-infection.jpg>

Even though paddy cultivation is responsible for many cases of leptospirosis, historical agricultural practices with poor land arrangements and inappropriate waste disposal also give rise to most of the sources of infection.

Epidemiology

Disease notification data have revealed that there had been a significant increase in reporting and identifying leptospirosis cases over the last few decades since identification of the first confirmed leptospirosis case in 1953, while the year 2008 Sri Lanka has reported the larg-

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est outbreak of leptospirosis with 7423 suspected cases with 204 deaths.

Occupation is a significant risk factor for humans. The disease is endemic in Sri Lanka with occasional outbreaks and the so called highly endemic areas are Colombo, Gampaha, Matale, Kurunegala and Kalutara which are known to be overcrowded with agricultural communities and changing whether/ environmental factors.

Challenges In prevention and control of leptospirosis

In Sri Lanka majority of leptospirosis patients were due to occupational exposure in rural areas. Therefore it is important in understanding the basic facts about the sources and mechanisms of disease transmission which are vital for an effective prevention programme. Doxycycline is given for high risk farming communities during cultivation seasons as a chemoprophylaxis. However it is important to consider Doxycycline chemoprophylaxis as a high risk strategy and not as a leading preventive measure. In addition to occupational exposure, leptospirosis following recreational activities too have been reported.

When considering primary prevention programmes, knowledge, awareness and behaviour of the people are the key essential components to be considered. Increased awareness of the disease among high risk groups, health care providers and even among general public will in turn increase early recognition and early treatment seeking behaviour. Secondary prevention of the disease is equally effective when considering complications and case fatality of the disease. Therefore priority should equally be given to seeking, reaching and treating components of the disease.

Sri Lankan national programme of Leptospirosis focuses on both reduction of incidence as well as case fatality rate (CFR) of leptospirosis and outbreak prevention. It also emphasizes on strengthening surveillance specially during paddy cultivation season and improving inter-sectoral coordination with other key sectors such as agriculture, irrigation and animal husbandry at MOH level.

In addition, laboratory confirmation of the disease is very important specially at the onset of an outbreak. Timely accurate notification of the suspected patients to relevant MOH is of great importance to investigate and prevent local spread of the disease.

Sources

1. Epidemiology Unit website <http://www.epid.gov.lk/leptospirosis.htm>
2. National Guidelines on management of Leptospirosis, Epidemiology Unit, Ministry of Health, Sri Lanka, 2016
3. Agampodi, Suneth Buddhika, et al. "Outbreak of leptospirosis after white-water rafting: sign of a shift from rural to recreational leptospirosis in Sri Lanka?." *Epidemiology & Infection* 142.4 (2014): 843-846.
4. <http://wiki.ggc.edu/images/0/0d/Lepto-infection.jpg>

