

Leprosy after the Elimination: A BPKIHS experience

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Abstract

Introduction

Leprosy is a chronic granulomatous immune response to infection of the skin and the nerves with *Mycobacterium leprae* (*M. leprae*). Declaration of elimination of leprosy as a public health problem in Nepal was done on the 19th of January 2010.

Objectives

To estimate the number of cases visiting a tertiary care centre in eastern Nepal after the declaration of the elimination

Methods

All clinically diagnosed and newly registered cases of leprosy attending Dermatology Department of BPKIHS were prospectively included in the study (Jan 2010- Dec 2012). A detailed history, cutaneous and nerve examination were performed and recorded in a preset proforma.

Results

A total of 219 new cases were seen in the dermatology OPD with a male preponderance of 143/219 (65.3%). The patients were more in the 20-29 years age group. Ninety percent (197/219) patients presented with skin lesions while 178/219 (81.3%) of the patients had nerve involvement along with skin lesions.

Reactions were seen in 167/219 (76.3%) patients while disabilities was seen in 82/219 (37.4%) patients. Multibacillary treatment was started in 202/219 (92.2%) patients and paucibacillary in 17/219 (7.8%) patients after the clinical, bacteriological and histological co-relation.

Conclusion

Constant evaluation, monitoring and case detection should be still pursued actively in endemic districts. Health education activities and involvement of teaching hospitals and trained health specialist at the tertiary general health care delivery system would further help in sustaining the national goal of elimination.

Keywords: leprosy, elimination

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Original Article

Introduction

Leprosy is a chronic granulomatous immune response to infection of the skin and the nerves with *mycobacterium leprae* (*M. leprae*).¹ Though, leprosy has been eliminated from developed countries, it is still considered to be a major public health problem in developing countries of Africa, Asia and Latin America.^{2,3} By mid of year 2011, the registered prevalence of leprosy globally was 192,246. The total number of new cases detected during the year 2010 was 228,474. In South East Asian region total prevalence and new case detection being 113,750 and 156,254 respectively.⁴ Although Nepal has already eliminated leprosy on 19th January 2010, disease prevalence is still high. Total of 3,157 new cases were detected during the year 2009/10 in Nepal. Among them, 891 cases were from eastern Nepal, where new case detection rate was found to be 1.42/10,000 which is the highest amongst all development regions.⁵ This study was thus undertaken to estimate the number of cases visiting a tertiary care centre in eastern Nepal after the declaration of the elimination.

Materials & Methods

All clinically diagnosed and newly registered cases of leprosy attending Dermatology Department of BPKIHS were prospectively included in the study (Jan 2010- Dec 2012). A detailed history, cutaneous and nerve examination were performed and recorded in a pre set proforma. Slit skin smear was performed in all patients however biopsy was done when ever needed. Data were entered in MS- Excel 2007

and were converted into SPSS version 11.5 for statistical analysis for descriptive statistics.

Results

A total of 219 new cases were seen in the Dermatology OPD with a male preponderance of 143/219 (65.3%). The patients were more in the 20-29 years age group (Table 1) and majority of the patients, 158/219 (72.1%) had no history of contact with leprosy. The duration of the disease ranged from 12-23 in 47 /219 (21.5%) patients. Most of the patients, 113/219 (51.6%) attending the OPD were from Sunsari, the district where the tertiary care hospital is located. The patients in the study group had different occupation, among which the maximum were farmers 49/219 (22.4%).

197/219 (90.0%) patients presented with skin lesions while 178/219 (81.3%) of the patients had skin and nerve involvement. Reactions were seen in 167/219 (76.3%) patients while disabilities was seen in 82/219(37.4%) patients. Slit skin smear was positive in 40/219 (18.3%) patients while negative in 179/219 (81.7%) patients. The most of the patients were classified based on the clinical, immunological and histological diagnosis as shown in Table 2. Treatment was started in all patients after their initial visit. Mutlibacillary treatment was started in 202/219 (92.2%) patients and paucibacillary in 17/219 (7.8%) patients after the clinical, bacteriological and histological co-relation. Childhood leprosy receiving multibacillary treatment was seen in 6/219(0.027%).

