33rd Biennial IAL National Conference of Leprosy

LEPCON 2026

Conference Dates : 28th February - 1st March 2026
Workshop for PG students : 27th February 2026

Theme :
'Leprosy free India - Moving closer, Reviewing progress.

Venue :
All India Institute of Medical Sciences (AIIMS), Phulwarisharif,
Patna, Bihar-801507

Organised by
Indian Association of Leprologists (IAL)

ABSTRACT BOOK

OF THE

33rd BIENNIAL IAL NATIONAL

CONFERENCE OF LEPROSY

Leprosy free *India* – Moving closer

Conference Date: 27th, 28th February & 1st March

Time: 10:00 AM TO 5:00 PM

Venue: All India Institute of Medical Sciences, Patna

DAY 1: PROGRAMME

27TH FEBRUARY (FRIDAY), VENUE: AIIMS AUDITORIUM

DETAILS OF LEPROSY WORKSHOP

WORKSHOP OBJECTIVE

To Improve Clinical, Diagnostic and POD (Prevention of Disability) skills in Leprosy

WORKSHOP STRUCTURE

- Total Participants: 75 students per session
- Batch Division: 3 batches of 25 students each (Batch A, B, C)
- Workshop Stations: 3 stations with rotation system
- Station Duration: 40 minutes + 5 minutes changeover
- Total Workshop Duration: 2 hours 15 minutes (135 minutes)

Friday, 27th February 2026				
Time	Duration	Activity	Details	Faculty/Presenters
11:00 AM onwards	-	Registration	Afternoon session registration begins at 11:30 AM	-
12:00 - 1:00 PM		Introduction + Video/PPT Demonstrations	Combined session for all 75 students	
	15 mins	Ultrasound in Leprosy	Video/PPT presentation	Dr. Sujai Suneetha Dr. Swetalina Pradhan
	15 mins	Nerve Biopsy	Video/PPT presentation	Dr. Rashid Shahid Dr. K Rajyalaxmi & Dr. Manavi
	15 mins	PCR Testing for Leprosy	Video/PPT presentation	Dr. Manjot Kaur, Dr. Ankit Kaushik, Dr. Pallak Sharma (PGIMER Team)
	15 mins	Q&A and Transition	Batch allocation and station briefing	Workshop Co-Ordinator
1:00 - 2:00 PM	60 mins	LUNCH BREAK	For all participants	
2:00 - 5:00 PM	180 mins	HANDS-ON WORKSHOP SESSIONS	3 Rotating Stations	

Each group will experience all three stations - here's how it flows:

Time Slot	Duration	Batch A (25 students)	Batch B (25 students)	Batch C (25 students)
2:00 - 2:40 PM	40 mins	Station 1 Skin smear - Preparation & reading Dermatology Faculty: Dr. Irene Mathews Senior resident: Dr. Niharika Kumari Junior resident: Dr. Rishav Sanghai Dr. Pallireddy Lavanya Microbiology Faculty: Dr. Asim Sarfaraz Senior resident:	Station 2: Nerve palpation and testing for sensory and Motor NFI Faculty: Dr. Swetalina Pradhan Dr. Kananbala Sahu Senior Residents: Dr. Subhasree Sarkar Dr. Vartika Dr. Shivani Kumari	Station 3: Physiotherapy & use of splints / supports Faculty: Dr Sanyal Kumar(PMR) Dermatology Faculty: Dr. Rakhee Gupta Senior Residents: Dr. Md. Mobarak Hussain Dr. Shivani Shekhar Junior Residents: Dr. Soumya Sulagna Mahapatra Dr. Mishkat Fatima

		Dr. Gargee Anand Junior resident: Dr. Devika AJ Observer: Dr. Swapna	Junior Residents: Dr. Zoya Nasreen	Leprosy physiotherapists: Mr. Surajit Kumar Sahu (Clinical Prosthetist and Orthotist), Mr. Rajesh Kumar Thakur (Physiotherapist) Observer: Dr. Veerakumaran
2:40 - 2:45 PM	5 mins	CHANGEOVER	CHANGEOVER	CHANGEOVER
2:45 - 3:25 PM	40 mins	Station 2: Nerve palpation and testing for sensory and Motor NFI	Station 3: Physiotherapy & use of splints / supports	Station 1: Skin smear - Preparation & reading
3:25 - 3:30 PM	5 mins	CHANGEOVER	CHANGEOVER	CHANGEOVER
3:30 - 4:10 PM	40 mins	Station 3: Physiotherapy & use of splints / supports	Station 1: Skin smear - Preparation & reading	Station 2: Nerve palpation and testing for sensory and Motor NFI
4:10 - 4:15 PM	5 mins	BREAK & FEEDBACK	BREAK & FEEDBACK	BREAK & FEEDBACK
4:15 - 5:00 PM	45 mins	Closing Session & Evaluation	Closing Session & Evaluation	Closing Session & Evaluation

DAY 2: PROGRAMME

28TH FEBRUARY (SATURDAY), VENUE: AUDITORIUM, 'AMARKANT JHA 'AMAR' HALL, AIIMS PATNA, BIHAR

Saturday, 28th February 2026		
08:30 AM -9.30 onwards: Registration & Breakfast		
09:30 AM – 10:00 AM - PLENARY SESSION: Reviewing Progress		
09:30AM–10:00 AM	PLENARY SESSION 1: Reviewing Progress	Chairperson HK Kar; Dr. Hare Ram Kumar; Dr. Pankaj Agarwal
Speaker	Reviewing Progress: Neural Leprosy	Dr Bhushan Kumar (15 min)
Speaker	Reviewing Progress: Early Diagnosis in Leprosy	Dr. Sundeep Chaitanya (15 min)
10:00 AM – 11:00 AM - SPECIAL SESSION ON PEP/SDR		
10:00 AM – 11:00 AM	SPECIAL SESSION ON PEP/SDR	Chairperson Dr. VM Katoch; Dr. Vikas Shankar, Dr. P.C Das
Lead Speaker	Experience of Post Exposure Prophylaxis (PEP/SDR) in the NLEP	Dr. Sunil V Gitte, DDG Leprosy (15 min)
Invited talk	Use of Leprosy PEP in Preventing Leprosy & Interrupting Transmission	Dr. Paul Saunderson (15 min)
Panel Discussion	Steps of Involvement of IAL Members including Dermatologists in NLEP	Moderator: Dr. P Narasimha Rao. Panellists: Dr. Sunil V Gitte, Dr. HK Kar, Dr. Sujai Suneetha, Dr. Sunil Dogra, Dr. Ashok Agarwal, Dr. VV Pai (30 min)
11:00 AM – 11:30 AM	Inauguration of LEPCON 2026	30 min

11:30 AM – 11:45 AM	IAL Lifetime Achievement Awards	15 min
ORATIONS		
11:45 AM – 01:00 PM	Orations	Chairperson Dr. Kiran Katoch, Dr. Sujai Suneetha, Dr. Abhishek Kumar Jha
Orator	Jal Mehta Oration	Dr PSS Sundar Rao (30 min)
Orator	RN Dutta Oration	Dr Utpal Sengupta (30 min)
01:00 PM – 02:00 PM: Lunch Break		
02:00 PM – 05:00 PM: 180 min: Parallel Session Location: Hall A – Dr Amarkant Jha Amar Hall, AIIMS AUDITORIUM		
Debate Session		
02:00 PM – 03:00 PM	Debate Session	Chairperson Dr. Birendra Kumar Singh; Dr. Punkesh Kumar, Dr. Timir Mehta
Judge	Debate Session	Dr. Vithal Jadhav, Dr. Sunil Dogra
Debate	Debate 1: Are leprosy campaigns sufficient approach for active case finding for hidden case load—do we need to do more?	Yes: Dr. T Ravindran vs No: Dr. Satyaki Ganguly (30 min)
Debate	Debate 2: FDT for all vs Individualized MDT when needed	Dr. Rajesh Pandey (FDT for all) vs Dr. Tarun Narang (Individualized MDT) (30 min)
Scientific Session 1: Reviewing Progress - Clinical Leprosy & Diagnosis		
03:00 PM – 04:00 PM	PLENARY SESSION 2: Reviewing Progress – Clinical Leprosy & Diagnosis	Chairpersons Dr. RP Singh; Dr. SK Tripathi
Lead Speaker	AMR in Leprosy posing Management challenges: Case based Scenarios	Dr. Swetalina Pradhan (12 min)
Invited Talk 1	CNS Involvement in Leprosy	Dr. Swastika Suvirya (12 min)
Invited Talk 2	From PCR to Genomics: Next-Generation Diagnostics of Leprosy	Dr. Rakesh Yadav (12 min)
Invited Talk 3	Antimicrobial Resistance in Leprosy: Outcome Evidence to inform India's control strategy	Dr. Aparna Srikantam (12 min)
Invited Talk 4	Role of AMR in Leprosy Clinical practice	Dr. Manoj K Ram (12 min)
Scientific Session 2: Reviewing Progress - Reactions & Nerve Damage		
04:00 PM – 05:00 PM	PLENARY SESSION 3: Reviewing Progress – Reactions & Nerve Damage	Chairpersons Dr. Devendra Chauhan; Dr. Ramavatar Singh, Dr. Joydeepa Darlong
Invited Talk 1	Newer Advances in Aetiology & Management of Leprosy Reactions	Dr. Sudip Das (12 min)
Invited Talk 1	Mapping of ENL Pathogenesis from Plasma priming to Neutrophil-driven tissue Destruction	Dr. Seema Chhabra (12 min)

