



WEEKLY EPIDEMIOLOGICAL REPORT

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Prevention of disability in Leprosy – Practical approaches

Leprosy continues to be one of the major concerns in developing countries, not because less they consider the numbers of patients with the disease, than the occurrence of the deformities in the proportion of the patients. Many experience mild and reversible deformities at the time of the first diagnosis, later they develop them though. Practical approaches indeed, to prevent the development of deformities and disabilities by early intervening at ground context would be beneficial to peripheral health personals to provide sustainable and low-cost health services at the point of care.

WHO has adopted a grading system to classify deformities.

- GR 0 ➔ No anaesthesia or Deformity
- GR 1 ➔ Anaesthesia only (Numbness)
- GR 2 ➔ Visible deformity (deformities & ulcers)
 - ⇒ GR 2-A – Abduction deformity of the little finger or weakness of adduction or early clawing of the little finger/ clawing of toes
 - ⇒ GR 2-B – A mobile claw/foot drop
 - ⇒ GR 2-C – stiff proximal IP joints or volar skin contractures

The nerve involvement and loss of function due to Leprosy apply in varying degrees to all three modalities of the peripheral nervous system: the sensory, motor and autonomic functions. As a result of the first two dysfunctions, deformities can be seen in hands, legs and eyes in many patients infected with Leprosy. Hands can be deformed as an anaesthetic limb, clawed hands and wrist drops. A deformed foot can result as an anaesthetic limb, clawed foot dropped foot, ulcers and resorptions.

Deformities of Hand	Deformities of Foot	Deformities of Eye
Anaesthetic limb	Anaesthetic limb	Lagophthalmos (Facial nerve damage)
Abduction deformity	Clawfoot	Corneal scarring (Trigeminal nerve damage)
Partial claw hand	Foot drop	Iridocyclitis (inflammation of the choroid and the iris)
Ulnar claw hand (little and the ring fingers)	Trophic ulcers	
Subtotal claw hand (more than two fingers)	Toe loss / Resorption	
Full claw hand (all the fingers and the thumb)		
Wrist drop		
Hand ulcers		
Finger loss / Resorption		

Contents

1. Leading Article – Prevention of disability in Leprosy – Practical approaches
2. Summary of selected notifiable diseases reported (03rd – 09th Apr 2021)
3. Surveillance of vaccine preventable diseases & AFP (03rd – 09th Apr 2021)

Page

- 1
- 3
- 4

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Early identification of the deformities

Early identification is the key to prevent many disabilities and deformities due to Leprosy because there are measures to be adhered to before patients developing worsened deformities and disabilities. At initial stages, identification of symptoms like "Hotfoot", painlessness, swollen foot, warm to touch, redness, photophobia, watering of eyes and pain of eyes and blurred vision. To protect from further damage to the limbs or eyes, the following methods of care were adopted. Anaesthetic limbs of patients infected with Leprosy should be inspected often for any "Hot spots", soaked the limb in luke-warm water for 20 minutes a day, scraped the calluses using a scalpel, prevention of dry skin, use emollients. Special care needs to be given to all activities by hands like using padded gloves, pot holders, padding around handles, long handles to hold hot things and by using cup holders. Care of eyes includes "Think and blink" to prevent corneal ulceration, inspecting eyes daily, using head coverings, managing with eye pads while sleeping and consulting an ophthalmologist regularly.

Deformity Care Components

By any national campaigns of countries combatting against Leprosy advises following a broad spectrum of measures to prevent further disabilities. Those explain advice for self-care, physiotherapy, splinting, ulcer care and surgical procedures. Aims of Physiotherapy are to make the skin soft and supple, to maintain and improve the blood circulation, to restore the normal tone of muscles and preserve the physiological properties of paralyzed muscles, to prevent muscle atrophy and the overstretching of paralyzed muscles and to prevent contractures and keeping the joints mobile by improving the range of movements.

Splinting

Splinting is recognized in the management of patients infected with Leprosy as a method of reducing further damage and a method of improving day to day activities. Splinting supports the patients to being mobile, work and independent.

Indications for Splinting are immobilization, prevention of deformities, correction of deformities, restoration of function and maintain the improvements made by exercises, massage, and surgery. Several types of Splints in Leprosy care are identified as adductor bands (abductor deformity of the little finger only), Gutter splints (claw hand with contractions), Finger loop splints (claw hand without contractions), Opponents loop splints (Ape thumb deformity), Wrist drop splints, Foot drop splints and Ulnar palsy splints.

Important points in Splint usage, which everyone should keep in their mind are, that it should not be used for fixed joints, should not be continued if fever, pain or swelling occurs, should not be continued if redness or blisters occurs and should not be used more than three months at a stretch.

An essential component of Splinting includes post-assessment of results following Splintage by subjectively asking the patient about improvement, measurement and record of the PIP angle, photographic documentation and charting the deformity by ink impression technique.