Table 1: Age distribution of the patients having leprosy

Character	Category	Frequency	Percentage
Age in year	<10	1	0.5
	10-19	26	11.9
	20-29	62	28.3
	30-39	33	15.1
	40-49	37	16.9
	50-59	31	14.2
	≥60	29	13.2

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Category	Frequency	Percentage
TTHD	1	0.4
BTHD	137	62.5
BLHD	18	8.21
LLHD	23	10.5
PNHD	35	15.9
Histoid Leprosy	5	2.2

(Abbreviation: TTHD= Tuberculoid Hansen's Disease, BTHD= Borderline Tuberculoid Hansen's Disease, BLHD= Borderline Lepromatous Hansen's Disease, LLHD= Lepromatous Hansen's Disease, PNHD= Pure Neural Hansen's Disease)

Discussion

Nepal has been known as an endemic region for Leprosy since a long time with leprosy still being referred to as a 'social stigma'.

Elimination of Leprosy as a public health problem is defined as prevalence rate of below 1 per 10,000 populations at the national level. At the end of December 2009 Nepal achieved elimination with 2445 leprosy cases under treatment and prevalence rate of 0.89 per 10,000 populations.⁴ Finally declaration of elimination of leprosy as a public health problem in Nepal was done on the 19th of January 2010.⁵

A total of 3,157 new cases were detected during the year 2009/10 in Nepal. Among them, 891 cases were from eastern Nepal, where new case detection rate was found to be 1.42/10,000 which is the highest amongst all developmental regions.⁶

In the present study, a total of 219 cases were recorded in the tertiary level hospital which is quite high after the elimination. In a study done in Nigeria during the year 2004-2008, new leprosy cases detected annually was found to have declined from 226 cases in 2004 to 140 cases in 2008. The prevalence rate was observed to be between 0.3-0.4 per 10,000 populations within the five years period.⁷ In India, 44% reduction in prevalence and 29% decline in new case detections has been observed, due to vigorous efforts in minimizing 'operational factors' which were influencing the indicators previously.⁸

In our study most of the case required multibacillary treatment (92.2%). The percentage of patients presenting with reactions was 76.3% (167/219) while disabilities was seen in 82/219 (37.4%) patients. Reactions if not treated could further result in disabilities. In the Nigerian study the patients with grade 2 disability among new cases were found to be very high between 21%-27% within the five years period. Also most of the patients were multibacillary leprosy case and the proportion of the MB increased from 83% in 2004 to 92% in 2008.⁷

The current reality is that there is a need to sustain and provide quality leprosy services to all persons through general health system, including a good referral system. Efforts need to be made to reduce deformity through early detection, self care, physiotherapy and reconstructive surgery and developing sound surveillance systems.⁹

There is need for effective monitoring and evaluation of the integration process of leprosy elimination into primary health care services. Inadequate monitoring could lead to a reduction in early diagnosis, a delay in initiation of MDT and an increase in disability rates.¹⁰

Awareness programmes amongst community members thus still needs to be realistic to reduce PR to < 1 / 10,000 and continue to reduce it further, to prevent disabilities due to leprosy and to reduce the stigma against the disease in the community.⁵

Constant evaluation, monitoring and case

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detection should be pursued actively in endemic districts. Health education activities and involvement of teaching hospitals and trained health specialist at the tertiary general health care delivery system would further help in sustaining the national goal of elimination. Comprehensive community level approach alone can reduce and possibly eliminate not only leprosy but also the stigma attached with it leading to restoration of self esteem in these patients.¹¹ More vigilant targeted programmes should still be implemented from the Government side as well as by health professionals to bring down the new case detection to the minimum.

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