WEEKLY EPIDEMIOLOGICAL REPORT
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LEPROSY: Lest we forget

What is leprosy? : Leprosy is a communicable disease caused by a bacterium. This bacterium is called "Mycobacterium leprae ". Leprosy bacterium mainly affects the skin and nerves. Progression of leprosy in the body is very slow with an average incubation period of three years. Leprosy affects people of all ages and all sexes. The disease spreads to a non infected person from a patient of infectious type (multibacillary-MB) via droplets generated during coughing and sneezing. Patients suffering from non infectious type of leprosy (paucibacillary-PB) do not act as sources of infection. Ninety percent of the population possess natural immunity against leprosy. Therefore even a contact with an infectious patient might not cause the disease in those individuals with natural immunity. On the other hand , 80% of the leprosy patients are non infectious (PB) patients and are not capable of transmission of the disease.

Signs of leprosy: A leprosy patient is someone who has a skin patch/patches with definite loss of sensation. Even those who have completed a full treatment course may have patches as it may take some time for the lesion to disappear. Therefore, individuals who have a patch or patches with definite loss of sensation but have completed a full course of anti leprosy treatment (Multi Drug Therapy-MDT) should not be considered as patients, nor they are infectious to the healthy people in the community.

A leprosy patch can be pale, red or copper coloured and may appear in any part of the human body. It can be either raised or flat. However, itching is not characteristic to leprosy, nor the lesion is painful. Sensation to heat, touch or pain in the affected area is either absent or lacking. Other than patches, leprosy may appear as reddish or skin coloured nodules or smooth shiny diffused thickening of the skin without a loss of sensation. Continuous numbness in hands and feet may also be a sign of leprosy.

There are some signs which are not suggestive of leprosy when a doctor assesses a skin lesion. A patch which has been present since birth could be a birth mark. A lesion which has normal sensation and been itchy is not a leprosy patch. Similarly, a patch of white, black or dark red colour is not leprosy. So are lesions with scaling skins and those which erupt suddenly, spread fast and then disappear suddenly.

Examination of a patient for leprosy: Leprosy can be diagnosed on clinical signs alone. It has helped suspicion of leprosy by patients themselves and self referral to health centers for treatment. An increase in self referrals by patients after a social marketing programme has been one of the major factors for Sri Lanka to achieve elimination of leprosy (prevalence less than 1 per 10000 population) at the national level a half decade before the year targeted by the World Health Organization.

Patient needs to be examined in a well lit room or in broad daylight. The examiner should examine the whole body of the individual as there could be patches in areas which are covered by clothes. Lesions in genital areas and buttocks may be missed. If there are suspected lesions, they need to be checked for sensory loss. If sensory losses are present, the patient should be inquired about previous treatment for leprosy.

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MDT, very rarely needs a repeated course. Testing sensory loss is simple. Lesion is tested with a pointed object like a pen or a tooth pick. It is necessary to demonstrate to the person what is intended to do. Lightly touching the skin with the pointed object , the person is asked to show the point where the pain was felt. Now he or she is asked to close eyes so that what is done is not visible to them.

The center of the most prominent patch is lightly touched and the person is asked to point where the pointed object was felt. The procedure is repeated on normal skin and done again on the patch. If there is a distinct loss of sensation, patch is leprosy. Patient needs treatment.

Since the great majority of cases of leprosy can be diagnosed on clinical signs alone, skin smears are not necessary for diagnosis, classification or monitoring of the progress of the treatment. Skin smears from many leprosy patients will yield negative results. Therefore, skin smears are limited to specialized dermatological units where consultants will perform these in exceptional situations like relapse cases.

Treating leprosy : Patients diagnosed with leprosy should not worry as potent and effective treatment is available. Multi Drug Treatment (MDT) which is provided free of charge from government health institutions can cure leprosy without development of disabilities. However, to determine the type of treatment,classification of leprosy is essential. The classification is based on the count of patches. Number of patches ranging from 1-5 is classified as paucibacillary while five or more patches are multibacillary.

Adult paucibacillary patients are treated with Rifampicin 600 mg / once a month and Dapsone 100 mg /daily for a period of six months. Standard child dose is Rifampicin 450mg/ once a month and Dapsone 50 mg / daily for six months. Adult multibacillary patients are treated with Clofazimine 300 mg once a month and 50 mg/daily in addition to two drugs stated above for PB adults over a period of 12 months. Standard child dose of Clofazimine is 150 mg once a month and 50 mg every other day in addition to the doses of two drugs(Dapsone and Rifampicin) stated under PB child dose.

MDT is safe, effective and provides definite cure. It prevents the spread of the disease by making infectious (MB) patients non infectious. Furthermore, MDT is responsible for prevention of disabilities among leprosy patients. MDT is safe during pregnancy and lactation.