Invited Talk 2	Biologic in type 2 Leprosy Reaction	Dr. Anupama Singh (12 min)
Free Paper (7 min each)	Investigating the regulation of cytokines production by Signal Transducers and Activator of Transcription (STAT) molecules in leprosy reactions	Dr. Bhavna Sharma (7 min)
	Diagnostic Clinical Utility of Granulocyte to Lymphocyte Ratio in Patients with Leprosy Reactions	Ms. Mansi Gupta (7 min)
	An Observational Study of Leprosy Reactions in Released From Treatment (RFT) Cases at a Tertiary Care Centre	Dr. Riddhi Suresh Mehtha (7 min)
Special Session: TLMTI Papers		
05:00- 05:30 PM	Special Session: TLMTI Papers	Chairpersons: Dr. U Sengupta, Dr. Premal Das, Mr. Bino Berry
7 min each	Aarogyata ki Ore: Development of a Holistic Health Education Guideline for Healing Beyond Cure in Leprosy	Dr. Joydeepa Darlong
	Understanding Healing: A comparative analysis in Chronic Diseases with leprosy — A Scoping Review	Subhojit Goswami
	From Detection to Elimination: The Role of Multiplex PCR in Leprosy Control	Dr. Itu Singh
Free Paper (7 min each)	Leprosy Reactions at Diagnosis in Multibacillary Patients: Baseline Data from a WHO MB-MDT vs Rifampicin, Moxifloxacin and Clarithromycin (RMC) Trial	Dr. Sesmrun Nessa
	Impact of reaction and neuritis on mental well-being among female patients with leprosy- A case series study.	Shreyasi Dorman
05:30PM- 07:00 PM	IAL Annual General Body Meeting & Elections	120 min
07:00PM onwards	Gala Dinner: Hotel Aquila	

28/02/2026 Hall B		
Scientific Session 3: Reviewing Progress – Therapy including Drug Resistance		
02:00 PM – 03:00 PM	Scientific Session 1: Reviewing Progress – Therapy including Drug Resistance	Chairpersons Dr. Michel Kumar; Dr. Omprakash; Dr. OP Chaurasia
Lead Speaker	Newer Bactericidal Drugs and their role in achieving Zero Leprosy	Dr. HK Kar (12 min)
Invited Talk 2	Key outcome measures-based work on AMR and its impact on leprosy control in India	Dr. Swapna (12 min)
SCHOLARLY FREE PAPERS	Pattern of Drug-Resistant Mycobacterium leprae in Endemic Regions of India	Rahul Sharma (7 Min)

(7 MIN EACH)	Incomplete Nasal Clearance of Viable Mycobacterium leprae After a Single Dose of Rifampicin: Evidence from a Prospective Cohort Study	R.P. Turankar (7 Min)
	Systematic Documentation of Contacts in Leprosy Post-Exposure Chemoprophylaxis with Single Dose Rifampicin Improves Contact Tracing and Screening Tiruvallur district, Southern India, December 2023 – April 2024	Sridevi Govindarajan(7 min)
	Experience in Management of Rifampicin Resistant Cases of Leprosy	Dr. Aman Cooper(7 min)
	Pediatric Leprosy as an Indicator of Ongoing Transmission in the Community	Dr. Sangita Singh(7 min)
Scientific Session 4: Reviewing Progress – Epidemiology & Programmatic Developments		
03:00 PM – 04:00 PM	Scientific Session 2: Reviewing Progress – Epidemiology & Programmatic Developments	Dr. AM Khan; Dr. Manjeet Pal; Dr. R.R. Madhukar
Lead Speaker	Areas of Attention to achieve NSP Targets / WHO Roadmap Milestones	Dr. Rajesh Pandey (12 min)
Lead Speaker	Post Covid surge of leprosy in urban Mumbai – experience of BLP	Dr. VV Pai (12 min)
Invited Talk 1	Implementing notification of leprosy in Tamil Nadu	Dr. T Ravidran, on Behalf of SLO, TN (12 min)
Invited Talk 2	Findings of the important study on migration and its impact on leprosy control in India	Mr. Bijoy Kumar Swain (12 min)
Free Paper (7 min)	Beyond Elimination: National Leprosy Trends with Special Focus on West Bengal	Shailja Verma
28/2/2026 Hall B Scientific Session 5 : Reviewing Progress – IADVL SIG Leprosy & NTD		
04:00 PM – 05:00 PM	Scientific Session 3: Reviewing Progress – IADVL SIG Leprosy & NTD (TBD)	Chairpersons: Dr. Rajiv Thakur; Dr. Dr. Subodh Kumar; Dr. Nita Agarwal
Lead Speaker	Involving Dermatologists in the National Program: Recommendations of LEPSYM 2026	S. Kingsley (12 min)
Follow-up Talk	IADVL SIG Leprosy viewpoint on draft suggested	Dr. Manobalan K(12 min)
	Suggested Title: Combined efforts of IADVL & IAL to support NLEP to improve leprosy care	Dr. S S Chaudhary (12 min)
	Management of Trophic ulcer from Dermatosurgeon's perspective	Dr. Aditi Snehal (12 min)
05:00 PM- 05:35 PM - Free Paper Session		
05:00 PM- 05:35 PM (7 mins each)	Free Paper Session	Chairperson: Dr. PSS Sundar Rao (35 Min), Dr. M K Sinha
	Accelerating Leprosy Elimination through Rapid Point-of-Care Molecular Diagnosis Using RLEP LAMP Assay	Dharmendra Singh
	Relationship Between Nerve function impairment and Motor Dexterity in People Affected by Leprosy Using the Jebsen–Taylor Hand Function Test:	Sneha Mahato
	Comparative Evaluation of Sequencing Methodologies for Whole-Genome Analysis of Mycobacterium leprae to Study Antimicrobial Resistance and Lineage Patterns	Pallak Sharma
	Beyond MDT-MBR: Hematological Markers Associated with Treatment Non-Response in Leprosy	Pragati Pandey
	Gendered Vulnerabilities and Strengths among Female Leprosy Patients: A Community- based Quantitative Study	Gloriya Raju
4:45 PM onwards-Hall C — 2nd National IAL PG Quiz – Screening Round Quiz Masters Dr. Manavi; Dr. Gaurav Dash; Dr. Shruthi K		

