

Clinical Profile of Leprosy in Children Under 10 Years at Anandaban Hospital: A 29-Year Review

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Background

- Leprosy is one of the Neglected Tropical Disease (NTD)
- It is caused by *Mycobacterium Leprae*, which mainly affects peripheral nerves and skin that may leads to disabilities and deformities
- Out of 182,815 new cases reported worldwide in 2023, 3.9% are children (WHO, Weekly Epidemiological Record, September 2024)
- In Nepal 2510 new cases were reported in 2023 out of which 180 (**7.1%**) were child cases (WHO, Weekly Epidemiological Record, September 2024)
- **Leprosy was eliminated at the national level in 2009** and declared in 2010 (Leprosy Control Division, Government of Nepal, 2017)



Background

- Long term vision- Zero leprosy: zero infection and disease, zero disability, zero stigma and discrimination
- Leprosy in young children is an epidemiological indicator of active community transmission
- Understanding the clinical characteristics of this age group is essential to improve diagnosis, management, and outcomes



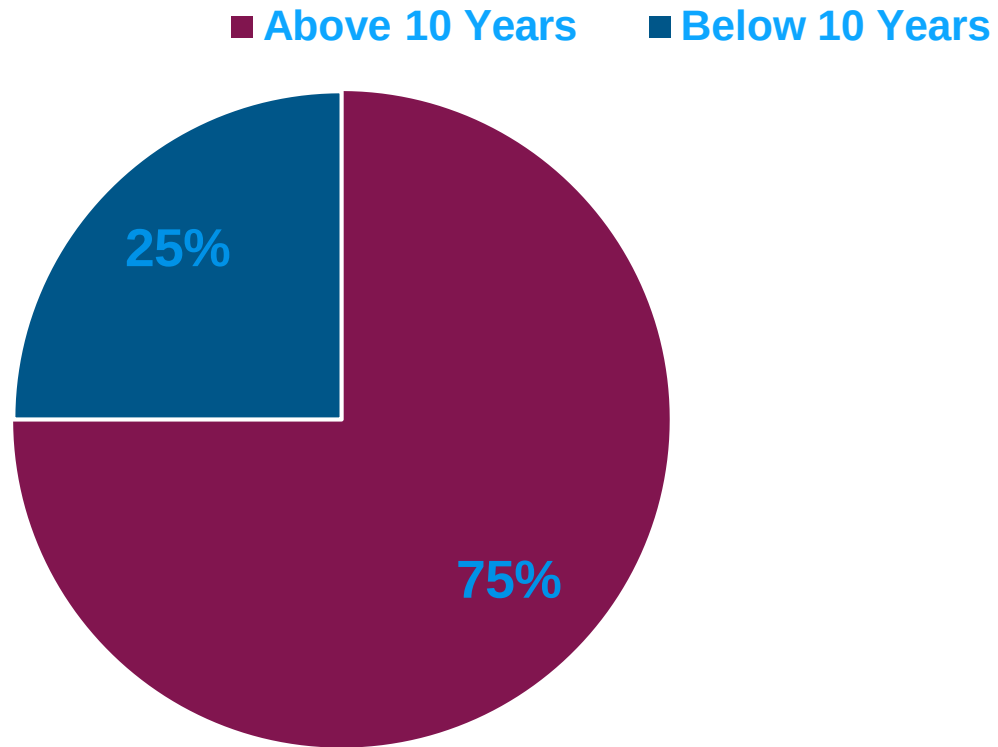
Methods

- We carried a **retrospective (1995-2023)** chart review of child cases under 10 years age registered at Anandaban Hospital, Lalitpur, Nepal, a tertiary level referral center for leprosy.



