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Original Article

A Clinico-epidemiological Scenario of Leprosy at a Tertiary Care Centre in Sub-Himalayan Region: A Seven Year Retrospective Study

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Despite leprosy being an eliminated disease from most of the countries in the world including India, it continues to remain as a major burden on public health expenditure. The purpose of this study was to determine the current clinico-epidemiological profile of leprosy at tertiary care health institution in Himachal Pradesh. This retrospective study was conducted in the Department of Dermatology, Indira Gandhi Medical College, Shimla, Himachal Pradesh, India. All patients registered from April 2010 to April 2017 were included in this study. Hospital records of 221 patients were analysed according to age, gender, region of permanent residence, history of contact with leprosy patients, number of patients within state or immigrants from nearby state/country, type of disease-multibacillary (MB) or paucibacillary (PB), type of lepra-reactions and grade of disability patient developed. Out of a total 221 patients majority were in the younger age group of 15-30 years (38.9%), with male predominance (male:female ratio 2.7:1). Majority had MB leprosy (85.5%), and had significant proportion of grade II disability (G2D) compared to national and global data. In clinical disease spectrum, Lepromatous Leprosy (LL) and Borderline lepromatous (BL) leprosy were the most common presentations. Migrants from other states or immigrants from neighbouring country constituted a significant proportion (44/221, 20% approximately). Pure-neuritic disease was diagnosed in 7 (3.2%) patients, childhood cases were only 5 (2.3%) patients, indeterminate leprosy in 3 (1.4%) patients and histoid leprosy in 1 patient (0.004%). To know the exact status of leprosy in the country, knowledge and understanding of the epidemiological profile is an essential pre requisite as it will assess and address public health needs and will help in efficient programme planning and management of leprosy cases in the country. High proportion of MB cases and very high disability percentage shows the need to increase the awareness in the community as well as health care workers so that cases report early, are diagnosed early and managed appropriately so that disabilities become zero in near future. Partnerships among different medical institutions in the state are expected to strengthen the quality referral services and research aimed at eradication.

Key Words: Lepra reactions, Clinical profile, Epidemiology, Childhood leprosy, Himachal Pradesh, India

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Introduction

The introduction of multidrug therapy (MDT) to leprosy programmes in the mid 1980's resulted in significant reduction in prevalence of the disease, from 5.4 million cases to a few thousand cases per year at present. With the help of National Leprosy Eradication Programme (NLEP) India had achieved elimination targets in 2005, the criteria being less than 1 case per 10000 population. However, majority of leprosy burden in the world still comes from South East Asian Region (SEAR) particularly from India, around 60% of the new leprosy cases detected globally in 2015 was from India (WHO 2015). According to NLEP progress report and WHO global leprosy update, a total of 88166 leprosy cases are on record as on 1st April 2017 giving a prevalence of 0.65 per 10,000 population, as against to 0.66 on 1st April 2016 and 0.69 on 1st April 2015 showing a decreasing trend of leprosy cases in India (NLEP 2015-16, WHO 2016). Within country, there has been a wide variation in prevalence rates across different states and regions of the country. The State of Chhattisgarh and one Union Territory Dadra and Nagar Haveli are still endemic for leprosy and are still to achieve elimination (NLEP 2015-16). While cases reporting to or referred to any Tertiary Care Centre will not be representative of situation at population level, they reflect the problems of access, competence and various epidemiological parameters. Our Tertiary Care Centre at Indira Gandhi Medical College (IGMC), Shimla has been publishing data on profile of leprosy cases treated/studied by us (Mahajan et al 2003, Jindal et al 2009). This study is in continuity of these efforts. This analysis has been carried out to understand such trends at our Tertiary Care Centre so that referral services could be strengthened and future studies as well as interventions could be planned at community level.

