pISSN 2394-6032 | eISSN 2394-6040

# **Original Research Article**

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20211213

# Leprosy in the post elimination era: a retrospective descriptive study from district Kathua, Jammu and Kashmir

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Received: 03 July 2020 Revised: 22 February 2021 Accepted: 25 February 2021

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### **ABSTRACT**

**Background:** Leprosy is often referred to as the oldest disease known to man. Leprosy as a social disease has been a major public health problem because of the social stigma and ignorance attached to it. India achieved elimination status for leprosy in 2005; however, the reported prevalence continues to be high in some of the states. Leprosy understood as God's retribution, has been present since the colonial times. Stigma attached to leprosy is typically a social process, experienced or anticipated, characterized by exclusion, rejection, blame or devaluation that result from experience, perception or reasonable anticipation of an adverse social judgment about a person or group. Objective was to study the demographic and epidemiological features of leprosy in the post-elimination era.

**Methods:** A retrospective descriptive study was conducted from July 2019 to September 2019. Case records of newly diagnosed leprosy patients were included in the study. The secondary data was collected from district leprosy society Kathua retrospectively for a period of nine and half years (from April 2010 to September 2019). Data was entered in Microsoft excel and Descriptive statistics were analysed.

**Results:** In our study, 154 total leprosy cases were registered from April 2010 to September 2019. Among the demographic details of leprosy cases, maximum number of cases were in the age group of 31-40 years (38.31%) and childhood leprosy cases were 1.94%. Majority of cases were females as compared to males. Out of 154 cases, 35 cases were outsiders registered in the Kathua district. The treatment completion rate was 100%, no defaulter cases were reported from the past decade.

**Conclusions:** Leprosy continues to be a communicable disease of concern in the post-elimination era. This alarms the need to strengthen contact screening, early case detection, referral activities and even more focus on the pediatric population to sustain elimination.

Keywords: Childhood leprosy, Leprosy, Post-elimination

## INTRODUCTION

One of the global major public health problems is leprosy which is now eliminated from maximum number of endemic countries (less than 1 case per 10,000 population) by the World Health Organization. India achieved its target of leprosy elimination in December 2005. The current prevalence rate in the areas of Southeast Asian region is 0.63 per 10,000 and in India it is 0.68 per 10,000 population. In the year 2012-2013, the

newly diagnosed cases of leprosy from India were 13,387 (81.9%) and strikingly, 10% of these leprosy cases comprised of children<15 years of age.<sup>4</sup>

Among all the communicable diseases, leprosy is considered to be important for its ability to cause permanent and physical progressive disability. These deformities leads to social discrimination and social stigma of the patients which leads a negative impact on the physical and mental wellbeing of an individual,

family and society as a whole. The isolation of leprosy patients is an age old practice for the purpose of keeping the leprosy suffers out of sight.<sup>5</sup>

The most important indicator in the leprosy eradication programme is the new case detection rate.

#### **METHODS**

A retrospective descriptive study was conducted from July 2019 to September 2019. Case records of newly diagnosed leprosy patients were included in the study. Secondary data was collected from District Leprosy Society Kathua retrospectively for a period of nine and half years (from April 2010 to September 2019). All newly diagnosed cases were included in the study. Data was analyzed in terms of Demographic variables like sex, age, residence, childhood leprosy, treatment completion. Other data like household contact history, history of skin lesions, types of leprosy was also included in the study. Data was entered in Microsoft excel and analyzed in number and percentages.

#### **RESULTS**

In our study, 154 total leprosy cases were registered from April 2010 to September 2019 (Figure 1). Among the demographic details of leprosy cases, as depicted in Table 1; majority of the cases were females as compared to males, multi-bacillary cases were dominant in both the local as well as outsider resident population (61.03% and 15.58% respectively), childhood leprosy reported was 1.94%. Out of 154 cases, 35 cases were outsiders registered in the Kathua district. The treatment

completion rate was 100%, no defaulter cases were reported from the past decade.

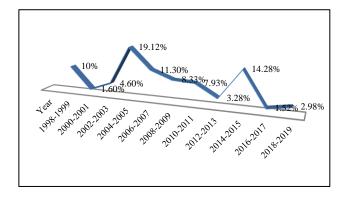


Figure 1: Year-wise distribution of leprosy cases.

Table 1: Demographic distribution of variables (n=154).

Gender	N (%)
Males	65 (42.20)
Females	89 (57.79)
Residence	
Local population	
Paucibacillary (PB)	25 (16.23)
Multibacillary (MB)	94 (61.03)
Outsiders	•
Paucibacillary (PB)	11 (7.14)
Multibacillary (MB)	24 (15.58)
Childhood leprosy	3 (1.94)
Treatment completion	154 (100)

Table 2: Age and sex distribution of the study participants.