Results

Child cases reported from 1995-2023

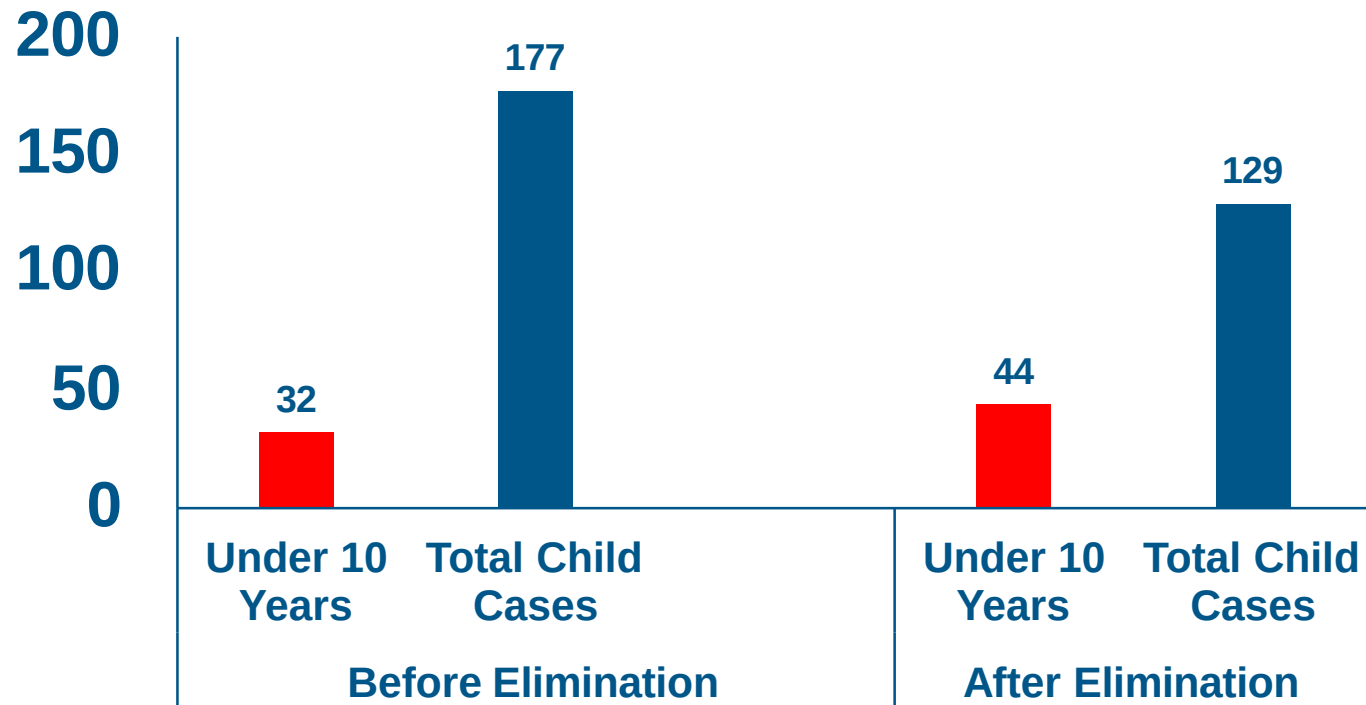


- Out of 306 child leprosy cases (<15 years), **76 (25%) were under 10 years old**



Results

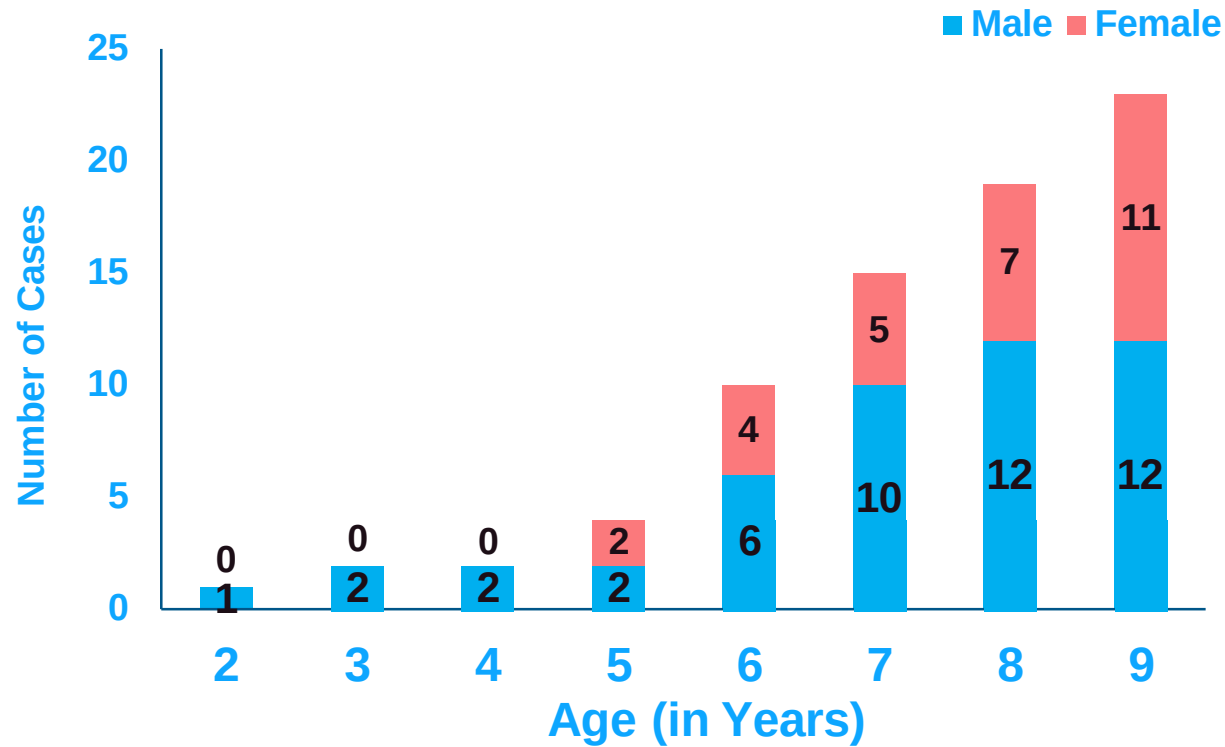
Number of Child cases reported before and after national level elimination declaration in 2009