Patients and Methods

A retrospective data analysis of all leprosy cases registered in Department of Dermatology, Venereology and Leprology IGMC, Shimla (H.P) from April 2010 to April 2017, was carried out. Patients were classified into clinical spectrum as per Ridley-Jopling classification Ridley & Jopling (1966) and Indian Association of Leprologists (IAL 1982). Cases were also classified into multibacillary (MB) and paucibacillary (PB) types based on number of lesions and bacteriological positivity (NLEP 2009, WHO 2012).

The data was analysed according to age, sex, region, family history or history of contact with leprosy patient, number of patients from different states within country or immigrants from nearby country, extent of involvement & bacillary load [multibacillary (MB) and pauci-bacillary (PB) cases], type of lepra reaction, patients presenting and grade of disability as per WHO criteria (Brandsma & van Brakel 2003).

Results

A total of 221 cases were registered during a study period of 7 years. Mean age of patients was 30±10 years. Majority of patients were young adults in the age group of 15-30 years (38.5%) (Fig 1). Childhood cases were only 2.3% (5 patients). Majority of patients were males with a gender ratio of 2.7:1.

Demographic Analysis

Majority of patients (80.1%) were natives of Himachal Pradesh (Table 1) while 44 patients (19.9%) were migrants from other Indian states or immigrants from Nepal. Twenty three out of 44 patients belonged to Nepal and 12 patients were from Bihar, 8 from Uttar Pradesh while 1 from Jharkhand (Table 2). Sixty nine (31.2%) patients revealed close contact with leprosy patient in the family or neighbourhood.

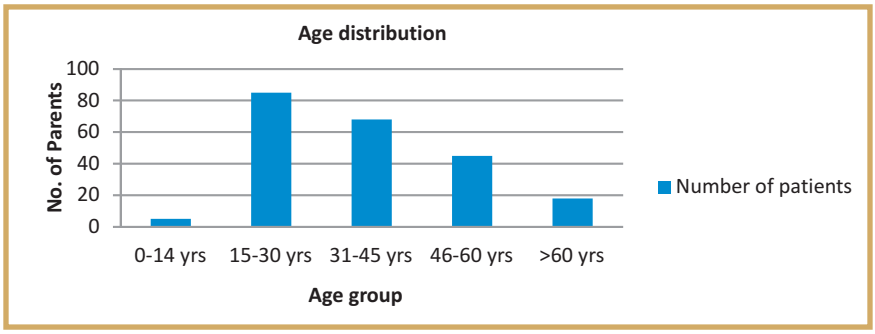

Fig 1 : Age Distribution of leprosy cases studied

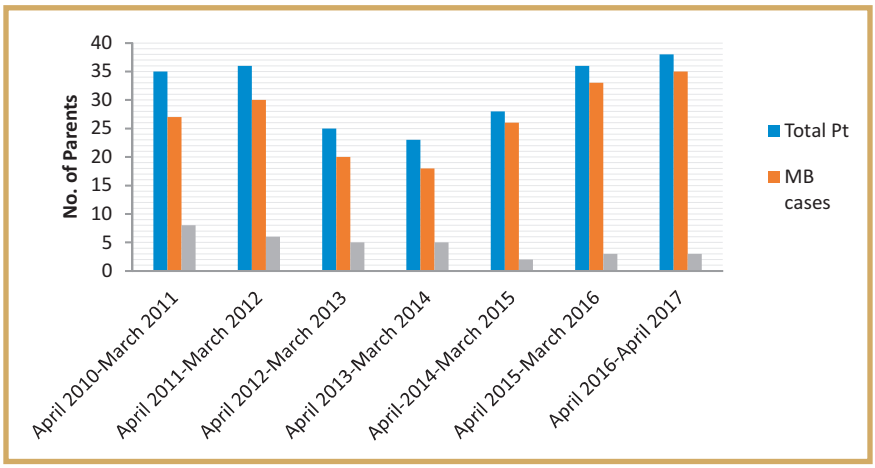

Fig 2 : Clinical pattern of disease over the study period of seven years.

Table 1 : Original district of Himachali leprosy cases.