LEPCON 2026
Hall C: Day 2: 28/02/2026 AWARD PAPER SESSION

02:00 PM-03:30 PM	Award Paper Session-1 Chairpersons/Judges: Dr. Rajyalaxmi, Dr. Swastika Suvirya, Dr. Piyushkumar	Presenter
	Protean Manifestations Of Leprosy: Diagnostic And Therapeutic Challenges with Coexisting Systemic Diseases	Dr. Abhijeet Brizwasi
	Nerve Biopsy Histopathology, Nerve Biopsy Pcr and Nerve Conduction Study In Pure Neuritic Leprosy: A Cross-Sectional Study	Dr. Sreechithra C
	Comparison Of Relapse Rate And Disease Severity Among Patients With Type 2 Lepra Reaction Receiving Tofacitinib And Thalidomide Separately As An Adjuvant To Systemic Steroids: A Longitudinal Analytical Study	Dr. Rishav Sanghai
	Geriatric Leprosy In Delhi: A Three-Year City-Wide Study Exposing Hidden Barriers In Timely Detection And Disability Prevention	Dr. Parth Rathi
	Precision Immunomodulation With Tofacitinib In Chronic Recurrent Erythema Nodosum Leprosum	Dr. Yadav Keshav
	Bacteriological Profile And Antibiotic Sensitivity Pattern Of Trophic Ulcers In Leprosy Patients: A Cross-Sectional Study From A Tertiary Care Center	Dr. Jayshruti Singh
	Clinical And Histological Markers As Determinants Of Adequacy Of Multi Drug Therapy In Leprosy: A Prospective Case Control Study	Dr. Pooja Shah
	Nail Unit Alterations In Leprosy: An Onychoscopic Insight	Dr. Divya Singh
	Comparison Of Auramine-O Staining In Slit Skin Smear Against Histopathology Among Clinically Diagnosed Patients Of Leprosy- A Cross-Sectional Study:	Dr. Tanya Gupta
	Bedaquiline-Based Regimen For Multibacillary Leprosy Not Responding To Who-MDT: A Proof-Of-Concept Study	Himanshi Khera
03:30 PM- 05:00 PM-Award Paper Session-II		
03:30 PM-05:00 PM	Chairpersons/judges: One Set of Judges	
03:30 PM-05:00 PM	Chairpersons/judges:	Presenter
	Therapeutic immunotherapy with Mycobacterium indicus pranii (MIP) vaccine for recurrent erythema nodosum leprosum (ENL) among post MDT and RMM/RCM pulse therapy treated Hansens disease patients.	Dr. Saumya Raj
	Beyond Elimination: A Rural–Urban Dichotomy In The Clinical Spectrum And Disability Burden Of Leprosy In Central India — An Observational Study	Dr. Garima Khandelwal
	De Novo Histoid Leprosy: Variant Or Villain? A Hidden Threat To Eradication	Dr. Aarti Deepak Chawla
	Rising Numbers Or Better Detection Of Leprosy? A Report From Western Maharashtra	Dr. Sakshi Pansari
	Dermoscopic Evaluation Of Cutaneous Lesions Across The Spectrum Of Leprosy : A Prospective Observational Study	Dr. Shikha Kumari
	Histoid Leprosy In The Era Of Leprosy Elimination- A Case Series	Dr. Shivam Pasi
	Whole-Genome Sequencing-Based Analysis Of Mycobacterium Leprae In North India	Manjot Kaur
	Doing More With Less: Low-Dose Etanercept In Refractory Erythema Nodosum Leprosum	Dr. Akash Jaiswal
	Efficacy of Autologous Platelet-rich Fibrin Matrix in the management of Non- healing ulcers in Patients with Hansen's Disease	Dr. Tadvi Avinash

DAY 3: PROGRAMME

01st MARCH (SUNDAY), VENUE: AUDITORIUM, 'AMARKANT JHA 'AMAR' HALL, AIIMS PATNA, BIHAR

Time	Duration Session/Topic	Role Speaker/Details
National IAL Quiz (Final)		
	Chairpersons: (35 min): Dr. Ashutosh Ranjan, Dr. Anjishnu Prakash, Dr. Sudhanshu Singh	
08:00 AM – 08:30 AM **Free Paper Session (7mins each)**	Integrating Stigma Reduction into Leprosy Control Programmes: Lessons from GLRA India	Dr. Dinesh Kumar
	The Perils, Limitations and Future of Artificial Intelligence in Leprosy Care: A Retrospective Analysis Using ChatGPT	Dr. Fariz Sarshar
	Translating Prevention into Practice: A District Foot Health Model for Leprosy and Diabetes	Michael Pallapati
	Library of Leprosy Literature: From Ancient Texts to Modern Journals — A Librarian's Perspective	Shashi Ranjan Kumar
	Neuroimaging Spectrum of Central Nervous System and Brachial Plexus Involvement in Hansen's Disease: A Case Series	Dr. Divya Priyadarshi
8:30 AM – 9:30 AM	National IAL Quiz Final	Quiz Masters Dr. Anupam Das; Dr. Shruthi; Dr. Gaurav Dash; Dr. Vibhu (60 min)
Scientific Session 6 – Pathology & Immunology		
9:30 AM – 10:30 AM	Plenary Session 4 – Reviewing Progress: Pathology & Immunology	Chairpersons Dr. Lakshmi Rajan; Dr. Ravi Vikram Singh; Dr. Veerakumaran
Invited Talk 1	Importance of Pathology in Leprosy Diagnosis	Dr. Punam Prasad Bhadani (Dean, AIIMS Patna & HOD Pathology) (12 min)
Scholarly Free Paper (7 Min each)	Early Diagnosis of Malignant Change in Chronic Plantar Ulcers of Leprosy Patients	Dr. Lakshmi Rajan
	From Lens to Microscope: Histopathological Decoding in Treatment-Naïve Hansen's Disease	Dr. Manuraj S
Moderator / Panelists	Panel Discussion: Applied aspects of Immunology with implications for Diagnosis and Therapy	Moderators: Dr. Gaurav Dash. (30 min) Panelists: Dr. Itu Singh,

		Dr. S. K Tripathi Dr. Pooja Agarwal, Dr. JP Swain; Dr. Rashmi Singh, Dr. Aditi Snehal, Dr. Dependra Timshina
Scientific Session 7– RCS & Rehabilitation		
10:30 AM – 11:35 AM	Plenary Session 5 – Reviewing Progress: RCS & Rehabilitation	Chairpersons: Dr. M Ebenezer; Dr. Helen Roberts; Dr. S. Mishra (60 min)
Lead Talk	'RCS and Rehabilitation of Children with Disabilities'	Dr. S. Ananth Reddy (12 min)
Invited Talk 1	Medical Device Safety in Leprosy: An Emerging Need for Materiovigilance	Dr. Pugazenthan (12 min)
Invited Talk 2	3D Printing as an Innovative Tool for hand & foot deformity management in Leprosy Rehabilitation	Mr. Mathan Raj David (12 min)
Invited Talk 3	Cured but not recovered? The Rehabilitation gap in Leprosy Care	Dr. Sanjay Pandey (12 min)
Invited Talk 4	3D Printing as an Innovative Tool for foot deformity in Mobile leprosy clinics in Tamil Nadu	Dr. Manivannan (12 min)
Tea Break (11:35 to 11.45 AM)		
Scientific Session 8– Social Aspects (incl. Rehabilitation)		
11:45 AM – 12:45 PM	Plenary Session 6 – Reviewing Progress: Social Aspects including rehabilitation in Leprosy	Chairpersons Dr. Nikita Sarah; Dr. Nita Agarwal, Dr. Santosh Rathod
Lead Talk	Developing Best Practices in Leprosy Care	Dr. Joydeepa Darlong (12 min)
Invited Talk	Gaps in care of people with lived experiences: APAL perspective	APAL Representative (12 min)
Invited Talk	Addressing gaps and unmet needs in leprosy rehabilitation Talk	Dr. Jerry Joshua (12 min)
25 min Open Forum: Q & A		
Closing Plenary & Valedictory		
12:45 PM – 01:15 PM	30 min	Closing Plenary & Valedictory — —
Lunch & Departure		
01:30 PM onwards	—	Lunch & Departure — —

01 Mar 2026 – Day 2 (Scientific Sessions) HALL B

Scientific Session 9– Leprosy in Special Populations		
		Chairpersons: Dr. Archana Lokhande, Dr. MD. Mobarak Hussain, Dr. Irene Mathews
Free Papers 8:00AM-8.30AM	Advancing Leprosy Research through Innovative Animal Models: Bridging Translational Gaps for Novel Therapeutics in the Post-Elimination Era	Dr. Amit Kumar Singh
	Multimorbidity In Leprosy: A Retrospective Study	Sneha Hembrom
	Efficacy of Molecular Point-of-Care Testing (POCT) in the Early Diagnosis of Leprosy.	Dr. Vinay Kumar Pathak
	Study of Diagnostic Efficacy of Fite-Faraco Stain in Histopathology of Slit-Skin Smear Negative Borderline Tuberculoid Leprosy	Dr. Monica Thakur
8.30AM - 9.30AM	2nd National IAL Quiz on Leprosy	
Scientific Session 10– Leprosy in Special Populations		
09:30 AM – 10:30 AM Move as 9.30	Chairpersons	Maj Gen. Dr. Ashok Jaiswal, Dr. RRK Rahul Dr. PP Prabhakar
Invited Talk 1	Leprosy and Pregnancy	Dr. Pankaj Tiwari (12 min)
Invited Talk 2	Leprosy in Immunosuppression	Dr. Shreeparna Deb (12 min)
Invited Talk 3	Childhood Leprosy	Dr. Irene Mathews (12 min)
Invited Talk 4	Leprosy in Geriatric Population (incl. post-RFT issues)	Dr. Krishna Deb Burman (12 min)
Invited Talk 5	Immunotherapy in Leprosy: Current Update and Future Outlook	Dr. Rakhee Gupta (12 Min)
Scientific Session 11– Free-Paper Session		
10:30 AM – 11:30 AM (7 Min Each)	Scientific Session 5 – Reviewing Progress – Free-Paper Session	Chairpersons: Mr. Rajnikant Singh, David Prakash, Dr. Manoj Ram
	Clinical Dilemmas in the Management of Steroid-Induced Cataracts in Leprosy Patients: A Case Series from a Mission Hospital	Dr. Saurabh Deshmukh
	Determinants of Disability Among Leprosy Patients Attending a Tertiary Care Hospital in North India	Dr. Neha Mishra
	A Clinical Outcome-Based Evaluation of Conventionally Available Materials vs Polymer Filament in the Fabrication of Finger Gutter Splints	Dr. Kishore Kumar