- Though the under 10 cases increased, total number of new child cases (<15 yrs) were decreased after elimination

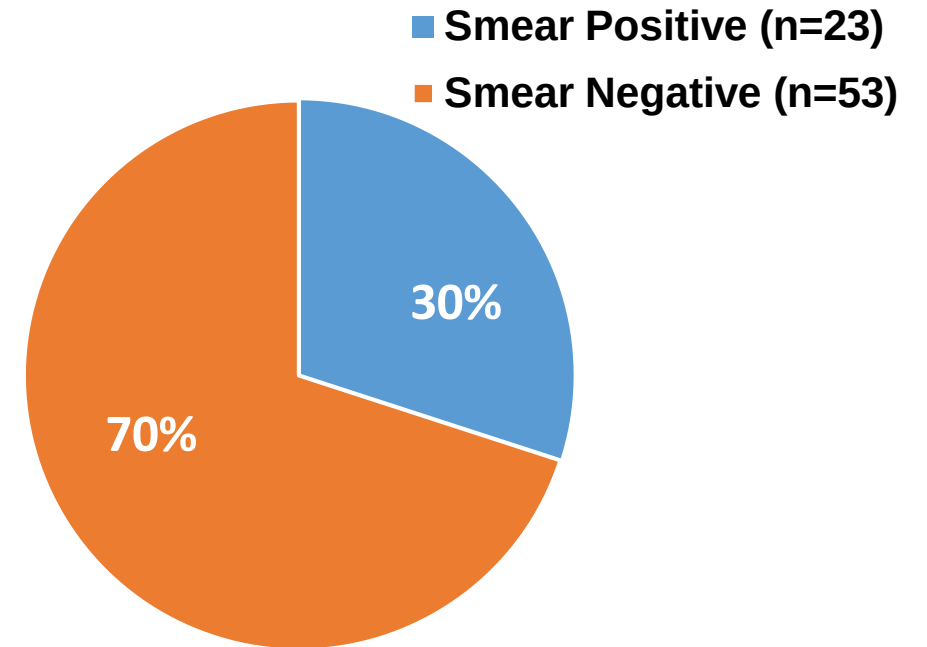
Results

Gender Distribution by Age



- Average age- **7.3 years** (range: 2–9 years)
- Males-47 (**62%**), Females- 29 (**38%**)

