WEEKLY EPIDEMIOLOGICAL REPORT
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Epidemiology of Leishmaniasis (Part II)

Patr I of this article was published in the last issue of the Weekly Epidemiological Report in which we discussed history, risk factors, mode of transmission and the clinical picture of leishmaniasis.

In this article we shall discuss the diagnosis, treatment, prevention and social impact of the disease.

HOW IS LEISHMANIASIS DIAGNOSED?

There is no effective laboratory screening tests for leishmaniasis. Therefore, diagnoses involves a combination of compatible symptoms, objective signs, and laboratory findings. Giemsa-stained tissue samples remain the most commonly used technique in the world today for diagnosis. A local pathologist should review the results. Serum antibody detection (serology) can prove useful in diagnosing visceral leishmaniasis but is of no use in the cutaneous disease. Other diagnostic techniques exist that allow parasite detection and species identification by special culture and microscopy, biochemical (isoenzymes), immunologic (immunoassays), and molecular PCR approaches.

Cutaneous leishmaniasis is diagnosed by sampling the skin lesion, usually with a biopsy or scraping. In visceral eishmaniasis, diagnosis requires invasive samples (bone marrow, liver, lymph nodes) and parasitological diagnosis can be challenging.

TREATMENT:

Cutaneous leishmaniasis generally heals spontaneously in 5-12 months in nonimmunocompromised patients. Treatment depends on whether the patient is immunocompromised and/or at risk for mucosal leishmaniasis (in which case, treatment is provided) and on site and severity of lesions, with metastatic lesions treated and unobtrusive lesions not always treated. First-line treatment is IM or IV sodium stibogluconate.

WHAT WILL HAPPEN IF LEISHMANIASIS IS LEFT UNTREATED?

The skin sores of cutaneous leishmaniasis may heal on their own, but this can take months or even years. The smallest lesions (under 10 mm) may not require treatment, just “watchful waiting.” The sores can leave ugly scars. If not treated, infection that started in the skin can rarely spread to the nose or mouth and can cause sores there (mucocutaneous leishmaniasis), which can be quite disfiguring. This is seen in some of the types of Leishmaniasis found in Central and South America. Visceral leishmaniasis can cause serious illness (enough to require hospitalization) but does not usually cause death in people with healthy immune systems and good nutrition. In some, visceral leishmaniasis can be a milder illness. On the other hand, individuals with degraded immune system functioning are at higher risk forserious or even fatal illness.

PREVENTION AND CONTROL

1. Case management : Detect cases systematically and treat rapidly. This applies to

Contents	*Page*

all forms Leishmaniasis and is one of the important measures to prevent spread of the disease.

2. Prevention of sand fly bites ; The best way to prevent ac quiring of Leishmaniasis is to avoid sand fly bites.

- Stay away from shrub jungles, and avoid outdoor activitiesas much as possible, especially from dusk to dawn when the sand flies are mostly active.
- Use bed nets (specially treated with permetrin) when ever possible during the night and day sleeping.
- When outside wear long sleeve shirts, long pants, and whenever possible socks.
- Application of insect repellents in exposed areas also can be useful. Care must be taken in children.
- Treatment of bed nets with permetrin is known to be effective for several months to repel the sand fly.

3. Suppression of the vectors : Residual insecticides which are used to control mosquitoes can be used effectively against the sand fly too.

4. Eliminate rubbish heaps and other sand fly breeding places

5. Suppression of the reservoir: Further research has to be carried out to establish local reservoir animals.

NOTIFICATION

If any cases of Leishmaniasis are suspected/confirmed , please notify to the Epidemiologist and to the Regional Epidemiologist.

LEISHMANIASIS AND HIV CO-INFECTION

In a particularly ominous trend, the spread of HIV infection is bringing the severe visceral form of leishmaniasis to new geographical areas and changing the epidemiology of this disease in dangerous ways. The two infections coexist in a deadly synergy. Where leishmaniasis occurs in urban areas, conditions often favour explosive epidemics thus transforming leishmaniasis from a sporadic to an epidemic threat. In persons infected with HIV, leishmaniasis accelerates the onset of AIDS by cumulative immunosuppression and by stimulating replication of the virus. The epidemiological significance of asymptomatic carriers of the parasite has also been amplified by the advent of HIV, as co-infection rapidly activates disease in parasite carriers. Sharing of needles by intravenous drug users contributes to the spread of leishmaniasis as well as HIV.

REPORTED LEISHMANIASIS JANUARY –MAY 2010

District	*Cases*	
	Notified	**Confirmed**
Hambantota	35	19
Matara	26	18
Anuradhapura	79	51
Polonnaruwa	06	02

MEASURES THAT CAN BE TAKEN TO CONTROL LEISHMANIASIS

- Strengthen the leishmaniasis surveillance within the district with the help of Dermatology clinics.
- dentify the high risk areas
- Strengthen the vector surveillance activities in the high risk areas
- Carry out focal spraying houses and cattle sheds in high risk locations
- Organize awareness programmes to medical staff
- Organize awareness programmes to public

Sources

1. LEISHMANIASIS Information for Clinicians. A Collaborative Effort of DHCC, AFIOH/RSR,DHSD, USACHPPM, & WRAMC.

2. Leishmaniasis fact sheet : The disease and its epidemiology. (http:// www.leishmaniasis\WHO The disease and its epidemiology.htm)

3. Urbanization: an increased risk factor for leishmaniasis . *Weekly Epidemiological Record*, N° 77, 44, 1 November 2002 (http://www.who.int/wer)