	Profile of Grade 2 Disability Among New Cases Presenting at Tertiary Hospitals	Dr. Elwin Roja
	Streptococcus dysgalactiae subsp. equisimilis as an Emerging Secondary Pathogen in Leprosy Foot Ulcers: A Comparative Study Using Conventional Culture and NGS	Dr. Kumar Ebineshan
	Dapsone-Induced Adverse Reactions: Retrospective Descriptive Analysis of 34 Cases from South Indian District-Erode	Dr. T. R. Ravindran
	RLEP-PCR–based screening of nasal samples for the detection of Mycobacterium leprae in leprosy patients and healthy humans from Uttar Pradesh, North India	Ajay Vir Singh
Scientific Session 12– Free-Paper Session		
11:30 AM – 1:00 PM	Scientific Session 6 – Reviewing Progress	Chairpersons: Dr P.C Das, Dr. Gaurav Dash, Dr. Rajiv Thakur
Lead Talk:	PEP++ Study:	Dr. Ashok Agarwal (12 Min)
Invited Talk	Tracking AMR over Ten Years in a tertiary care centre in South India: Is there a cause for concern?	Ann Miriam Jose
Free Papers (7 Min Each)	Mycobacterium indicus pranii as Adjunct Immunotherapy in Leprosy: Clinical outcomes from a Retrospective Case Series	Dr. Chethan CM
	Exploring the Atypical Presentations of Leprosy: A Retrospective Cross-Sectional Study	Dr. Namrata Dahe
	Comparative Study to Determine Sensitivity and Specificity of Light Microscopy vs Fluorescence Microscopy for AFB Detection in Slit Skin Smears in patients of borderline lepromatous and lepromatous leprosy.	Dr. Shibani Ranjan
	Ocular changes in leprosy: a cross-sectional study	Dr. Komal kumari
	Clinico-epidemiological study of Hansen's disease in pediatric age group	Dr. Ankita

	Childhood Hansen's disease in central India: a Clinico-epidemiological study highlighting ongoing transmission	Dr. Dewashish Ghughe
	Clinical, Therapeutic, and Stigma-Related Challenges in Lepromatous Leprosy with the Emerging Role of Apremilast in Type 2 Reaction	Dr. Priya
	Clinical, Epidemiological and Histopathological Profile of Histoid Leprosy: A Case Series from a Tertiary Care Centre in Chhattisgarh	Dr. Shashi Pandey

Message from the ILA President

It is a privilege to convey my warm greetings to the organizers and delegates of the LEPCON 2026: 33rd Biennial IAL National Conference being held at AIIMS Patna from 27 February to 1 March 2026, Patna. The theme, “Leprosy Free India – Moving Closer; Reviewing Progress,” is both timely and forward-looking. India has achieved significant progress in leprosy control, yet challenges remain in early case detection, prevention of disability, management of reactions, and stigma reduction. This meeting provides an important platform to review achievements, address gaps, and strengthen collaborative efforts. The International Leprosy Association appreciates the dedication of the Indian leprosy community and congratulates the organizers for bringing together clinicians, researchers, and field workers to advance the shared goal of a leprosy-free India. With best wishes for a successful conference.

With best regards,

P Narasimha Rao, MD, D.D, PhD

President, **International Leprosy Association (ILA)**

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Message from the IAL President

It is my privilege, as President of the Indian Association of Leprologists, to present this message for the e-Abstract Book of LEPCON 2026 – The 33rd Biennial Conference of Leprosy, Organised by IAL, to be held from 27th February to 1st March 2026 at AIIMS, Patna. Leprosy continues to be a public health concern in several parts of the world despite the availability of effective multidrug therapy. Although many countries, including India, have achieved elimination as a public health problem at the national level, transmission persists in pockets of endemicity. India still accounts for a significant proportion of global new case detections. The continued occurrence of child cases, delayed diagnoses, grade-2 disabilities, and stigma highlight the need for sustained vigilance, early detection, disability prevention, and strengthened research to interrupt transmission. LEPCON 2026 is convened at a pivotal moment to strengthen leprosy services and research. The IAL remains committed to scientific excellence, improved clinical care, and interdisciplinary collaboration. This conference provides a vital platform for experts to exchange knowledge and build partnerships. The scientific program spans advances in diagnostics, therapeutics, antimicrobial resistance, immunopathogenesis, reaction management, disability prevention, chemoprophylaxis, and community interventions, while addressing stigma reduction and psychosocial support. The e-Abstract Book stands as a testament to the dedication and scholarly contributions of our colleagues. I commend all authors, particularly our young investigators and postgraduate students, for their valuable work and commitment to improving patient outcomes and strengthening programs.I extend my sincere appreciation to the Organising and Scientific Committees of LEPCON, especially the dynamic leadership of Dr Abhishek Jha, Chair of the Organising Committee, Dr Vikas Shankar, Organising Secretary and Dr Swetalina Pradhan, the Scientific Chair, for their meticulous planning and dedication. I wish to also thank the IAL EC – Dr P Narasimha Rao, Dr Santosh Rathod, and Dr K Rajyalaxmi for their unstinting support to the Association and to me. I warmly welcome all delegates to Patna. Let us reaffirm our shared resolve—toward zero transmission, zero disability, and zero stigma—and work together toward a leprosy-free world. With best wishes for a successful LEPCON 2026.

Best Regards,

Dr Sujai K Suneetha

President

Message from the Executive Director and CEO

It is my privilege to welcome all delegates to the 33rd Biennial National Conference of Leprosy (LEPCON 2026), organized by the Indian Association of Leprologists at AIIMS Patna from 27th February to 1st March 2026, in collaboration with the Department of Dermatology, AIIMS Patna.

Leprosy remains a chronic disease associated with significant stigma and disability due to nerve involvement and loss of sensation. However, it is fully curable with timely treatment, and appropriate self-care and protective measures can prevent complications. I am pleased to note the participation of over 300 delegates from across the country, reflecting our shared commitment to advancing knowledge, improving patient care, and reducing stigma.

I am confident that the scientific deliberations will enrich understanding of the clinical and public health aspects of leprosy. I congratulate the Organizing and Scientific team, including Dr. Abhisek Kumar Jha, Dr. Vikas Shankar, Dr. Swetalina Pradhan, and the entire Department of Dermatology, AIIMS Patna, and wish the conference great success. As Head of the Institute, AIIMS Patna, I extend my full support toward its successful conduct and our collective goal of a leprosy-free society.

With warm regards,

Prof. (Brig.) Dr. Raju Agarwal

Executive Director & CEO

AIIMS Patna

Prof. (Brig.) Dr Raju Agarwal / प्रो. (ब्रिग.) डॉ. राजू अग्रवाल
Executive Director / कार्यपालक निदेशक
All India Institute of Medical Sciences, Patna
अखिल भारतीय आयुर्विज्ञान संस्थान, पटना

Message from the Patron

It gives me great pleasure to extend my warm greetings to all delegates, faculty members, researchers, and students attending the 33rd Biennial National Conference of the Indian Association of Leprologists — LEPCON 2026.