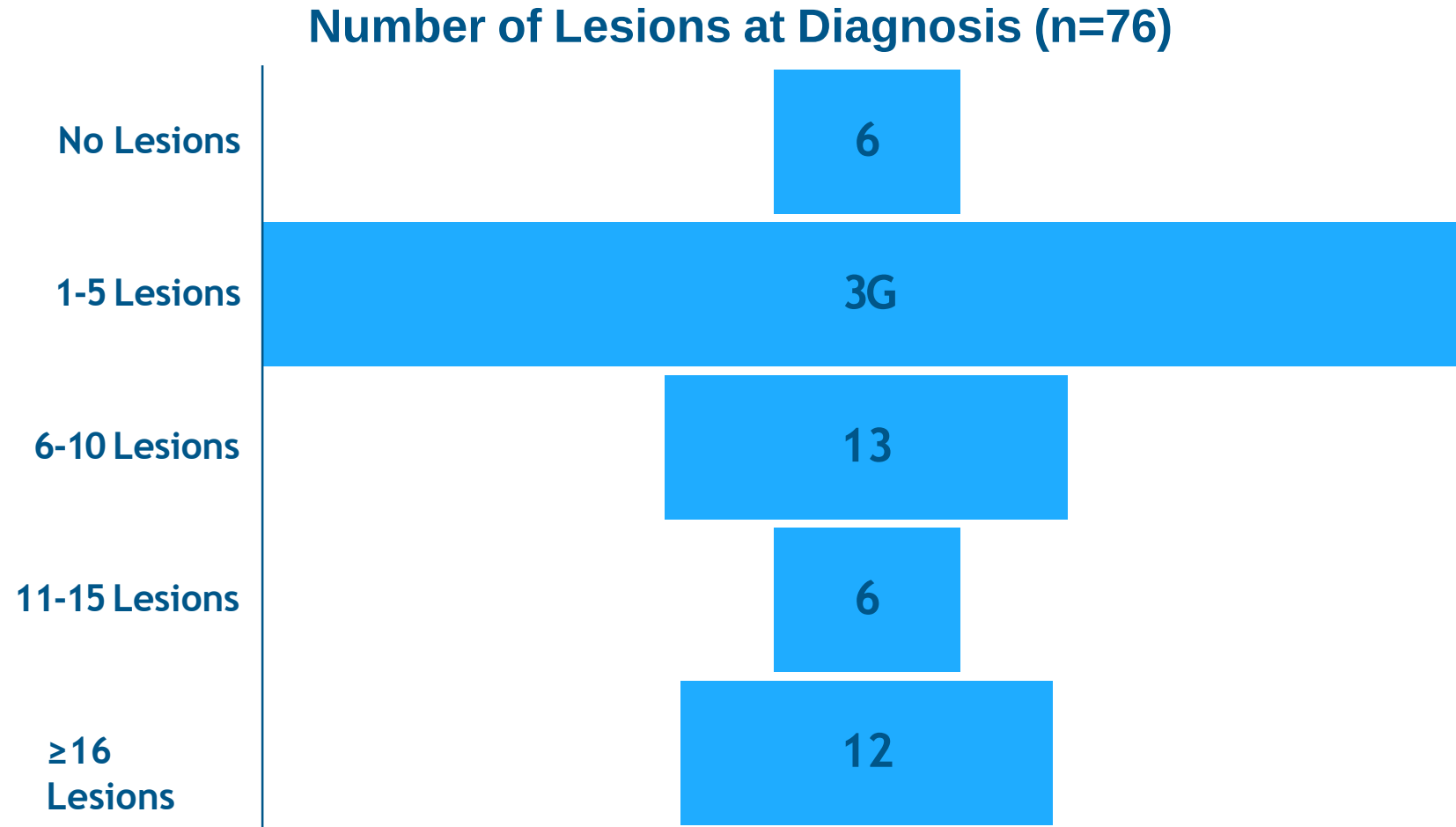
Smear Positivity Rate



- **30 % of cases were smear positive**



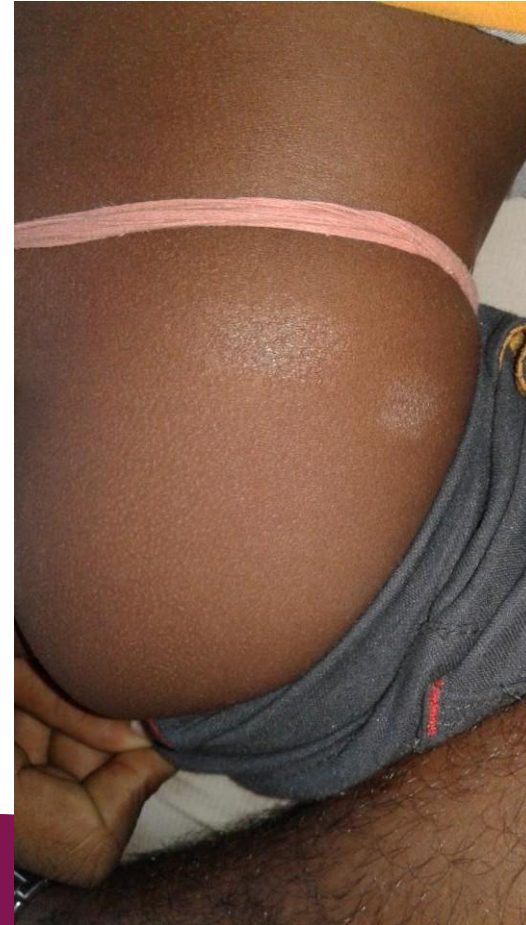
Results



- 51% of cases were presented with 1-5 lesions in their body