Age (years)	Total number of cases	Male	Male		Female	
		PB	MB	PB	MB	
0-10	3 (1.94%)	-	1 (1.96%)	-	2 (2.89%)	
11-20	8 (5.19%)	1 (7.14%)	3 (5.88%)	2 (10%)	2 (2.89%)	
21-30	38 (24.67%)	7 (50%)	12 (23.52%)	3 (15%)	16 (23.18%)	
31-40	59 (38.31%)	3 (21.42%)	23 (45.09%)	10 (50%)	23 (33.33%)	
41-50	27 (17.53%)	2 (14.28%)	8 (15.68%)	3 (15%)	14 (20.28%)	
>50 years	19 (12.33%)	1 (7.14%)	4 (7.84%)	2 (10%)	12 (17.39%)	
Total	154	14	51	20	69	

Table 3: History of household contacts of leprosy and type of disease.

Towns of law years	Household contact/s		
Type of leprosy	Present	Absent	
PB	26 (34.66%)	8 (10.12%)	
MB	49 (5.33%)	71 (89.87%)	
Total	75 (48.70%)	79 (51.29%)	

Table 2 depicts age and sex distribution of the study participants. Maximum number of cases belonged to the age group of 31-40 years (38.31%) and childhood leprosy cases were 1.94%.

48.70% were having the history of household contacts (Table 3), wherein, 34.66% had pauci-bacillary type of leprosy and 5.33% had multi-bacillary type of the disease.

In our study, there were 5.84% of leprosy patients with thickened nerves, 38.96% of patients with 2-5 skin lesions and 10.38% had more than 5 skin lesions. The age

group with the maximum percentage of >5 skin lesions and thickened nerves was 31-40 years (50% and 55.55% respectively) (Table 4).

Table 4: Number of skin lesions and thickened nerves.

A go (in voore)	No. of skin lesio	Thickened nerves		
Age (in years)	SSL	2-5	>5	Thickened herves
0-10	2 (2.89%)	1 (1.66%)	-	-
11-20	4 (5.79%)	2 (3.33%)	1 (6.25%)	1 (11.11%)
21-30	18 (26.08%)	15 (25%)	3 (18.75%)	2 (22.22%)
31-40	20 (28.98%)	26 (43.33%)	8 (50%)	5 (55.55%)
41-50	16 (23.18%)	9 (15%)	2 (12.5%)	-
>50	9 (13.04%)	7 (11.66%)	2 (12.5%)	1 (11.11%)
Total	69 (44.8%)	60 (38.96%)	16 (10.38%)	9 (5.84%)

#### **DISCUSSION**

Leprosy control strategy in present scenario is to reduce the infection cases by detecting and providing treatment to new cases of leprosy so as to interrupt the chain of transmission.<sup>6</sup> Because of the implementation of Multi Drug Treatment regimen, the prevalence rate of leprosy has been reduced to 0.66/10,000 in 2016.<sup>7</sup> The Global Leprosy Strategy 2016-2020 was launched by the World Health Organization in April 2016 with the aim of having a leprosy free world.<sup>7</sup>

Our study was retrospective in design. Data was collected from District leprosy society Kathua for a period of nine and half years (from April 2010 to September 2019). The maximum number of cases belonged to 31-40 year age group and dissimilar results was observed in other studies. The male to female ratio is 1:1.4. The female preponderance was seen in this study as compared to other study where male preponderance was seen. Household contacts was seen in 34.66% of paucibacillary patients and 5.33% of multibacillary patients and these results were in contradiction to as reported by others. The risk of developing leprosy has been observed to be four to even nine times higher in case of a positive household contact history.

In our study, the maximum number of cases belonged to multibacillary type as compared to paucibacillary leprosy. Also, in case of childhood leprosy, the number of cases were 3 out of 154, with a single skin lesion and 2-5 skin lesions and no case of childhood leprosy with thickened nerve was observed.

## CONCLUSION

Leprosy continues to be a communicable disease of concern in the post-elimination era. This alarms the need to strengthen contact screening, early case detection, referral activities and even more focus on the pediatric population to sustain elimination.

Funding: No funding sources Conflict of interest: None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee

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Cite this article as: Sangra S, Choudhary N, Razdan N. Leprosy in the post elimination era: a retrospective descriptive study from district Kathua, Jammu and Kashmir. Int J Community Med Public Health 2021;8:1667-70.