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Srinivasan, H & World Health Organization. (1993). Prevention of disabilities in patients with leprosy: a practical guide / H. Srinivasan. World Health Organization. <https://apps.who.int/iris/handle/10665/41226>

Anti Leprosy Campaign, Ministry of healthcare and Nutrition, Sri Lanka - 2017 www.leprosyncampaign.health.gov.lk

Table 1: Selected notifiable diseases reported by Medical Officers of Health 03rd - 09th Apr 2021 (15th Week)

RDHS	Dengue Fever		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	88	861	0	3	0	0	0	2	0	0	10	70	0	1	0	2	0	2	9	18	0	6	0	0	57	91
Gampaha	46	495	0	1	0	1	0	1	0	0	3	101	0	2	0	3	0	0	0	11	0	5	0	2	35	76
Kalutara	22	322	0	8	0	1	0	0	0	0	7	251	0	3	0	1	0	1	4	44	1	6	0	0	46	100
Kandy	20	204	0	13	0	1	0	0	0	1	4	63	0	16	0	1	0	0	1	22	0	6	0	10	59	100
Matale	1	30	0	2	0	1	0	0	0	0	3	23	0	3	0	1	0	0	0	9	0	1	11	93	62	100
NuwaraEliya	3	18	2	5	0	1	0	1	0	0	1	27	4	25	0	1	0	0	0	11	1	3	0	1	36	94
Galle	5	75	0	2	0	1	0	4	0	4	16	288	0	17	0	2	0	0	1	21	2	17	0	1	48	98
Hambantota	8	98	1	6	0	1	0	0	0	1	6	86	1	31	0	5	0	0	2	25	1	12	12	155	75	100
Matarata	10	108	1	3	0	0	0	1	0	0	8	107	1	11	0	2	0	0	2	31	1	3	1	136	35	100
Jaffna	0	85	0	28	0	2	1	10	0	7	0	10	11	400	0	0	0	0	2	17	0	2	1	2	17	88
Kilinochchi	0	19	3	11	0	0	0	0	0	1	8	35	0	48	0	0	0	0	0	6	0	0	0	1	52	100
Mannar	0	16	0	0	0	0	0	3	0	0	0	22	0	1	0	0	0	0	2	0	6	0	1	45	80	
Vavuniya	2	24	0	2	0	0	0	0	0	0	0	11	1	2	0	1	0	0	0	5	0	0	0	0	35	100
Mullaitivu	0	3	0	1	0	0	0	0	0	0	1	17	0	6	0	0	0	0	3	4	0	3	0	0	21	100
Batticaloa	44	2633	2	12	0	2	0	1	1	13	0	19	0	0	0	1	0	0	0	5	2	14	0	0	47	100
Ampara	0	11	0	5	0	0	0	1	0	0	3	15	0	0	0	0	0	0	0	22	0	7	0	2	57	100
Trincomalee	3	77	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	9	0	2	0	0	41	87
Kurunegala	54	365	1	9	0	2	0	0	0	3	3	139	0	7	0	0	0	2	21	3	63	20	155	47	99	
Puttalam	16	152	0	1	0	1	0	0	0	0	2	14	0	14	0	0	1	4	10	2	19	3	7	51	94	
Anuradhapur	10	60	0	7	0	0	0	0	0	2	8	158	0	20	0	2	0	1	18	1	18	1	2	92	33	87
Polonnaruwa	2	22	0	2	0	0	0	1	0	1	4	42	0	1	0	1	0	0	1	13	0	1	16	154	38	100
Badulla	4	29	0	8	0	0	0	1	0	0	12	128	0	16	1	5	0	4	20	1	9	1	11	50	96	
Monaragala	2	35	1	4	0	0	0	2	3	3	15	132	1	13	2	29	0	0	1	12	0	25	0	9	37	100
Ratnapura	17	196	3	16	1	4	0	0	0	3	14	357	0	14	1	5	0	1	0	28	5	34	0	31	38	99
Kegalle	18	142	0	4	0	5	0	0	0	0	3	121	1	6	0	0	0	1	38	0	10	1	6	44	100	
Kalmune	10	160	0	5	0	1	0	1	0	1	0	13	0	0	0	2	0	2	0	5	0	2	0	1	42	100
SRI LANKA	385	6240	14	158	1	24	1	29	5	47	129	2251	20	657	4	66	0	7	38	427	20	274	68	870	45	95

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

*T=Timeliness refers to returns received on or before 09th April, 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

03rd – 09th Apr2021 (15th 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*	01	00	00	00	00	00	00	00	00	01	01	17	10	70%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	01	01	00	00	00	00	00	00	00	02	01	34	55	-38.18%
Measles	00	00	00	00	00	00	01	00	00	01	00	06	22	-72.72%
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Tetanus	00	00	00	00	00	00	00	00	00	00	00	01	03	-66.66%
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	00	06	-100%
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	00	03	-100%
Tuberculosis	59	06	34	11	06	07	09	05	21	158	00	1998	1455	37.31%

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
NA = Not Available

Covid-19 Prevention & Control
For everyone's health & safety, maintain physical distance, often wash hands, wear a face mask and stay home.

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**

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