4. Leishmaniasis fact sheet : Burden of the disease. (http:// www.leishmaniasis\WHO Burden the disease .htm)

This article was compiled by Dr Darshani Abeysekera - Epidemiology Unit Colombo

Table 1: Vaccine-preventable Diseases & AFP

19th - 25th June 2010(25th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2010	Number of cases during same week in 2009	Total number of cases to date in 2010	Total number of cases to date in 2009	Difference between the number of cases to date in 2010 & 2009
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	00	01	00	00	00	00	01	00	00	02	00	44	39	+ 12.8 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	-
Measles	00	03	01	00	00	00	00	00	00	04	01	50	64	- 21.9 %
Tetanus	00	00	00	00	00	00	00	00	00	00	01	12	14	- 14.3 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	14	30	- 53.3 %
Tuberculosis	123	10	11	11	11	02	07	33	01	209	222	4414	4743	- 06.9 %

Table 2: Newly Introduced Notifiable Disease

19th - 25th June 2010(25th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2010	Number of cases during same week in 2009	Total number of cases to date in 2010	Total number of cases to date in 2009	Difference between the number of cases to date in 2010 & 2009
	W	C	S	N	E	NW	NC	U	Sab					
Chickenpox	09	01	04	00	00	05	03	02	02	26	273	1840	10028	- 81.6 %
Meningitis	10 CB=4 GM=1 KT=5	01 NE=1	01 GL=1	01 JF=1	03 TR=2 AM=1	06 KN=6	06 PO=5 AP=1	03 BD=3	02 KG=1 RP=1	33	16	917	509	+ 45.1 %
Mumps	01	02	01	02	01	00	0	00	00	09	26	483	939	- 48.5 %
Leishmaniasis	00	00	00	00	00	00	01 AP=1	00	00	01	05	156	435	- 64.1 %

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.

DPDHS 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, Whooping Cough, Chickenpox, Meningitis, Mumps.

Special Surveillance: Acute Flaccid Paralysis.

Leishmaniasis is notifiable only after the General Circular No: 02/102/2008 issued on 23 September 2008.

Dengue Prevention and Control Health Messages

You have a duty and a responsibility in preventing dengue fever. Make sure that your environment is free from water collections where the dengue mosquito could breed

Table 4: Selected notifiable diseases reported by Medical Officers of Health

19th - 25th June 2010(25th Week)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Returns Received
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	%
Colombo	213	2573	4	131	0	13	0	35	0	25	18	336	1	6	1	31	0	1	**85**
Gampaha	35	2224	1	46	0	13	0	27	0	9	2	214	0	5	0	51	1	5	**53**
Kalutara	62	922	10	110	0	11	0	12	0	65	3	187	0	1	0	17	0	1	**83**
Kandy	42	833	4	181	0	1	0	14	1	3	1	51	2	87	2	34	0	1	**96**
Matale	6	396	5	208	0	2	1	17	0	67	0	63	0	4	0	28	0	0	**67**
Nuwara	3	85	19	212	0	0	1	71	0	82	0	16	3	42	0	25	0	0	**85**
Galle	23	529	3	126	0	3	0	2	0	12	0	41	0	4	0	7	0	3	**79**
Hambant	16	410	4	42	0	3	0	1	0	9	4	58	1	51	1	5	0	0	**82**
Matara	13	229	3	97	0	3	0	3	0	42	1	184	0	78	0	11	0	0	**82**
Jaffna	73	2304	8	129	0	3	9	365	0	5	0	1	1	105	1	41	0	2	**83**
Kili-	1	3	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**25**
Mannar	37	143	3	26	0	0	0	33	0	10	0	0	0	0	0	12	0	0	**60**
Vavuniya	6	507	1	22	0	2	2	30	0	8	0	2	0	1	0	10	0	1	**50**
Mullaitivu	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**20**
Batticaloa	20	1070	4	79	0	2	0	15	0	28	0	10	0	1	0	3	0	1	**79**
Ampara	1	80	0	44	0	1	0	6	00	6	1	30	0	0	0	9	0	0	**14**
Trincomal	17	779	3	94	2	10	0	3	0	9	0	11	0	10	0	13	0	1	**70**
Kurunega	22	707	4	148	0	13	0	18	0	8	0	201	0	28	0	62	0	3	**75**
Puttalam	12	660	1	49	1	5	0	40	0	124	0	57	0	0	2	17	0	1	**67**
Anuradha	8	784	2	36	0	3	0	5	0	32	3	53	0	22	1	28	0	3	**79**
Polonnar	12	275	1	46	0	1	2	4	0	7	0	47	0	1	1	32	0	0	**100**
Badulla	19	386	4	97	0	1	0	57	0	13	0	40	1	46	4	61	0	0	**67**
Monaraga	24	342	6	114	0	1	0	24	0	4	0	27	1	31	0	58	0	1	**82**
Ratnapur	56	1389	15	271	0	4	0	10	0	22	2	232	1	36	0	58	0	2	**56**
Kegalle	12	507	2	82	0	8	0	28	0	19	1	128	0	8	0	47	0	0	**45**
Kalmunai	3	437	4	140	0	1	0	5	0	2	0	0	0	0	0	8	0	1	**77**
SRI LANKA	**736**	**18611**	**111**	**2532**	**03**	**104**	**15**	**827**	**01**	**611**	**36**	**1989**	**11**	**567**	**13**	**668**	**01**	**27**	**72**

Source: Weekly Returns of Communicable Diseases WRCD).
*Dengue Fever / DHF refers to Dengue Fever / Dengue Haemorrhagic Fever.
**Timely refers to returns received on or before 25th June, 2010 Total number of reporting units =311. Number of reporting units data provided for the current week: 231
A = Cases reported during the current week. B = Cumulative cases for the year.

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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@sltnet.lk.

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