S.No.	District	Number of cases
1	Shimla	125
2	Kullu	12
3	Mandi	12
4	Sirmaur	10
5	Solan	5
6	Kinnaur	6
7	Bilaspur	5
8	Hamirpur	1
9	Chamba	1
10	Total (indigenous cases)	177

Table 2 : Analysis of immigrants and migrant leprosy cases

S.No.	Migrants*/Immigrants (Other state*/country)	Number of cases
1	Nepal	23
2	Bihar	12
3	Uttar Pradesh	8
4	Jharkhand	1
	Total	44

Disease Spectrum Analysis

Large majority of patients, 189 (85.5%) had MB disease (Fig. 2) whereas 32 (14.5%) patients

Table 3 : Disease spectrum of patients studied

S.No.	Disease Spectrum	Number of cases	Percentage (%)
1	Polar Tuberculoid (TT)	10	4.5
2	Borderline Tuberculoid (BT)	58	26.2
3	Mid Borderline (BB)	2	0.9
4	Borderline Lepromatous	69	31.2
5	Lepromatous Leprosy (LL)	71	32.1
6	Indeterminate leprosy	3	1.4
7	Pure Neuritic leprosy	7	3.2
8	Histoid Leprosy	1	0.004

Table 4 : Pattern of Lepra-Reactions

Type of lepra reaction	Number of cases	Disease spectrum
Type 1 lepra reaction	36	TT=2
		BT =20
		BB=2
		BL=10
		LL=2
Type 2 lepra reaction	46	BL=24
		LL=22
Total	82	

were in PB spectrum among total of 221 leprosy cases. According to the Ridley-Jopling spectrum, most of the patients were in Lepromatous leprosy spectrum 71 (32.1%) patients followed by Borderline Lepromatous (BL) spectrum 69 (31.2%) patients), Borderline Tuberculoid (BT) 58 (26.2%) patients, Tuberculoid leprosy (TT) 10 (21.4%) patients and Mid-Borderline (BB) 2 (0.9%) patients. In addition, indeterminate leprosy was also seen in 3 (1.4%) patients, Pure-neuritic disease in 7 (3.2%) patients and Histoid leprosy in 1 (0.004%) patient (Table 3). Among childhood cases of Hansen's disease, 2 patients each were in a BT and TT spectrum while 1 patient belonged to BL spectrum.

Lepra Reactions and Disability

At first presentation, 82 (37.1%) patients were suffering from lepra reactions. Majority suffered from Type II reaction 46 (20.8%) patients while 36 (16.3%) patients had Type I reaction (Table 4). Among Type I reaction, most of the patient were from BT spectrum i.e. 20 (55.6%) patients while those who presented with Type II reaction belonged to BL spectrum (24 patients) and LL Hansen (22 patients). At the time of presentation, anaesthesia of the limbs i.e., grade I disability was present in 79 (35.7%) patients while 77 (34.8%) patients presented with grade II disability. Nineteen (8.6%) patients presented with or developed disability of the eye later as

Table 5 : Pattern of Deformities/disabilities

Type of Disability	Number of patients	Prevalence
Grade I	79	35.7%
Grade II	77	34.8 %
Disability Eye	19	8.6%
Total	175	79.2%

Table 6 : Situation of leprosy as per global leprosy update (2016) and NLEP (2015-16) in Himachal Pradesh and India.

S.No	Indicators	Global (2016)	India NLEP (2015-16)	Himachal Pradesh NLEP(2015-16)
1	Prevalence Rate	0.23	0.66	0.20
2	Number of new case detected	214783	127334	162
3	Annual New Case Detection Rate	2.9 per 100,000 population	9.71 per 100,000 population	2.24 per 100,000 population
4	Cases on record as on 1 April 2016	-	86028	148
5	% of new case detected (MB)	127013 (59.1%)	65284 (51.27%)	140 (44.15%)
6	% of new case detected (Child)	18220 (8.5%)	11389 (8.94%)	5 (2.3%)
7	% of new cases with Grade II disability	12819 (5.96%)	5851 (4.60%)	21 (12.96%)