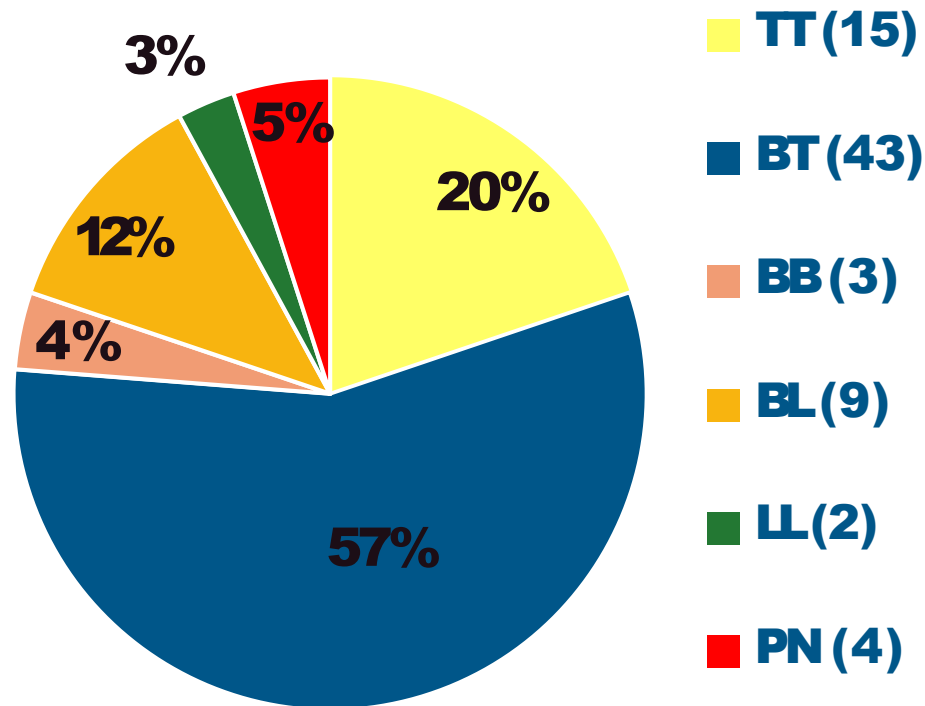
Diagnosis Challenges- 2.5 years Child

- Mother had BL Leprosy
- Smear negative case, Leprosy confirmed by Histopathological examination