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Table 1: Selected notifiable diseases reported by Medical Officers of Health 05th- 11th August 2017 (32ndWeek)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmaniasis		WRCD		
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**	
Colombo	836	28396	1	43	0	3	2	24	0	26	1	71	0	2	0	12	0	0	0	8	249	0	19	0	1	21	100
Gampaha	918	25512	1	23	0	12	0	16	0	8	1	37	0	9	2	12	0	1	1	199	0	22	0	2	6	99	
Kalutara	310	8247	2	41	0	3	1	11	0	50	4	194	0	5	0	4	0	0	12	390	1	92	0	1	3	100	
Kandy	670	9423	0	50	1	4	1	5	0	9	5	35	3	90	0	10	1	1	9	176	1	28	0	8	13	97	
Matale	150	2204	0	17	2	3	0	1	0	7	0	29	0	2	0	5	0	0	2	38	1	48	0	5	12	100	
NuwaraEliya	49	703	1	19	0	8	2	26	0	50	3	35	1	137	1	18	0	0	2	254	1	35	0	0	51	100	
Galle	233	4738	1	39	2	10	0	12	0	13	7	219	0	38	0	1	0	1	11	295	2	50	1	1	16	100	
Hambantota	116	2620	0	15	0	6	0	7	0	17	2	40	0	43	0	7	0	1	0	150	1	16	2	200	9	100	
Matara	329	4995	0	25	0	8	0	2	0	5	3	147	0	20	0	6	0	1	5	167	1	6	3	93	9	100	
Jaffna	65	3568	4	187	0	12	0	30	0	51	0	24	0	398	0	3	0	0	8	144	1	31	0	0	40	88	
Kilinochchi	12	392	0	13	0	1	0	10	0	1	0	3	0	12	0	2	0	0	0	3	1	8	0	2	24	100	
Mannar	0	499	0	5	0	0	0	2	0	1	0	2	0	2	0	0	0	0	0	13	0	0	0	0	0	16	100
Vavuniya	11	632	0	13	0	0	0	30	0	6	0	24	0	7	0	1	0	0	0	21	0	2	0	9	12	97	
Mullaitivu	13	264	0	8	0	1	1	4	4	5	0	15	0	4	0	1	0	1	0	15	0	5	0	1	8	100	
Batticaloa	67	4408	5	75	0	8	0	13	0	20	0	20	0	0	0	4	0	1	1	132	0	21	0	1	22	100	
Ampara	24	695	0	16	0	2	0	1	0	0	1	12	0	1	0	3	0	0	7	144	0	31	0	3	31	100	
Trincomalee	26	4574	2	17	0	2	0	5	0	17	0	17	0	12	0	17	0	0	2	104	0	18	1	5	18	98	
Kurunegala	423	8429	0	50	0	6	0	2	1	17	1	51	0	24	0	16	0	2	7	390	4	50	2	107	10	100	
Puttalam	290	4239	0	30	0	2	0	2	4	4	0	19	0	11	0	1	0	0	1	112	0	37	0	3	8	100	
Anuradhapur	71	2280	1	29	0	3	0	1	0	10	0	57	0	13	0	10	0	1	7	301	1	49	0	171	7	99	
Polonnaruwa	20	1072	0	12	0	5	0	9	0	5	0	30	0	6	0	6	0	0	2	172	0	12	1	94	4	96	
Badulla	143	2699	2	68	1	6	0	7	0	2	0	67	2	78	0	46	0	1	8	268	3	128	0	12	7	97	
Monaragala	80	1790	0	41	0	3	0	1	0	9	3	96	1	89	0	17	0	1	1	65	1	43	0	13	26	100	
Ratnapura	445	9101	5	109	0	65	1	8	0	8	6	421	0	22	0	58	0	0	4	229	0	128	0	16	9	100	
Kegalle	431	7215	0	27	0	8	0	4	0	17	3	57	0	57	0	11	0	0	6	197	1	49	0	8	9	100	
Kalmune	41	2018	0	61	0	4	0	4	0	278	1	8	0	0	0	2	0	0	1	114	2	16	0	0	12	100	
SRILANKA	5773	140713	25	1033	6	185	8	237	9	636	41	1730	7	1082	3	273	1	12	10	4342	2	944	10	756	15	99	

Source: esurveillance.avid.gov.lk

*T=Timeliness refers to returns received on or before 11th August, 2017 Total number of reporting units 344 Number of reporting units data provided for the current week: 342 C**=Completeness

Table 2: Vaccine-Preventable Diseases & AFP

05th– 11th August 2017 (32ndWeek)

Disease	No. of Cases by Province									Number of cases during current week in 2017	Number of cases during same week in 2016	Total number of cases to date in 2017	Total number of cases to date in 2016	Difference between the number of cases to date in 2017 & 2016
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	01	00	00	00	00	01	00	00	00	02	04	45	46	- 2.1%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	02	00	02	00	00	00	00	00	00	04	08	213	260	- 18.0%
Measles	00	00	01	00	00	00	00	00	00	01	03	151	309	- 51.1%
Rubella	00	00	00	00	00	00	00	00	00	00	00	05	06	- 16.6%
CRS**	00	00	00	00	00	00	00	00	00	00	00	01	00	0%
Tetanus	00	00	00	00	00	00	00	00	00	00	00	11	07	57.1%
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	21	12	162.5%
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	10	40	- 75%
Tuberculosis	25	11	20	01	02	06	17	07	13	102	199	5171	5848	-11.5%

Key to Table 1 & 2

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.
RDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

Data Sources:
Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,
Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis
CRS** =Congenital Rubella Syndrome

Dengue Prevention and Control Health Messages
Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them

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Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@slt.net.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

ON STATE SERVICE

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