During treatment with MDT, urine may acquire a dark red colour and this may unsettle the patient. However, this is not a cause for concern nor it is harmful as the redness of urine is due to the colour of the drug, Rifampicin. This condition will last for only a few hours after taking the drug. Another worry for the patient is the discolouration (darkening) of skin due to the clofazimine. This is harmless as the skin will return to its normal colour within a few months after the patient stops treatment. However, patients with fever, malaise eruptions of new lesions, painful skin lesions and muscle pains should contact a doctor immediately. These patients may need specialist care as this situation(lepra reaction) can lead to irreversible deformities. Lepra reactions are not reactions to drugs. They are the body's reaction to leprosy and in no way indicates that the disease is becoming worse or MDT is not working. While on treatment, rarely patients might develop drug induced hepatitis. Thus, the patients should be educated to stop drugs immediately if they experience tender liver, dark colour urine or jaundice. Due to Dapsone, another rare occurrence is the severe itching, skin rashes or haemolytic anaemia. Drugs should be stopped immediately and a doctor should be consulted.

Complications of leprosy : Leprosy can be complicated with deformities. Delayed diagnosis and treatment with MDT, delayed management of lepra reactions involving nerves may lead to deformities such as claw hands, wrist drops, claw toes, foot drops and difficulty in closing the eye (lagopthalmus). Inability to protect insensitive parts may cause cuts and wounds and infection over time leading to irreversible deformities. It must be borne in mind that fingers or toes never fall off in leprosy contrary to existing myths. Early detection and prompt treatment with MDT is the best way to prevent disabilities. Treatment of lepra reactions and educating patients as to how they should protect insensitive parts also help reduce disabilities.

Instructions for patients :A patient who has completed treatment is definitely cured. Though the patient is cured, normalization of the skin lesion will take some time. In some patients, sensory loses may remain forever. These patients with insensitive feet and hands should protect themselves as injuries may occur without noticing. These wounds can get infected and over time lead to irreversible deformities .These wounds should be managed as any other wound is managed.

Leprosy patients following initiation of treatment can lead a completely normal life. Affected children can attend school. Adults, can go for their work. Being diagnosed as having leprosy is not a limiting factor for getting married, having children, being involved in social activities and having a entirely normal family life. They are not a threat to the community.

Leprosy is a curable disease. Over ten million people have been cured of leprosy with MDT. If a person suspects a skin patch to be leprosy, he should seek medical advice from the closest medical institution and make leprosy a closed chapter in his life and contribute to elimination of leprosy in his community. This small step will be a giant leap towards eliminating leprosy at sub national level in Sri Lanka.

Further information on leprosy contact Central Leprosy Clinic, room 21, NHSL, Colombo (2696444) slelp1@sltnet.lk

This article was compiled by Dr P. R Wijesinghe — Consultant Epidemiologist.

Table 1: Vaccine-preventable Diseases & AFP

20th - 26th Oct 2007 (43rd Week)

Disease	No. of Cases by Province								Number of cases during current week in 2007	Number of cases during same week in 2006	Total number of cases to date in 2007	Total number of cases to date in 2006	Difference between the number of cases to date between 2007 & 2006
	W	C	S	NE	NW	NC	U	Sab					
Acute Flaccid Paralysis	00	00	00	00	00	01 PO=1	00	00	01	07	69	105	-34.3%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00.0%
Measles	00	00	01	00	00	00	00	00	01	01	66	37	+78.4%
Tetanus	00	00	00	00	00	01	00	00	00	01	31	41	-24.4%
Whooping Cough	00	00	00	00	00	00	00	01 RP=1	01	00	38	67	-43.3%
Tuberculosis	56	76	75	26	22	16	05	32	308	135	8141	8177	-0.4%

Table 2: Diseases under Special Surveillance

20th - 26th Oct 2007 (43rd Week)

Disease	No. of Cases by Province								Number of cases during current week in 2007	Number of cases during same week in 2006	Total number of cases to date in 2007	Total number of cases to date in 2006	Difference between the number of cases to date between 2007 & 2006
	W	C	S	NE	NW	NC	U	Sab					
DF/DHF*	88	06	11	01	18	10	02	12	148	204	5078	8979	-43.4%
Encephalitis	00	00	00	00	00	00	00	00	00	03	171	104	+64.4%
Human Rabies	00	00	00	00	01 KR=1	00	00	00	01	03	54	56	-3.5%

Table 3: Newly Introduced Notifiable Diseases

20th - 26th Oct 2007 (43rd Week)

Disease	No. of Cases by Province								Number of cases during current week in 2007	Total number of cases to date in 2007
	W	C	S	NE	NW	NC	U	Sab		
Chickenpox	06	01	07	02	00	03	04	02	25	2829
Meningitis	05 GM=3 CB=2	00	00	00	03 KR=3	00	02 MO=2	05 KG=2 RP=3	15	571
Mumps	06	01	01	06	01	01	01	00	17	1830

*DF / DHF refers to Dengue Fever / Dengue Haemorrhagic Fever.
NA= Not Available.