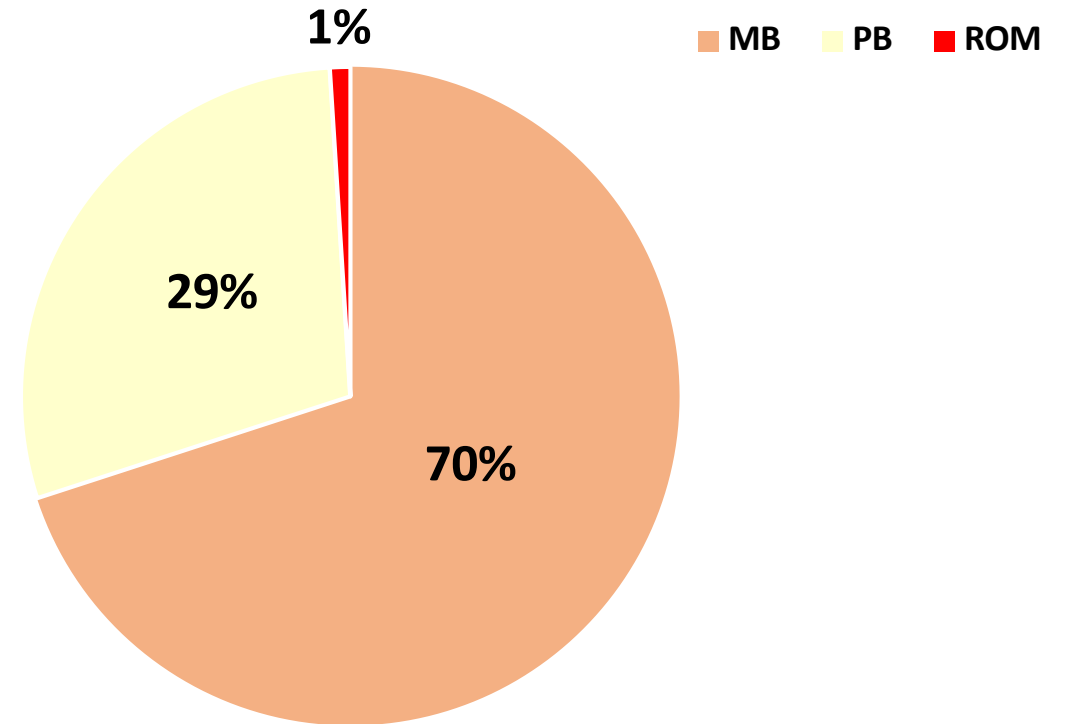
Results

Clinical RJ Class



- 57% of the cases were BT type followed by TT (20%)
- High prevalence of TT/BT in children indicates **active but recent transmission** in the community