consequence of lepra reaction (Table 5). Nerve thickness was present in 165 patients, ulnar nerve being the most common nerve enlarged followed by lateral popliteal, radial cutaneous and posterior tibial nerve. Thirty patients presented with nerve tenderness/neuritis, out of which 18 patients were having Type I reaction while 12 patients were having Type II reaction. At the time of reporting, 5 patients had grade 2 disability out of 18 patients who had Type 1 reaction while 3 patients had grade 2 disability out of 12 patients who had Type 2 reaction.

Among 19 patients who presented with or developed deformities of eyes during the course of disease, 4 patients had lagophthalmos, 7 patients had conjunctivitis, 5 patients had decreased corneal sensation and 3 patients had iridocyclitis, out of which 1 developed corneal ulcer and blindness.

Pattern of Total number and MB cases over the past seven years

A year-wise record was also analysed to know the burden of leprosy cases in the community and the number of MB cases in the community. It was observed that each year significant number of patients suffering from Leprosy attended the leprosy clinic with a sufficient proportion of MB cases. Number of leprosy cases at our OPD initially decreased during 2012 to 2014 followed by steady rise in cases till the year 2017 which is significant concern in this era of post elimination of leprosy .

Discussion

The causative agent of leprosy, *Mycobacterium leprae*, was identified by Armauer Hansen in 1873 (Bacteria Genomes - *Mycobacterium leprae* 2008). It has a predilection for skin and peripheral nerves due to which the common and severe consequence of leprosy patient is loss of sensations followed by deformities and disability which have significant social and economic impact on both patient and community. In the pre-sulfone era, the most prevalent technique to prevent spread of infection was compulsory segregation of those afflicted with the disease (Joshi 2016).

Introduction of sulfones in the treatment of leprosy in 1943 marked the beginning of a new era which was the era of case finding and domiciliary treatment. Subsequently with availability of multidrug therapy (MDT) as a cure of leprosy, NLEP was launched in 1983-84 with a vision of "Leprosy Free India". The programme achieved an appreciable milestone in December 2005 when India attained an elimination target of less than 1 case per 10000 population. Leprosy has since been a curable and controllable disease (Jindal et al 2009). Still according to WHO global leprosy update, India contributed to 60% of the total number of cases in the year 2015 (WHO 2015). India had 127334 new cases of leprosy according to the recent NLEP report of 2015-16 with a prevalence of 0.66 per 10000 population and annual new case detection rate of 9.71 per 100,000 population (NLEP Progress report for the year 2015-2016). Fortunately only 162 cases contributed from the state of Himachal Pradesh in the year 2015-16 with a prevalence of 0.20 per 10000 population (NLEP Progress report for the year 2015-2016). This became largely possible due to the creation of a complete vertical specialized infrastructure to provide MDT services for leprosy control. Similar trends were also seen in other parts of country in the post-MDT era. The implementation of MDT programme by itself has helped in improving case management in such a way that a substantial reduction in prevalence has been achieved in all leprosy endemic countries/states. Despite of noticeable decrease in PR, the annual new case detection rate [ANCDR] has not declined so steeply.

In our study, most of the patients were in a younger age group of 15-30 years which is similar to finding recorded by Jindal et al (2009) and Tiwary et al (2011).

In demographic data analysis, Himachali leprosy cases reporting to IGMC, Shimla belonged to nine districts, most of them belonged to the Shimla, Kullu, Sirmaur, Mandi, Kinnaur, Solan, Bilaspur districts etc while one patient each was from Chamba & Hamirpur districts. There were no patients from Kangra, the possible reason could be that patients from Kangra, Chamba and adjoining districts might have been treated at a Tertiary Care Centre at Medical College at Tanda in Himachal Pradesh which is nearer to the patients living in that region. It would be important to have organized partnership among various medical colleges in Himachal Pradesh to know the exact situation for ensuring quality referral services and research aimed at elimination. Significantly, nearly 20% of patients belonged to other states and neighbouring country. This aspect needs to be kept in mind while focusing on elimination which has to ensure efficient services to all.

