

Brief Report



Usefulness of outreach clinics on active case detection of leprosy in a high endemic area in Sri Lanka

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Abstract

Though Sri Lanka reports low endemicity and a lesser number of cases detected annually, leprosy patients below 14 years of age are rising. Therefore, active case finding is essential. A skin clinic was conducted in the District Hospital (DH), Lunawa of Colombo District where higher numbers of cases had been reported in the past. The people were alerted on the clinic through public health staff to identify new cases. Out of the 54 persons who attended the clinic, one was clinically diagnosed as having multibacillary leprosy and another subsequently detected among the five suspected patients who were referred for skin biopsy, giving a yield of active case finding of 0.37 per 10 000 persons screened (95% CI: 0.45, 1.26). This high yield of the disease indicates that active case finding is a possible strategy for high endemic areas, which could be enhanced with a combination of outreach programs like household surveys or awareness on leprosy at institutions like schools.

Keywords: leprosy, high-risk community, out-reach clinics, Sri Lanka

Introduction

Leprosy is a chronic infectious disease prevalent worldwide. In 2020, there had been 127 558 new cases detected globally, including 8629 children below 15 years reporting a new case detection rate of 4.4 per million children. Among the new cases, 7198 were detected with grade 2 disabilities (G2D), with a new G2D rate of 0.9 per million population (1).

Sri Lanka reached the Leprosy Elimination Target in 1995 with reduction of the number of cases by less than one person per 10 000 population (2). However, approximately 2000 cases are reported annually in Sri Lanka (3). In 2022, the incidence of leprosy in Sri Lanka was 0.77 per 10 000 population. Further, out of the 1325 patients diagnosed, 154 (11.6%) were aged below 14 years. The case detection was highest in Batticaloa, Gampaha and Colombo Regional Director of Health Services (RDHS) areas, where 214, 206 and 194 cases were reported, respectively. Although 250 cases are usually detected in Colombo RDHS area, due to COVID-19, the new case detection has declined. One third of them were detected in Moratuwa Divisional Secretariat (DS) area, representing 50 new cases last year. According to this estimation, 300 new cases need to be identified in DS Moratuwa in 2023, after adding the undetected cases due to COVID-19 pandemic to the yearly estimate (2). Although mapping of index cases from 2001 to 2021 had shown pockets of leprosy endemics, the extent of such hidden leprosy remains unexplored, thus it is important to improve the case detection in high endemic areas. The objective of this study was to present the yield and socio-demographic factors of the leprosy cases detected in DH Lunawa.

Methods

The study identified grama niladhari divisions (GND) in the most prevalent medical officer of health (MOH) areas known for high prevalence of

leprosy, such as Egoda Uyana, Moratuwa and Ratmalana, by mapping the leprosy cases from 2001 to 2021. A discussion was held initially with the district team including the RDHS, Consultant Community Physician, Medical Officer-Epidemiology and Public Health Inspector-Leprosy Control (PHI-LC) to conduct a satellite clinic to achieve high case detection. The Mayor of Moratuwa Municipal Council and religious leaders were advocated to increase clinic attendance to identify leprosy patients. The community was informed through the public address system and by public health officials to attend the skin clinic if they presented with any undiagnosed dermatological condition. With the support of District Medical Officer (DMO), DH-Lunawa, all essential medicines to treat common skin problems were arranged from the Regional Medical Supplies Division (RMSD)-Colombo. Initial screening was done by the MOH or Medical Officer-DH Lunawa to identify the leprosy cases and the suspected patients were seen by the Consultant Dermatologist, Anti Leprosy Campaign, Sri Lanka who visited the satellite clinic.

Results

A total of 54 persons were screened at the satellite clinic held on 21st December 2022. The majority were aged 25-45 years (42.9%) followed by those aged 45-60 years (25.0%). A two-third (66.7%) were female (Table 1). Patients already diagnosed with leprosy did not attend the clinic. Two patients were diagnosed as having leprosy, giving a yield of 0.37 per 10,000 persons screened (95% CI: 0.45, 1.26). One of them was clinically diagnosed at the clinic, while the other became positive out of the five suspected patients who were referred for skin biopsy. The contacts were screened and followed-up by the range PHIs.

Discussion

Even if leprosy is a slow infectious disease, it can spread in significant numbers in high-risk communities. At the end of 2015, leprosy was eliminated from almost all countries including in Sri Lanka (4). This article reports the yield of active case finding as 0.37 per 10 000 persons screened, which is lesser compared to the incidence reported in 2022 for Sri Lanka (2). This difference can be attributed to the higher denominator which was used to calculate the national value compared to the number of people who attended the clinic. However, this screening showed the remaining pockets of high endemicity at the DS Moratuwa (Figure 1)

The most (n=39; 72.2%) diagnosed patients belonged to Egoda Uyana MOH Area, where most cases are detected in RDHS Colombo. This could be due to overcrowding, lack of awareness regarding the disease and high transport cost preventing them from seeking medical advice for skin conditions, thus establishment of satellite dermatology clinics in these areas to improve accessibility is highly recommended.