Treatment Regimens

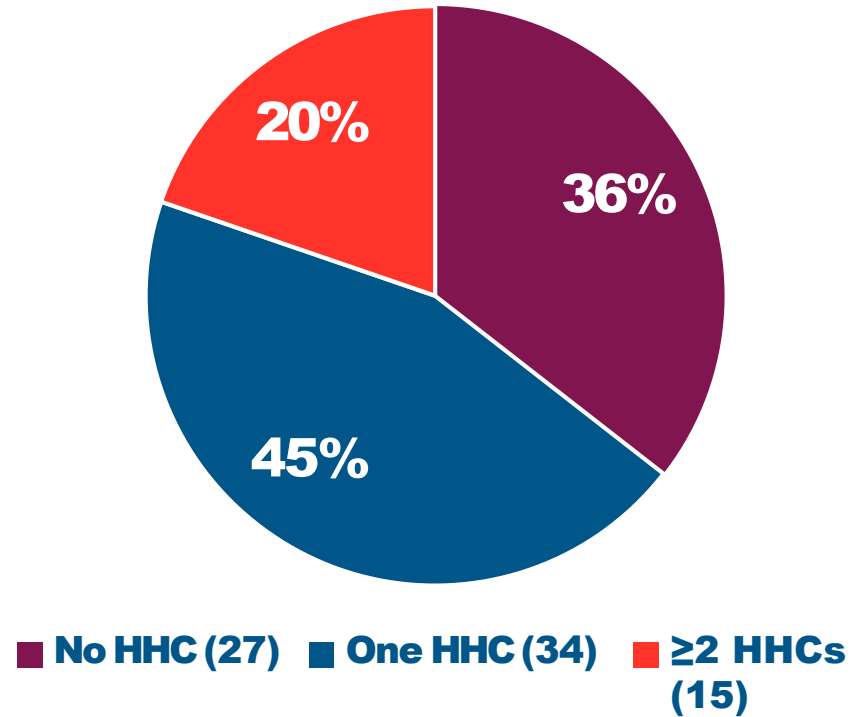


- 70% had received MB type treatment



Results

House Hold Contacts



Disability Grade at Diagnosis

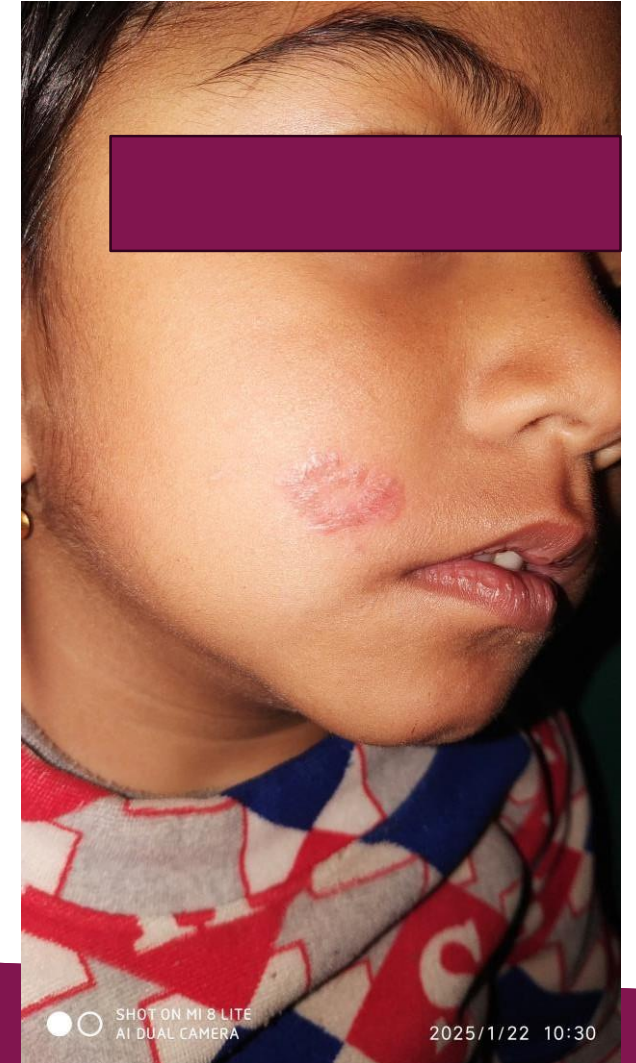
- 93% no Disability
- 4% Grade 1 Disability
- **3% Grade 2 Disability**