The proportion of MB cases indicates the presence of advanced cases of leprosy and indirectly the magnitude of sources of infection in the community. In the present study 221 cases of leprosy were evaluated which showed 85.5% MB case and 14.5% PB case which are far more than the status of MB case globally which is 61% and at

national level which is 51.27%. A retrospective study of 16 years from a tertiary hospital in Delhi also showed 80.5% MB cases (Tiwary et al 2011). In a period from April 2015 to April 2017, 70 cases of MB spectrum were detected out of 72 (97.2%) patients. This is a strong indication of the fact that even today there are inaccessible pockets of population harbouring undiagnosed leprosy patients for a long time. High number of MB cases might also be due to the fact that less severe cases might have been effectively managed at peripheral heath centre while most of the severe cases with reactions and disabilities might have presented to our tertiary care centre. In any case, this needs to be properly investigated at community level.

The proportion of females were analysed to understand access to leprosy services for women and the possible effects of discrimination against women with leprosy. Globally 38.8% of new cases in 2015 were female. In present study over the period of seven years, 59 cases were female, the proportion being 26.7% while over the period of April 2015 to April 2017, 22 patients were female, out of total case there were 72 female patients, proportion being (30.6%) indicating universal services to community irrespective of gender. According to NLEP 2015-16, in Himachal Pradesh 50 patients were female, proportion being 30.86%. These figures are lower compared to overall proportion of females leprosy cases in country according to NLEP 2015-16 (38.3%).

In our study, the most common clinical spectrum observed was LL and BL followed by BT which is in contrast to other studies which shows BT to be the most common spectrum followed by BB (Mahajan et al 2003, Singh et al 2009, Tiwary et al 2011). The possible reason could be that patients in the BT and TT spectrum are easier to diagnose as the skin lesions are well defined with definite area of anaesthesia and are managed at the primary and secondary health centres itself, and hence rarely report to tertiary care centres. The lower spectrum is more difficult to diagnose as such because of absence of clinical symptoms and hence were generally referred to tertiary care centre where they are eventually diagnosed and managed. histoid leprosy was reported in our study only 1 patient (0.004%) much lower than reported by Kaur et al (1.8%) from Department of Dermatology, Postgraduate Institute of Medical Education and Research, Chandigarh, India (Kaur et al 2009) .

The detection of leprosy in children indicates the continued transmission of infection in the community. The proportion of new child cases globally is 8.8% (WHO, Global Leprosy Update 2015). In our study, 5 cases of childhood leprosy were detected over a period of 7 years; the proportion being 2.3%. The proportion is much lower than reported by Chabra et al (2015) (9.3%) and (9.6%) by Singal et al (2011) were children with leprosy. Palit & Inamdar (2014) reported that proportion of childhood leprosy in tertiary care hospitals varied from 5.1-11.43%, in one urban clinic and the three leprosy referral hospitals it was 9.81-31.3% and peripheral surveys recorded 7.06-35.5% cases. In a NLEP yearly report of 2014-15 no case of childhood leprosy was detected from Himachal Pradesh but in a recent yearly report of NLEP 2015-16, 4 cases (2.47%) childhood cases were detected from H.P. including 1 case from our institute in the year 2015-16 while 11389 childhood cases were detected nationwide, proportion being 8.94%. In spite of increase in childhood cases in 2015-2016 in H.P, overall proportion of childhood cases have decreased in the country i.e being 8.94% now compared to 9.04% in NLEP report (2014-15).