This conference represents not merely an academic congregation, but a reaffirmation of our shared commitment to advancing the science, service, and social responsibility associated with leprosy care. At a time when we are moving steadily toward elimination goals, it is imperative that our clinical acumen, research initiatives, and public health strategies evolve in equal measure. LEPCON 2026 serves as an important platform to critically examine progress, address emerging challenges such as antimicrobial resistance and reactions, and explore innovations in diagnostics, therapeutics, and rehabilitation.

I am particularly encouraged by the enthusiastic participation from across the country, reflecting the vitality of our specialty and the dedication of professionals working at every level — from tertiary academic centres to peripheral health services. The active engagement of young researchers and postgraduate students is especially heartening, as they represent the future leadership of leprosy care in India.

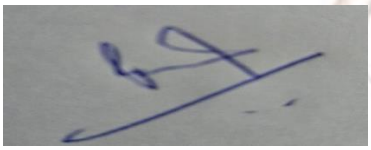
The scientific program has been thoughtfully curated to ensure depth, relevance, and practical applicability. I am confident that the deliberations, panel discussions, and scholarly presentations will stimulate meaningful dialogue and foster collaborations that extend well beyond the conference halls.

I commend the Organising Committee and the Scientific Committee for their meticulous planning and tireless efforts in bringing this event to fruition.

May this conference inspire renewed dedication toward early diagnosis, comprehensive management, disability prevention, rehabilitation, and above all, the eradication of stigma associated with the disease.

I wish LEPCON 2026 grand success and every delegate a productive and enriching academic experience.

With best wishes,



Prof. Dr. P.K Roy

Patron, LEPCON 2026

Message from the Organizing Chairperson

It is a great honor and privilege for me and my team to host the 33rd Biennial National Conference of the Indian Association of Leprosy — LEPCON 2026 — at AIIMS Patna. On behalf of my team, I express my sincere gratitude to the Executive Committee of the Indian Association of Leprosy for entrusting us with the responsibility of organizing this prestigious biennial conference.

I extend a very warm welcome to all delegates, esteemed faculty members, students, and stakeholders working in the field of leprosy. Your participation is invaluable, and I am confident that the scientific discussions and interactions during this conference will contribute significantly to advancing knowledge, collaboration, and patient care.

I convey my best wishes to both the organizing committee and the scientific committee for their dedication and hard work, and I wish the conference great success.

I would also like to place on record my heartfelt thanks to the administration of AIIMS Patna, especially the Director, for his constant support and for providing us the opportunity to host this conference in collaboration with the Department of Dermatology at AIIMS Patna.

Let us come together to share experiences, exchange ideas, and reaffirm our collective commitment toward improving leprosy care and research.

With warm regards,

Dr. Abhishek Kumar Jha

Organizing Chairperson, LEPCON 2026

Message from the Organizing Secretary

It gives me immense pride and heartfelt pleasure to welcome you to the 33rd Biennial National Conference of the Indian Association of Leprosy — LEPCON 2026, hosted at AIIMS Patna.

LEPCON 2026 is more than a scientific gathering. It is a collective reaffirmation of our commitment to eliminate stigma, strengthen clinical excellence, and advance meaningful research in leprosy and related disciplines. Each delegate, faculty member, researcher, postgraduate student, and healthcare professional present here represents dedication toward compassionate care and evidence-based practice.

As Organizing Secretary, I warmly welcome you to this national platform where ideas will be exchanged with clarity, research will be discussed with rigor, and experiences will be shared with honesty. I am confident that the scientific sessions, panel discussions, case deliberations, and interactive forums will inspire fresh perspectives and practical solutions that directly impact patient care across the country.

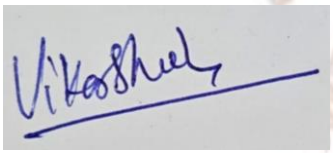
Leprosy care demands not only knowledge but empathy, not only protocols but persistence. Through this conference, we aim to foster collaboration between clinicians, academicians, public health experts, and young researchers who carry the torch forward. May this meeting strengthen professional bonds, encourage innovation, and renew our resolve toward early diagnosis, disability prevention, rehabilitation, and social reintegration.

I also extend my warmest wishes for a pleasant stay in Patna. This historic city, rooted in the legacy of knowledge and resilience, welcomes you with sincerity and hospitality. I hope you find time to experience its culture while engaging deeply in the academic sessions.

Let LEPCON 2026 be remembered as a conference that not only discussed science but strengthened purpose.

Wishing every delegate a rewarding academic experience and a truly memorable conference.

With warm regards,



Dr. Vikas Shankar

Organizing Secretary,

LEPCON 2026.

Message from the from the Hon. Secretary, IAL

On the Occasion of LEPCON 2026

It gives me immense pleasure to witness the overwhelming response to LEPCON 2026 – the 33rd Biennial National Conference of Leprosy. The continued enthusiasm shown by our members in registering and making travel arrangements reflects the strong academic commitment and solidarity within our fraternity.

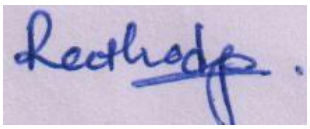
We are proud to share that the conference has already received over 300 registrations, along with 65 scientific papers and 40 E-posters, highlighting the vibrant research activity and dedication to advancing leprosy care in India.

Equally encouraging is the active participation and representation from Government authorities, including State and District Leprosy Officers, which underscores the collaborative spirit between academia, clinicians, and public health leadership. I take this opportunity to express my sincere gratitude to our respected President, Dr. Sujai Suneetha, for his inspiring leadership and constant encouragement. I also extend my heartfelt thanks to our Past President, Dr. P. N. Rao, for his continued guidance and invaluable support. My appreciation to our Treasurer, Dr. Rajyalaxmi K, for her meticulous oversight and unwavering commitment to the Association.

I would also like to acknowledge the excellent guidance provided by the Central Scientific Committee in shaping a robust and high-quality academic program. A special word of thanks to the dedicated Organising Team of Bihar — Dr. Abhishek Jha, Organising Chairperson; Dr. Vikas Shankar, Organising Secretary; and Dr. Swetalina Pradhan, Scientific Chairperson — whose tireless efforts and meticulous planning are ensuring that LEPCON 2026 will be a memorable and impactful event.

I sincerely thank all members for their continued interest and support. I look forward to welcoming you all for a scientifically enriching and professionally rewarding LEPCON 2026.

With warm regards,



Dr. Santosh Rathod

Secretary

Indian Association of Leprologists

Message from the Scientific Chairperson

It gives me immense pleasure to warmly welcome all delegates, faculty members, postgraduate students, research scholars, scientists, and everyone working in the field of leprosy to the 33rd Biennial National Conference of the Indian Association of Leprosy — LEPCON 2026 — being held at AIIMS Patna.

This conference brings together experts and learners who have assembled with a shared commitment to exchange knowledge, share experiences, and learn from one another to advance the understanding and management of leprosy.

The scientific program has been thoughtfully designed to cover a wide spectrum of important and emerging topics, including plenary sessions reviewing the progress in leprosy, recent diagnostic advances, chemoprophylaxis, antimicrobial resistance, newer therapeutic approaches, immunopathology of leprosy along with the evolving landscape of leprosy in the post-COVID era. We have also incorporated innovative and engaging formats such as debates on various topics to encourage critical thinking and meaningful dialogue.

To further enrich the conference, there are focussed sessions like Second National Leprosy Quiz, along with multiple sessions aimed at actively engaging postgraduate students and young scientists. Participants will have ample opportunities to contribute through free papers, award papers, and poster presentations, fostering academic exchange and collaboration.

On behalf of the entire scientific committee, I express my heartfelt gratitude to all stakeholders and participants whose enthusiasm and contributions will make the scientific deliberations insightful, stimulating, and impactful.

Thank you once again for your presence and participation. I wish you a rewarding and enriching conference experience.