- 65% of cases have family contact history



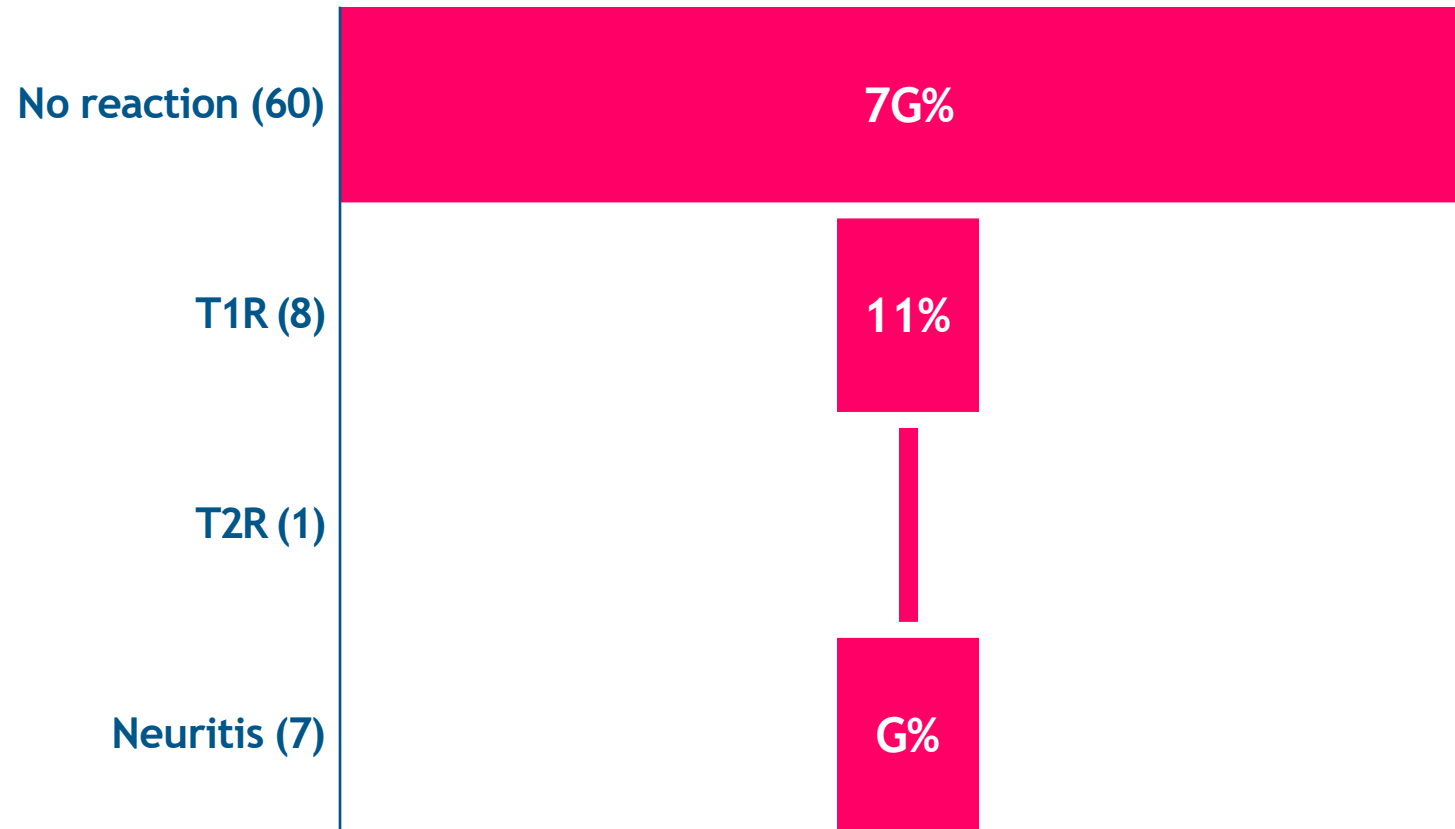
Case With Household Contact

5yrs Female with
Father LL Case



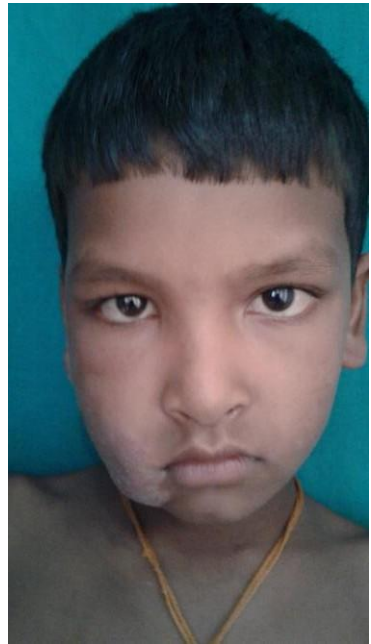
Results

Reaction Status at Diagnosis



- Majority had no reactions (79%), followed by T1R (11%), Neuritis (9%) and T2R/ENL (1%).

T1R Clinical Photographs- 8yrs Old Child



**Before
treatment**



**After
treatment**



ENL/T2R Clinical Photographs-8yrs old Child



- He had prednisolone about 4 years to manage the ENL symptoms
- Developed the consequences of long-term prednisolone treatment
- Steroid induced- hypertension and cataract, and growth retardation



Conclusions

- Leprosy in children under 10 remains a **public health concern**, even after the national elimination declaration.
- Leprosy in children under 10 years presents unique challenges
 - lack of dose-adjustable blister packs
 - dependence on guardians for treatment adherence
- Household transmission is a major factor, requiring **enhanced contact screening strategies**.



Acknowledgements

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- EDCD, LCDMS, Government of Nepal
- Anandaban Hospital, The Leprosy Mission Nepal



References

- World Health Organization. (2024). Global leprosy (Hansen disease) update, 2023: elimination of leprosy disease is possible—time to act. *Wkly Epidemiol. Rec*, 37, 20. <https://iris.who.int/bitstream/handle/10665/378895/WER9937-501-521>.
- World Health Organization. (2021). Towards zero leprosy: global Leprosy (Hansen's disease) Strategy 2021–2030. In *Towards zero leprosy: global leprosy (Hansen's disease) strategy 2021–2030*. <https://www.who.int/publications/i/item/9789290228509>
- Leprosy Control Division, Leprosy control. (2017), . Available at: <http://www.lcd.gov.np/index.php/programs/leprosy-control> (Accessed: 04 April 2025)





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N.M.C./Other regulatory body registration number	N.M.C. 1780
No. of Publications	26
Special Areas of Interest/ Expertise	Leprosy, Leishmaniasis, Genetic and immunological disorders
Major Academic achievements/ Awards	Senior Researcher of 2016" Awarded by Nepal Health Research Council. “Swasthya Khabar Health Award 2023”





ANY QUESTIONS??



THANK YOU FOR LISTENING !!!