Sources:

Weekly Return of Communicable Diseases:
Diphtheria, Measles, Tetanus, Whooping Cough, Human Rabies, Dengue Haemorrhagic Fever, Japanese Encephalitis, Chickenpox, Meningitis, Mumps.

Special Surveillance:
Acute Flaccid Paralysis.

National Control Program for Tuberculosis and Chest Diseases:
Tuberculosis.

Details by districts are given in Table 5.

Provinces: W=Western, C=Central, S=Southern, NE=North & 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.

Table 4: Laboratory Surveillance of Dengue Fever 20th - 26th Oct 2007 (43rd Week)

Samples	Number tested	Number positive *	Serotypes				
			D_1	D_2	D_3	D_4	Negative
Number for current week	07	02	00	01	01	00	00
Total number to date in 2007	438	48	01	23	14	00	09

Source: Genetech Molecular Diagnostics & School of Gene Technology, Colombo. * Not all positives are subjected to serotyping.

Table 5: Selected notifiable diseases reported by Medical Officers of Health

20th - 26th Oct 2007 (43rd Week)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Returns Received Timely**
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	%
Colombo	57	1348	02	324	00	10	02	72	00	68	04	124	00	03	00	126	**77**
Gampaha	26	607	02	291	00	24	00	67	00	45	04	188	00	15	04	180	**64**
Kalutara	05	308	04	400	00	05	02	42	01	43	03	127	00	01	00	55	**91**
Kandy	05	343	08	255	00	03	00	58	00	09	01	74	01	72	11	1908	**59**
Matale	01	88	01	188	00	06	00	25	00	12	00	54	00	05	01	129	**33**
Nuwara Eliya	00	36	03	219	00	02	01	108	00	368	01	10	01	33	02	516	**71**
Galle	03	80	02	151	00	11	00	19	03	42	07	82	00	26	00	19	**81**
Hambantota	00	69	03	165	00	06	00	21	02	19	01	41	01	49	00	21	**100**
Matara	08	164	05	266	00	08	02	39	00	24	21	220	03	191	00	29	**100**
Jaffna	00	115	00	159	00	02	00	391	00	12	00	00	00	88	00	23	**29**
Kilinochchi	00	01	01	01	00	00	00	06	00	00	00	00	00	02	00	04	**25**
Mannar	00	07	02	25	00	00	01	80	00	00	00	02	00	00	00	21	**50**
Vavuniya	01	29	00	58	00	04	00	20	00	53	00	02	00	00	01	09	**100**
Mullaitivu	00	00	02	29	00	08	00	20	00	01	00	00	00	00	00	14	**40**
Batticaloa	00	75	00	455	00	10	00	20	00	10	00	00	00	22	04	1093	**73**
Ampara	00	03	01	104	00	00	00	04	00	02	00	03	00	01	00	28	**29**
Trincomalee	00	54	07	243	00	04	00	26	00	23	00	10	00	15	02	109	**78**
Kurunegala	10	587	12	424	00	07	01	59	00	32	02	51	01	37	03	85	**61**
Puttalam	08	139	03	135	00	14	02	77	00	04	00	25	00	06	02	77	**89**
Anuradhapura	10	180	13	124	00	08	01	22	00	17	00	23	00	18	00	40	**47**
Polonnaruwa	00	59	08	107	00	03	00	13	00	57	00	20	00	00	02	46	**57**
Badulla	02	60	13	516	00	05	00	81	00	10	01	46	05	156	02	310	**60**
Monaragala	00	39	02	294	00	02	00	48	00	28	00	43	03	77	00	40	**60**
Ratnapura	05	346	12	513	00	18	01	63	00	19	04	64	00	24	02	96	**44**
Kegalle	07	335	01	249	00	08	02	56	00	08	10	132	01	35	06	207	**45**
Kalmunai	0	06	03	189	00	03	00	08	00	09	00	01	00	02	00	120	**62**
SRI LANKA	**148**	**5078**	**110**	**5884**	**00**	**171**	**15**	**1445**	**06**	**915**	**59**	**1342**	**16**	**878**	**42**	**5305**	**79**

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 3 November. 2007. Total number of reporting units =290. Number of reporting units data provided for the current week: 230

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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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