With warm regards,

Swetalina Pradhan

Dr. Swetalina Pradhan

Scientific Chairperson, LEPCON 2026

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AWARD PAPER PRESENTATION

AP:01

Protean manifestations of leprosy: Diagnostic and therapeutic challenges with coexisting systemic diseases

Abhijeet Brizwasi

INTRODUCTION: Leprosy, with its diverse clinical spectrum, poses diagnostic challenges, especially when complicated by comorbidities. Rare co-infections with tuberculosis or coexistence with systemic lupus erythematosus (SLE) and HIV can alter typical presentations. Immunosuppression in these conditions further obscures leprosy manifestations, demanding careful differential diagnosis and highlighting the need for heightened clinical awareness in endemic regions. **CASE SERIES**: Case 1: A 14-year-old girl with juvenile systemic lupus erythematosus (JSLE) and lupus nephritis, on immunosuppressive therapy, developed erythematous nodules on her legs. Skin biopsy confirmed borderline lepromatous leprosy, and she was initiated on WHO Multi Drug Therapy – Multibacillary (MDT-MB) alongside lupus treatment. Case 2: A 30-year-old male presented with hyperpigmentation, peripheral neuropathy, scrotal ulcer, and muscle wasting. Skin biopsy confirmed lepromatous leprosy, and chest X-ray revealed pleural effusion. He was diagnosed with tuberculosis and leprosy and initiated on Anti-Tubercular Therapy (ATT) and MDT-MB. Case 3: A 33-year-old woman with recurrent fever, headaches, weight loss, and multiple painless ulcers had infiltrated earlobes and lymphadenopathy. MRI showed a right parietal tuberculoma, and slit skin smear and biopsy confirmed lepromatous leprosy. She was started on ATT and MDT-MB. Case 4: A 36-year-old HIV-positive male on Anti-Retroviral Therapy (ART) developed erythematous plaques, neuropathy, and neuritis. Skin biopsy confirmed leprosy. He was started on MDT-MB and systemic steroids. Case 5: A borderline lepromatous leprosy patient with type 1 lepra reaction developed penile swelling, phimosis, and urinary retention. Slit skin smear confirmed leprosy, and treatment with ROM therapy and steroids led to resolution. **DISCUSSION**: Leprosy can present with diverse and atypical manifestations, especially in the presence of comorbidities like HIV, SLE and tuberculosis. Uncommon presentations can delay diagnosis. Immunosuppression further alters clinical presentation. Early recognition, slit skin smear, skin biopsy and appropriate treatment are crucial to prevent complications and ensure optimal patient outcomes in endemic regions.

AP:02

Nerve Biopsy Histopathology, Nerve Biopsy PCR and Nerve Conduction study in Pure Neuritic Leprosy: A Cross-sectional study

Sreechithra C

INTRODUCTION: Pure Neuritic Leprosy (PNL) is characterized by exclusive nerve involvement without skin lesions, making diagnosis difficult due to lack of specific clinical markers. Nerve biopsy remains the gold standard for diagnosis but has low sensitivity. Auxiliary diagnostic techniques include skin/nasal mucosa biopsy, FNAC, PCR, immunohistochemistry, HRUS, MRI and nerve conduction study (NCS). A combination of

these tests is vital for early diagnosis, timely management, and prevention of disability. **OBJECTIVES**: To describe concordance between the findings of Nerve biopsy Histopathology, Nerve biopsy PCR and NCS of peripheral nerves in clinically diagnosed cases of PNL. **METHODOLOGY:** A 2-year cross-sectional study where NCS of peripheral nerves were done for 40 clinically diagnosed PNL patients. Nerve biopsy of a pure sensory nerve was performed under LA and sent for HPE and PCR for *M. leprae* 16S ribosomal RNA and RLEP gene detection. **RESULTS**: NCS revealed sensory-motor axonal neuropathy in 13 patients and pure sensory axonal neuropathy in 27 patients. Histopathology revealed no definitive features in any patients, suggestive features in 40% (16) and was normal/equivocal in 60% (24) of the cases. 80% (32) were found to be PCR positive for *M. leprae*. Cohen's Kappa values representing agreement between these modalities ranged from fair (κ=0.3) between histopathology & PCR, moderate (κ=0.43) between histopathology and NCS and moderate (κ=0.57) between PCR & NCS. Overall, substantial agreement (Fleiss' Kappa=0.63) was demonstrated between the 3 modalities in the diagnosis of PNL. **CONCLUSION**: Combining Nerve biopsy histopathology, PCR and NCS facilitates diagnosis of PNL in doubtful cases. Substantial overall agreement was observed between the 3 modalities, underscoring the need for a multimodal diagnostic strategy. Out of all 3 modalities studied, PCR is the most reliable technique providing conclusive results with 80% positivity.

AP:03

Comparison of Relapse Rate and Disease Severity among patients with Type 2 Lepra Reaction receiving Tofacitinib and Thalidomide separately as an adjuvant to systemic steroids: A Longitudinal Analytical Study

Dr. Rishav Sanghai

BACKGROUND: Erythema nodosum leprosum (ENL) is a severe immune-mediated complication of multibacillary leprosy requiring prolonged immunosuppression. Steroid-sparing agents are essential to reduce relapse and treatment-related morbidity. **METHODS**: This longitudinal analytical observational study compared outcomes in patients with ENL treated with prednisolone plus thalidomide (Group A; n=30) and prednisolone plus tofacitinib (Group B; n=31). Patients were followed for 6 months. Primary outcomes included relapse rate and ENLIST ENL Severity Score (EESS). Secondary outcomes were neutrophil–lymphocyte ratio (NLR), Dermatology Life Quality Index (DLQI), steroid dependency, and adverse events. Inter-group comparisons and longitudinal analyses were performed using non-parametric tests. Correlations between NLR, EESS, and DLQI were assessed using Spearman's rank correlation. **RESULTS**: Relapse occurred in 36.7% of patients in Group A and 71.0% in Group B (p=0.007). The mean number of relapses was significantly lower in Group A (0.70±1.06 vs 1.84±1.51; p=0.002). At 3 and 6 months, Group A demonstrated significantly lower NLR values (p=0.017 and p<0.001, respectively). DLQI and EESS scores improved in both groups; however, sustained improvement was more consistent in Group A. Steroid-free status at 6 months was achieved in 93.3% of Group A compared with 58.1% of Group B (p<0.001). NLR showed a positive correlation with EESS (ρ=0.269, p=0.018) and DLQI (ρ=0.604, p<0.001) at 6 months. Adverse events were predominantly mild to moderate, with differing safety profiles between groups. **CONCLUSION**: Thalidomide demonstrated superior relapse prevention and steroid-sparing efficacy

compared with tofacitinib in ENL. NLR correlated with disease severity and quality of life, supporting its role as a useful biomarker for monitoring disease activity during follow-up.

AP:04

Geriatric Leprosy in Delhi: A Three-Year City-Wide Study Exposing Hidden Barriers in Timely Detection and Disability Prevention

Dr. Parth Rathi

INTRODUCTION: Leprosy persists in India despite major programmatic gains under the National Leprosy Eradication Programme (NLEP). With rising longevity, older adults (≥60 years) represent a neglected subgroup at heightened risk of diagnostic delay, advanced bacterial load, and irreversible disability. These vulnerabilities, compounded by stigma and access barriers, threaten to reverse elimination gains and remain poorly characterised. **OBJECTIVES** To delineate the demographic, clinical, and psychosocial profile of geriatric leprosy patients in Delhi, compare outcomes with younger cohorts, and identify programmatic blind spots in timely detection and disability prevention. **METHODS** We retrospectively analysed 3,193 newly registered cases (April 2022–March 2025) across Delhi's major centres. Geriatric cases (≥60 years) were compared with non-geriatric cases for demographic, clinical, and disability parameters. Psychosocial and access-related barriers were extracted from clinical records and available patient interviews**. RESULTS** Of 3,193 patients, 142 (8.9%) were geriatric—the largest city-wide geriatric leprosy cohort reported from India. Compared with younger cohorts, they had significantly higher mean bacterial index (3.8 vs. 3.2, $p=0.01$), longer diagnostic delay (14.6 vs. 9.1 months, $p<0.001$), more grade 2 disability (18.3% vs. 10.9%, $p=0.004$), and higher mortality (10.5% vs. 7.3%, $p=0.02$). Key barriers included dependence on caregivers for mobility, financial constraints, digital exclusion from tele-health, and persistent stigma delaying disclosure. Despite comparable treatment initiation, late presentation drove excess disability and death. **CONCLUSIONS** This first city-wide analysis demonstrates that India's elderly face a disproportionate and preventable burden of leprosy-related disability and mortality. Findings expose systemic gaps beyond clinical care, rooted in psychosocial and structural barriers. Incorporating age-sensitive screening, caregiver-inclusive education, and community rehabilitation into NLEP is essential. These lessons are globally relevant, offering a replicable framework for WHO's roadmap to zero leprosy by 2030 and safeguarding dignity and disability-free survival for ageing populations worldwide.