G2D indicates the level of awareness of early signs and symptoms of leprosy and of health seeking response in the community on the one hand and,

on the other, the capacity of the health system to recognize and treat leprosy at an early stage, before disabilities develop. Information about new G2D cases is used to monitor the disease burden due to leprosy. The proportion of new G2Dcases indicates delay in the detection of leprosy cases. In 2015, 14059 new G2D cases were reported globally (proportion being 6.7%). This corresponds to a detection rate of 2.1 per million populations (WHO, Global Leprosy Update 2015). In NLEP 2015-16, 5851 patients presented with G2D indicating the Gr. II Disability Rate of 4.46 / million population.

In our study 27 cases out of 72 presented from April 2015 to April 2017 with grade II disability i.e., 35% which is quite high compared to national and global data (WHO, Global Leprosy Update 2015; NLEP Progress report 2015-2016). Over a period of 1 year from April 2016 to April 2017, 14 patients presented with G2D out of 33 patients, proportion being 42.42%, while over a period of 7 years 77 patients presented with Grade II disability (34.84%). These findings are similar to as reported by Chhabra et al (2015) These data indicate that these patients presented to the health care facility when much damage has already been occurred. Monitoring of the new G2D case rate at national and sub-national levels helps in decision-making on improving awareness about leprosy in the community and on enhancing the skills of health staff to detect cases at an early stage.

According to NLEP 2015-16 progress report, one State (Chhattisgarh) and one U.T. (Dadra and Nagar Haveli) have remained to achieve elimination. Four more states/UTs namely Odisha, Delhi, Chandigarh and Lakshadweep have reported with PR>1/10,000 population, as on 31st March 2016, in the current year. Prevalence of leprosy cases in Himachal Pradesh is significantly lower according to NLEP 2015-16 progress report i.e 0.2 (NLEP Progress report for the year 2015-2016).

Comparison of various NLEP parameters of Himachal Pradesh with rest of India (NLEP 2015-16) shows that Himachal Pradesh holds a better position in some indicators like prevalence as well as child ratio as compared to overall trend in India (Table 6). Higher grade II disabilities indicate the need to improve the access to quality services so that patients are diagnosed and treated early and disabilities are prevented. In our study the findings were similar to NLEP parameters of Himachal Pradesh except for visible disability and MB cases, the ratio of which is significantly higher in comparison to overall figures for Himachal Pradesh, India as well as globally. Our data suggests the need of in depth analysis of this problem in the state so as to ensure early and appropriate eye care to our leprosy patients.

The task ahead remains difficult with a need for strong epidemiological monitoring at all levels. The Global Leprosy Strategy 2016-2020: “Accelerating towards a leprosy-free world” was released in April 2016. The strategy is based on the principles of initiating action, ensuring accountability and promoting inclusion. It is built around 3 pillars: to strengthen government ownership, coordination and partnership; to stop leprosy and its complications; and to stop discrimination and promote inclusion (WHO, Global Leprosy Update 2015).

In endorsing the global strategy, 3 key targets have been agreed by all national programmes: (i) zero G2D among children diagnosed with leprosy; (ii) the reduction of new leprosy cases with G2D to <1 case per million population; and (iii) zero countries with legislation allowing discrimination on the basis of leprosy (WHO, Global Leprosy Update 2015).

Conclusions and way forward

The prevalence of leprosy is gradually decreasing in many countries; however rates of new case detection remain at almost the same level globally and in different regions. Despite of leprosy elimination from the country, a lot of work still needs to be done. The high rate of MB case (85.5%) in our study as well as a high proportion of patients presenting with Grade II disability (34.84%) is a matter of great concern as these findings are far above the national and global level as discussed above. This shows the need to increase the awareness in community as well as health care workers so that cases report early, are diagnosed early and are managed appropriately so that disabilities gradually reduce and finally become zero.

As the last mile is always hardest to go, intensified focus should be made on early case detection, prompt and complete cure, strengthened referral mechanism to deal with the complications and sequelae of the disease.

