WEEKLY EPIDEMIOLOGICAL REPORT

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Leprosy the disease Part I

This is the first of a series of 2 articles

Leprosy, also known as Hansen's disease is a chronic progressive bacterial infection caused by Mycobacterium leprae. Patients are usually asymptomatic at the initial stage and remain in this stage for 5 to 20 years. It mainly attacks the skin and peripheral nerves in the hands, feet and eyes causing numbness or weakness of the affected area. If eyes are affected it can result in poor vision. Leprosy is assumed to be spread via the respiratory system through nasal droplets. It is commonly found among people living in poor socioeconomic conditions.

History of leprosy

Leprosy is an ancient chronic communicable disease, believed to have spread from India to other parts of the world. The earliest Indian historical evidence was described as "The laws of Manu", stated in the Vedas written as early as 1400 BC in India, included instructions for the prevention of leprosy. Leprosy was referred to as "Kushtha" in ancient India. The first authentic description of leprosy and its treatment with chaulmoogra oil is given in "Sushruta Samhita", a treatise written in India in 600 BC by an eminent surgeon "Sushruta". According to Vagbhata (600 AD), the name "Kushtha" was derived from "Kushnati", which means "eating away" in Sanskrit." The first unquestionable evidence of leprosy affected bone was found in an Egyptian mummy of the 2nd century BC. Trade, voyages and invasions for expansion of empires or kingdoms made leprosy spread from one territory to another. The word leprosy was derived from the Greek name lepros, which means scaly. The Old Testament did not mention leprosy. Nevertheless, in New Testament leprosy was discussed for the reason that the disease certainly existed at the time of Jesus. In the mid-part, the leprosy sufferers were regarded as unclean not only by society but also by the Church and patients were expected to live in a lazar house or hospital situated outside the city wall.

Sri Lankan Situation

In Sri Lanka, leprosy control activities were started since the Dutch colonial era including the establishment of Leper's Asylum in Hendala. Leper's Ordinance enacted during the British era in 1901 made isolation of leprosy patients compulsory. Since 1954, a Public Health Inspector (PHI) was appointed for each district who was the key person responsible for the coordination of clinics, village surveys, contact tracings, defaulter follow-ups and community awareness programmes with the help of field and institutional health staff. Sri Lanka was identified as one of the first countries in Asia to start Multi-Drug Therapy (MDT) for all patients in 1980, and full coverage was achieved in the same year.

In the early 1990s, a social marketing strategy was initiated which resulted in a 150% increase in case detection while even more imposing was the huge increase in self-reporting. In 1981 self-

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reported new cases were found as 9% and after 10 years of Social Marketing Campaign (SMC) in 1991, it was increased to 50%, which was a major achievement.

Sri Lanka currently reports nearly 2000 leprosy cases per year during the last two decades. Country achieved the Leprosy Elimination Target of WHO in 1995 (less than 01 cases per 10,000 populations). Over the past 10 years, the new case detection rate in Sri Lanka was around 10 per 100,000 population. The prevalence and incidence of leprosy in 2012 in Sri Lanka were 0.77 per 10,000 population and 10.38 per 100,000 populations respectively. Leprosy became a notifiable disease in the country in 2013 and contact tracing was started in 2014. In 2015, 1977 new patients were identified with a new case detection rate of 9.4 per 100,000 population. The child cases detected showed an upward trend from 190 in 2009 to 223 in 2015 (10% in 2001 to 11.2% in 2015). This reflects the rising of disease transmission and strengthened the case identification activities. Multibacillary case percentage showed a slight increase to 53.8% in 2015 from the usual 47% - 49% reported in past years. This reflects the rising trend of disease transmission. The proportion of patients having deformities was elevated to 10% in 2015 from 7.1% in 2014 suggesting an increase in the identification of complications. Furthermore, 40 relapse cases were reported in 2015.

WHO classification

According to WHO classification in 1998, leprosy cases are classified into two groups as Paucibacillary (PB) and Multibacillary (MB), based on the number of skin lesions.

Table1: WHO Classification of Leprosy

Clinical criteria	Paucibacillary (PB)	Multibacillary (MB)
Total number of skin patches	1-5	6 or more
Number of thickened nerves	1	2 or more
Slit Skin smear (if available)	Negative	Positive

If skin smear is positive then the patient must be classified as MB irrespective of the number of skin lesions. If there are two or more thickened nerves, again the patient should be classified into MB type. A person with a smaller number of skin patches, but if the largest diameter of any of the lesions exceeds 10cm, the patient is classified under MB type. The risk of nerve damage is higher in MB patients. Multidrug therapy is the recommended treatment regime for leprosy.

Diagnosis and control

A case of leprosy is an individual with clinical signs of leprosy who needs chemotherapy (MDT). A patient is defined as cured when he has successfully completed the course of treatment.

Leprosy is provisionally diagnosed when a patient manifests at least one of the cardinal signs; definitive loss of sensation in a pale (hypopigmented) or reddish skin patch, thickened or enlarged peripheral nerve, with loss of sensation and or weakness of the muscles supplied by that nerve, presence of acid-fast bacilli in a slit skin smear. Two out of these three signs are required to make a definitive diagnosis.