Both patients confirmed as having leprosy being males could be due to the fact that the disease is

more common in male population. Therefore, it is rational to increase awareness among young males in high-risk areas to attend skin clinics if they have suspected lesions (2). Most of the persons referred to the clinic were from Egoda Uyana MOH area (72.2%), followed by Moratuwa MOH area, denoting that providing awareness about leprosy prior to vigilant screening is essential.

The major limitation of the findings was that the data cannot be generalized to a wider area but are applicable to other areas in Sri Lanka that are similarly affected with high rates of leprosy. Further, the lesser number of clinic attendees limited further analysis of results.

Conclusions & Recommendations

Conducting a satellite clinic in a high endemicity area is a potential strategy to identify new cases. Continued multistakeholder involvement of the officials at DS, GND and education sector is required to improve new case detection of leprosy in high-risk communities. Conducting satellite clinics at least once a month is recommended to obtain high yield.

Table 1: Characteristics of the persons who attended the skin clinic

Characteristics	No. (%)		
	Male	Female	Total
Age category (Years)			
Less than 14	1 (5.6)	2 (5.6)	3 (5.5)
14 - 25	1 (5.6)	5 (13.9)	6 (11.1)
26 – 45	5 (27.8)	18 (50.0)	23 (42.6)
46 – 60	7 (38.9)	6 (16.7)	13 (24.1)
Above 60	4 (22.2)	5 (13.9)	9 (16.7)
MOH area			
Egoda Uyana	13 (72.2)	26 (72.2)	39 (72.2)
Moratuwa	4 (22.2)	8 (22.2)	12 (22.2)
Ratmalana	1 (5.6)	2 (5.6)	3 (5.6)

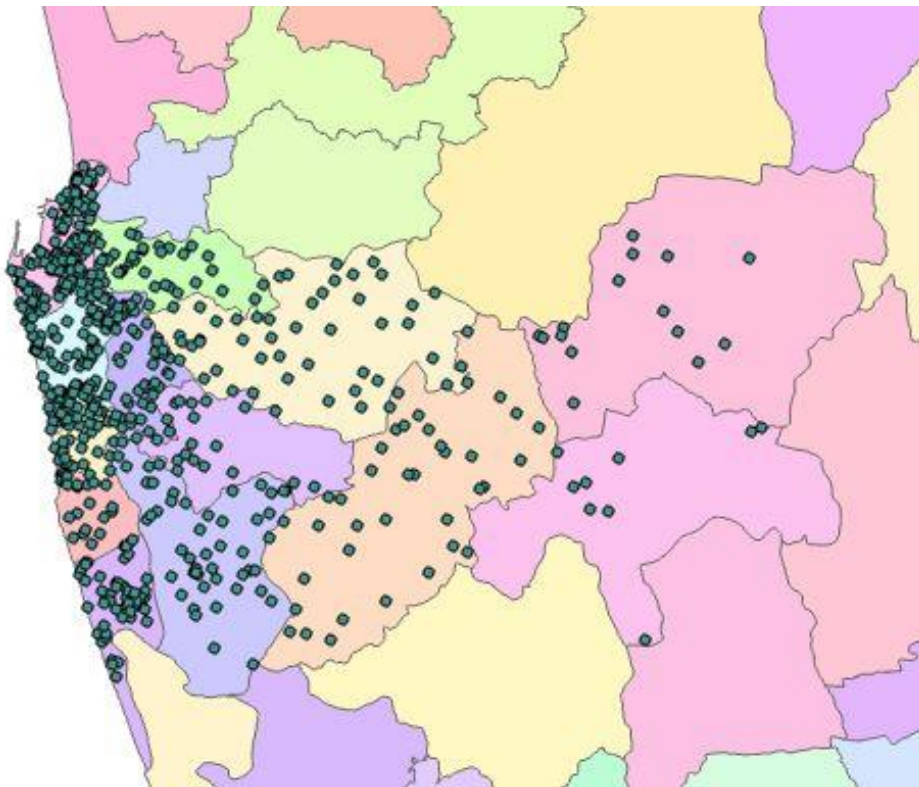


Figure 1: Leprosy cases from 2001 to 2021 in Colombo RDHS Area

Public Health Implications

Leprosy is a curable disease, therefore, by strengthening medical care and improve awareness a sustainable change in the lives of individuals, families, and communities can be create. Therefore, public health officials need to empower the individuals and families to rise above the stigma associated with leprosy.

Author Declarations

Competing interests: The authors declare that they have no competing interests.

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Author contributions: All authors have equally contributed to conceptualising the design, data acquisition, and manuscript preparation, editing and review.

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