AP:05

Precision Immunomodulation with Tofacitinib in Chronic Recurrent Erythema Nodosum Leprosum

Yadav Keshav

INTRODUCTION: Chronic recurrent erythema nodosum leprosum (ENL) poses a therapeutic challenge, frequently necessitating prolonged high-dose corticosteroids with many adverse effects. Tofacitinib, a JAK1/3 inhibitor, offers targeted immunomodulation by interrupting key cytokine signalling pathways, (like IL-2, IL-6, TNF-alpha, IFN-gamma, T-cell proliferation and differentiation) implicated in ENL pathogenesis. **OBJECTIVE:** To evaluate tofacitinib's efficacy and safety as a steroid-sparing agent in steroid-dependent chronic recurrent ENL. **METHODOLOGY:** This study was done on patients with borderline lepromatous or

lepromatous leprosy and history of chronic recurrent ENL at a North Indian tertiary care center. Its severity was assessed using the ENLIST ENL Severity Scale (EESS). Tofacitinib was initiated at 5 mg twice daily along with standard prednisone dose, increased to 15mg/day and 20mg/day on subsequent follow-ups at 2 weeks interval, with tapering prednisone based on response (≥5-point EESS reduction). Tofacitinib also later reduced after ENL control. **RESULTS:** 10 patients (mean age 41.3± 8.3 years; 8M/2F) with chronic, recurrent ENL were assessed in this study, in which mostly (70%) were of LL type and on standard MDT. 3 patients were post RFT. At 6-month follow-up, 5 patients (50%, Excellent responders) achieved complete steroid withdrawal. In these, favourable improvement in EESS, leading to early prednisone dose reduction was noted; maintained ENL remission without or low-dose tofacitinib in 2 and 3 patients respectively. 20% achieved partial response, maintaining on low dose prednisone and tofacitinib, while 2 patients didn't improve initially, stopped tofacitinib, hence shifted to alternatives, and 1 was lost to follow-up. Excellent responders demonstrated a mean EESS reduction of -10±2.02 points (-86.2%±17.5%; $p < 0.05$). Adverse events were mild and transient, with LFT elevation in 2 and mild hyperlipidemia in 3 patients. **CONCLUSION:** Tofacitinib exhibits promising steroid-sparing potential in chronic, recurrent ENL management, with EESS improvement and favorable safety profile. Early EESS response predicts long-term outcomes, enabling personalized dose optimization. These findings warrant larger studies and randomized controlled trials to establish definitive efficacy, optimal dosing, and long-term safety.

AP:06

Bacteriological Profile and Antibiotic Sensitivity Pattern of Trophic Ulcers in Leprosy Patients: A Cross-Sectional Study from a Tertiary Care Center

Dr. Jayshruti Singh

BACKGROUND

Trophic ulcers are a common and debilitating complication of leprosy, frequently complicated by secondary bacterial infection, leading to delayed healing, deformity, and limb loss. Knowledge of the prevalent aerobic and anaerobic organisms and their antibiotic sensitivity is crucial for early and effective management, especially in resource-limited settings. **OBJECTIVES** To identify the aerobic and anaerobic bacterial isolates from trophic ulcers in leprosy patients and to determine the antibiotic sensitivity pattern of aerobic isolates. **METHODS** This institution-based cross-sectional study was conducted over a period of one years in a tertiary care center. One hundred thirty-seven clinically diagnosed leprosy patients with trophic ulcers were included. Samples were collected from the deeper part of the ulcer after proper cleaning. Aerobic cultures were performed in all patients, while anaerobic cultures were done in selected cases. Antibiotic sensitivity testing for aerobic isolates was carried out using the Kirby–Bauer disc diffusion method following standard guidelines. **RESULTS** Aerobic bacterial growth was observed in 88% of cases. The most common aerobic isolate was Staphylococcus aureus (37.7%), followed by Pseudomonas aeruginosa (22.6%), Proteus mirabilis (15.1%), Escherichia coli (13.2%), and Klebsiella species (9.4%). Maximum overall sensitivity was noted with amikacin (93.1%) and linezolid (89.6%), while maximum resistance was seen with cotrimoxazole (58.6%) and co-amoxiclav (51.7%). Anaerobic organisms were isolated in 44.7% of cases, with Peptococcus being the most common. **CONCLUSION** Secondary bacterial infection is common in leprosy-associated trophic ulcers. Staphylococcus aureus is the predominant pathogen. Levofloxacin , Ofloxacin , Amikacin, Linezolid, Vancomycin appear to be effective empirical options, whereas Gentamicin, Cotrimoxazole and Co-amoxiclav show high resistance. Early bacteriological evaluation and appropriate antibiotic therapy can reduce morbidity and prevent limb-threatening complications. **KEYWORDS:** Leprosy, trophic ulcer, bacterial infection, antibiotic sensitivity, anaerobic culture.

AP:07

Clinical And Histological Markers As Determinants Of Adequacy Of Multi Drug Therapy In Leprosy: A Prospective Case Control Study

Dr. Pooja Shah

INTRODUCTION:
Currently, due to lack of objective parameters, patients are released from treatment (RFT) solely based on completion of 12 month of MB MDT in 18 months which discounted a significant proportion of patients who continue to show clinical and histological signs of disease necessitating prolongation of MDT. **AIMS AND OBJECTIVES:** To assess clinical and histological cure post RFT to substantiate need for prolongation of anti-leprosy treatment beyond 12 months of treatment. **MATERIALS AND METHODS:** This was a case control prospective study including all leprosy patients attending the dermatology OPD of a Tertiary Care Hospital for a period of 18 months. Patients who showed persistent clinical and histological activity at time of completion of regular MDT were included in the study. A decrease in Granuloma Fraction by 80% from baseline was considered as histological cure. Patients with persistent/new lesions after completing ≥ 12 months of WHO-MDT-MBR and persistent positive/increasing value of the morphological index (MI) and a 2-log increase in the bacteriological index (BI) after ≥ 12 months of WHO-MDT-MB were considered clinically non - responsive. **RESULTS AND DISCUSSION:** Out of 43 patients, 19 (44%) needed treatment post RFT. Of them, 8 (18.6%) were clinically and 11 were histologically non responsive to the standard MDT. Of those, histologically non responsive 11(25.58%), 6(14%) patients showed lymphohistiocytic infiltration/epithelioid/tuberculoid granuloma and 5(11.6%) showed histiocyte and foamy macrophage collection/macrophage granuloma. **CONCLUSION:** The study highlights that continued clinical cure and successful decrease in granuloma fraction are important parameters to study the efficacy of MDT. **KEY WORDS:** Clinical cure, Histological cure, MDT **CONFLICT OF INTEREST:** Nil

AP:08

Nail unit alterations in leprosy: an onychoscopic insight

Dr. Divya Singh

INTRODUCTION: Leprosy is a chronic granulomatous disease affecting skin and peripheral nerves, leading to trophic and vascular changes involving the nail unit. While clinical nail alterations are recognized, onychoscopic evaluation in leprosy remains limited. Onychoscopy allows magnified visualization of subtle nail changes that may not be apparent on routine examination and may assist in early detection of trophic alterations. This study aimed to evaluate nail unit changes in leprosy patients using onychoscopy and compare them with matched controls. **MATERIALS AND METHODS**: This cross-sectional case–control study included 100 leprosy patients (age 12–65 years; disease duration 6 months–5 years) who had completed at least 3 months of multidrug therapy and 100 age- and sex-matched controls. All fingernails were examined using Dermoscope under polarized and non- polarized modes. Nail findings were systematically recorded and compared using Pearson Chi-square test. **RESULTS**: Overall, 82% of cases exhibited one or more nail changes compared to 28% of controls (p<0.05). Common findings included punctate leukonychia, pitting, and longitudinal melanonychia. Significant associations were observed for pitting, melanonychia, transverse

lines, nail pallor, and onychauxis. Nail pallor was observed exclusively among leprosy patients. Cases also showed greater multiplicity of changes. **CONCLUSION**: Leprosy patients demonstrate a significantly higher frequency and spectrum of nail alterations. Onychoscopy serves as a valuable adjunct in identifying characteristic nail changes and may enhance comprehensive leprosy assessment and disability prevention.