Patients can present with symptoms or signs; pale or reddish patches on the skin with loss of or decreased sensations in the skin patch, swelling and lumps in the face or ear lobes, thickened nerves with or without pain or tenderness associated with numbness or tingling of the hands and feet, weakness of the hands, feet, eyelids (lagophthalmos), painless wounds or burn in the hands or feet, lytic bone lesions (nose, phalanxes, etc.).

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to be continue…..

Table 1: Selected notifiable diseases reported by Medical Officers of Health 26th – 01st Jan 2021 (1st Week)

RDHS	Dengue		Dysentery		Encephaliti		Enteric Fever		Food Poi-		Leptospirosis		Typhus Fe-		Viral Hep-		Human		Chickenpox		Meningitis		Leishmania-		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	35	35	2	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	50	95
Gampaha	17	17	0	0	0	0	1	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0	1	1	29	93
Kalutara	18	18	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	1	1	0	0	0	0	31	100
Kandy	18	20	0	0	1	1	0	0	0	0	8	8	2	2	0	0	0	0	1	1	1	1	0	0	65	100
Matale	36	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	6	6	77	100
NuwaraEliya	54	0	0	0	0	0	0	0	0	0	2	2	3	3	0	0	0	0	3	3	0	0	1	1	38	100
Galle	90	3	0	0	0	0	0	0	0	0	22	22	3	3	1	1	0	0	0	0	3	3	0	0	60	100
Hambantota	144	2	0	0	0	0	0	0	0	0	3	3	2	2	2	2	0	0	0	0	0	0	9	9	75	100
Matara	234	7	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	1	1	0	0	1	1	29	100
Jaffna	378	6	0	0	0	0	1	1	0	0	3	3	21	21	0	0	0	0	0	0	0	0	0	0		88
Kilinochchi	612	1	1	1	0	0	0	0	0	0	2	2	1	1	0	0	0	0	0	0	0	0	0	0	50	100
Mannar	990	1	0	0	0	0	2	2	0	0	2	2	0	0	0	0	0	0	0	0	5	5	0	0	25	80
Vavuniya	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	100
Mullaitivu	259	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0		100
Batticaloa	419	208	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	0	0	43	100
Ampara	678	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	1	0	0	43	100
Trincomalee	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	100
Kurunegala	177	12	0	0	0	0	0	0	1	1	23	23	1	1	0	0	0	0	0	0	9	9	9	9	59	100
Puttalam	287	8	0	0	1	1	0	0	0	0	2	2	3	3	0	0	0	0	0	0	1	1	0	0	77	100
Anuradhapur	465	4	0	0	0	0	0	0	0	0	11	11	2	2	0	0	0	0	1	1	3	3	15	15	41	96
Polonnaruwa	121	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	9	9	50	100
Badulla	197	0	0	0	0	0	0	0	0	0	13	13	2	2	1	1	0	0	0	0	0	0	1	1	31	100
Monaragala	318	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0		100
Ratnapura	515	2	2	2	0	0	0	0	0	0	14	14	0	0	0	0	0	0	2	2	3	3	4	4	37	100
Kegalle	834	3	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	1	1	0	0	0	0	73	100
Kalmune	752	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	100
SRILANKA	**35**	**351**	**5**	**5**	**2**	**2**	**4**	**4**	**1**	**1**	**127**	**127**	**42**	**42**	**4**	**4**	**0**	**0**	**11**	**11**	**27**	**27**	**56**	**56**	**45**	**98**

Source: Weekly Returns of Communicable Diseases (esurvillance.epid.gov.lk).

*T=Timeliness refers to returns received on or before 01st January , 2021 Total number of reporting units 357 Number of reporting units data provided for the current week: 352 C**-Completeness

Table 2: Vaccine-Preventable Diseases & AFP

26th – 01st Jan 2021 (1st Week)

Disease	No. of Cases by Province									Number of cases during current week in 2021	Number of cases during same week in 2020	Total number of cases to date in 2021	Total number of cases to date in 2020	Difference between the number of cases to date in 2021& 2020
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	01	00	00	00	00	01	NA	01	NA	NA
Diphtheria	00	00	00	00	00	00	00	00	00	00	NA	00	NA	NA
Mumps	00	00	00	00	00	00	00	01	00	00	NA	00	NA	NA
Measles	00	00	00	00	00	00	00	00	00	00	NA	00	NA	NA
Rubella	00	00	00	00	00	00	00	00	00	00	NA	00	NA	NA
CRS**	00	00	00	00	00	00	00	00	00	00	NA	00	NA	NA
Tetanus	00	00	00	00	00	00	00	00	00	00	NA	00	NA	NA
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	NA	00	NA	NA
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	NA	00	NA	NA
Whooping Cough	00	00	00	00	00	00	00	00	00	00	NA	00	NA	NA
Tuberculosis	27	09	01	00	03	05	12	03	11	75	NA	75	NA	NA

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 free of water collection.

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. Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

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