Our data has some limitations. First, as it is the referral tertiary care centre in Himachal Pradesh, most of the cases reported to the department are of severe spectrum which could not have been managed by peripheral health centres which have contributed to high proportion of MB cases as well as cases with Grade II disabilities. Secondly, study was done by retrospective data analysis based on department records and was limited to only those patients who reported to us either voluntarily or on being referred. Clearly there is need to carry out population based studies to better understand the situation in different districts and take remedial measures.

References

1. "Bacteria Genomes - *MYCOBACTERIUM LEPRAE*". EMBL-EBI Website. 2008. Available at: http://www.ebi.ac.uk/2can/genomes/bacteria/Mycobacterium_leprae.html.
2. Brandsma JW, van Brakel WH (2003). WHO disability grading: Operational definitions. *Lepr Rev*. **74**: 366-73.
3. Chhabra N, Grover C, Singal A et al. (2015). Scenario at a Tertiary Level Hospital in Delhi: A 5-year Retrospective Study. *Indian J Dermatol.* **60**: 55-59.
4. Indian Association of Leprologists (1982). Clinical, histopathological and immunological features of the five type classification approved by the Indian Association of Leprologists. *Lepr India.* **54**: 22-32.
5. Jindal N, Shanker V, Tegta GR et al (2009). Clinico-epidemiological trends of leprosy in Himachal Pradesh: a five year study. *Indian J Lepr*. **81**: 173-179.
6. Joshi PL (2016). Epidemiology of Leprosy. In: IAL Textbook of Leprosy, Bhushan Kumar and HK Kar (Eds), Second edition, Jaypee Publication, India, pp 33-44.
7. Kaur I, Dogra S, De D, Saikia UN (2009). Histoid leprosy: a retrospective study of 40 cases from India. *Br J Dermatol.* **160**: 305-310.
8. Mahajan VK, Sharma NL, Rana P et al (2003). Trends in detection of new leprosy cases at two centres in Himachal Pradesh, India: a ten-year study. *Indian J Lepr*. **75**: 17-24.
9. National Leprosy Eradication Programme (2009). Training Manual for Medical Officer, Central Leprosy Division, DGHS, MoHFW, Govt of India, pp 54-65.
10. NLEP Progress report for the year 2014-2015 ending on 31 March 2015. Central leprosy division, Directorate General of Health Services Government of India, New Delhi.
11. NLEP Progress report for the year 2015-2016 ending on 31 March 2016. Central leprosy division, Directorate General of Health Services Government of India New Delhi.
12. Palit A, Inamadar AC (2014). Childhood leprosy in India over the past two decades. *Lepr Rev*. **85**: 93-99.
13. Ridley DS, Jopling WH (1996). Classification of leprosy according to immunity. A five group system, *Int J Lepr Other Mycobact Dis.* **34**: 255-273.

14. Singal A, Sonthalia S, Pandhi D (2011). Childhood leprosy in a tertiary-care hospital in Delhi, India: a reappraisal in the post-elimination era. *Lepr Rev.* **82**: 259-269.

15. Singh AL, Vagha SJ, Agarwal A et al (2009). Current scenario of leprosy at tertiary care level hospital of rural central India. *Indian J Dermatol Venerol Leprol.* **75**: 520-522.

16. Tiwary PK, Kar HK, Sharma PK et al (2011). Epidemiological trends of leprosy in an urban leprosy centre of Delhi: A retrospective study of 16 years. *Indian J Lepr*. **83**: 201-208.

17. World Health Organization (2012). WHO expert committee on leprosy, 8th report. [online] Available from http://www.searo.who.int/entity/global_leprosy_programme/publications/8th_expert_comm_2012.pdf.

18. World Health Organisation (2015). Global Leprosy Update 2015: time for action, accountability and inclusion. *Weekly Epidemiological Rec* 2016; **91**: 405-420. Available from: http://www.who.int/lep/resources/who_wer9135/en/.

19. World Health Organisation (2016). Global Leprosy Update 2016: accelerating reduction of disease burden. *Weekly Epidemiological Rec* 2017; **92**: 501-520. Available from: http://www.who.int/wer/2017/wer9235/en/.

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