AP:09

Doing more with less: low-dose etanercept in refractory erythema nodosum leprosum

Akash Jaiswal

INTRODUCTION: Erythema nodosum leprosum (ENL) is a chronic immune-mediated reaction in leprosy that often requires prolonged treatment with systemic corticosteroids and thalidomide. A subset of patients develops steroid and thalidomide dependence, characterized by recurrent flares during dose tapering and significant treatment-related morbidity. Tumor necrosis factor-α (TNF-α) plays a key role in the pathogenesis of ENL, providing a rationale for targeted biologic therapy. Evidence regarding the efficacy of low-dose etanercept in refractory ENL remains limited. **MATERIALS AND METHODS**: This prospective case series included seven patients with chronic, recurrent ENL who had received systemic corticosteroids and thalidomide for a mean duration of three months, with consistent relapse on attempted tapering. All patients were treated with etanercept 25 mg subcutaneously once weekly. Clinical evaluation was performed at baseline and at 4, 8, and 12 weeks. Treatment response was assessed using clinical parameters, including reduction in number and severity of ENL nodules, frequency of new lesion development, control of systemic symptoms (fever and neuritis), ability to taper corticosteroids, and physician global clinical assessment. Adverse events were monitored during follow-up. **RESULTS:** All seven patients demonstrated early and sustained clinical improvement, with marked reduction in ENL lesions and systemic symptoms evident by four weeks, maintained at eight and twelve weeks. New lesion formation reduced significantly, and successful corticosteroid tapering without relapse was achieved in all cases. No patient required treatment escalation or discontinuation. Reported adverse effects were mild and self-limiting, including upper respiratory tract infections, headache, and diarrhea, with no serious adverse events. **CONCLUSION:** Low-dose etanercept (25 mg weekly) appears to be an effective and well-tolerated steroid-sparing option in refractory ENL. This case series demonstrates that meaningful clinical control can be achieved with lower biologic dosing in difficult-to-treat ENL.

AP:10

Efficacy of Autologous Platelet-rich Fibrin Matrix in the management of Non-healing ulcers in Patients with Hansen's Disease

Dr Tadvi Avinash Ashok

INTRODUCTION: Chronic non-healing trophic ulcers in Hansen's disease are a major cause of morbidity and disability. Accelerating wound healing is essential for rehabilitation. Autologous platelet-rich fibrin matrix (PRFM), rich in growth factors, has shown efficacy in healing chronic ulcers. This study evaluates

therapeutic role of autologous PRFM in sixteen cases of chronic trophic ulcers in Hansen's disease. **MATERIALS AND METHODS:** 16 patients with non-healing trophic ulcers (>6 weeks duration) were enrolled. Baseline photographs and measurements of ulcer area and volume were documented at weekly intervals. Each patient received 2–3 applications of PRFM, following which ulcers were managed with regular dressings. **RESULTS:** In our study, the mean age of the subjects was 39.9 years. A total of 12 (75%) subjects were male and 4 (25%) were female. The mean percentage improvement in ulcer area was 92%, and in volume was 96% by the end of the second sitting. All ulcers healed completely within a maximum of five sittings. **DISCUSSION**: Trophic ulcers affect about 10% of leprosy patients. Rapid healing improves quality of life. PRFM, rich in growth factors, promotes tissue regeneration by enhancing angiogenesis, fibroblast activity, and epithelialization **CONCLUSION**: Non-healing ulcers pose a major therapeutic challenge to dermatologists in patients of Hansen's disease due to their chronicity and resistance to conventional therapies. They are an important cause of physical and psychological morbidity. PRFM for the treatment of trophic ulcers is a novel, feasible, safe, simple and inexpensive method.

AP:11

Therapeutic immunotherapy with Mycobacterium indicus pranii (MIP) vaccine for recurrent erythema nodosum leprosum (ENL) among post MDT and RMM/RCM pulse therapy treated Hansens disease patients.

Saumya Raj

INTRODUCTION: Hansens disease is classified by World Health Organization (WHO) among the neglected tropical disease. Erythema nodosum leprosum (ENL) or type 2 lepra reaction is an immune-mediated inflammatory complication characterized by crops of tender, evanescent, erythematous, subcutaneous nodules associated multisystem involvement leading to fever, myalgia, neuritis, orchitis, arthritis and/or lymphadenitis. Repeated episodes of ENL occurring after 28 days of stopping treatment for ENL are termed as Recurrent ENL. **OBJECTIVES**: The aim of the study is to find the efficacy of MIP vaccine in patients with Hansens disease for treatment of recurrent ENL who have completed treatment with 12 months of WHO MB MDT or PULSE ROM/RMM or PULSE RCM regimen. **METHODOLOGY:** Nine patients with active ENL at the time of presentation were part of the study. MIP vaccine (Sepsivac) was administered intradermally: 2 ml on day 0, followed by 1 ml at one and two months. ENLIST ENL Severity Score were recording at baseline, one month after the first dose, one month after the second dose and final evaluation one month after administration of third dose. Reduction or discontinuation of ENL medication (thalidomide and/or corticosteroids) that patient was already taking was assessed. **RESULTS:** The mean age of patients was 36.5 years with age group ranging between 32 to 42 years. All showed progressive improvement in ENLIST scores. 88.9% achieved ≥ 50% reduction, and 66.7% achieved remission after three doses of MIP. Eight patients were on Thalidomide at baseline; 87.50% (n=7) were able to taper therapy within 3 months. One patient was a non-responder; one was lost to follow up. One patient reported injection site erythema and induration. **CONCLUSION**: MIP immunotherapy appears to be a safe, clinically effective and thalidomide

sparing adjunct in management of recurrent ENL. The findings from our research warrant further evaluation in larger, controlled studie

AP:12

Beyond elimination: a rural–urban dichotomy in the clinical spectrum and disability burden of leprosy in central india — an observational study from a tertiary care centre

Dr. Garima Khandelwal

INTRODUCTION: Despite achieving elimination at the national level, India continues to shoulder the largest global burden of leprosy. Behind epidemiological statistics lie delayed diagnoses, preventable deformities, and persistent rural–urban inequities. Madhya Pradesh, with its mixed demographic landscape, offers a crucial lens to examine whether elimination has translated into equitable disease control. This study explores the rural–urban differences in clinical spectrum and disability among patients presenting to a tertiary care hospital in Indore. **MATERIALS AND METHODS:** A prospective observational study was conducted at MY Hospital, Indore, from April 2025 to January 2026. All newly diagnosed leprosy patients were enrolled. Demographic details (rural vs urban residence), Ridley–Jopling classification (PB vs MB), and WHO disability grading were recorded. **RESULTS:** Among 92 patients diagnosed during the study period, 59 (64%) belonged to rural areas and 33 (36%) to urban settings. A striking 41 of 59 rural patients (69%) presented with multibacillary (MB) disease within the BB–BL spectrum, whereas only 8 of 33 urban patients (24%) had MB disease; the remainder were paucibacillary (PB). Disability was noted in 17 patients, with 13 exhibiting Grade 1 deformity and 4 presenting with Grade 2 deformity. Advanced spectrum disease and deformities were disproportionately observed among rural patients, suggesting delayed detection and limited access to early care. **CONCLUSION:** Our findings reveal that while leprosy may be “eliminated” statistically, its burden remains socially and geographically stratified. Rural patients continue to present with more advanced disease and higher disability, underscoring the urgent need for strengthened peripheral surveillance, early detection strategies, and targeted rural outreach in central India.

AP:13

DE NOVO HISTOID LEPROSY: VARIANT OR VILLAIN? A HIDDEN THREAT TO ERADICATION

Dr Aarti Deepak Chawla

INTRODUCTION –Histoid leprosy (HL) is a rare, multibacillary variant of leprosy, with distinct clinical, bacteriological, histopathological and immunological features. It is reported after dapsone monotherapy, drug resistance or irregular treatment and de novo. (2024 dermoscopy) **MATERIALS AND METHODS -** This prospective study was conducted at a tertiary care hospital from June 2024 to May 2025. All biopsy proven cases of HL were included. Detailed history was taken and clinical examination and investigations were performed. **RESULTS -** Out of 120 newly diagnosed leprosy cases in one year, 12 (10%) were of histoid leprosy. The male-to-female ratio was 5:1, with the highest prevalence observed in the 20 –29 year age

group. Most affected individuals were manual laborers and immigrants from Uttar Pradesh, Bihar, and Maharashtra. All patients presented with skin colored papules and nodules distributed over the face, bilateral helices of the ear, upper and lower extremities, trunk and buttocks. None of the patients had a prior history of leprosy or its treatment. Bilateral ulnar nerve thickening was the most frequent finding on nerve examination. WHO Grade 1 disability was found in 4 patients and Grade 2 in 3 patients. All patients were initiated on MB MDT and five developed Type II reaction (ENL) and neuritis following treatment initiation. **CONCLUSION-** HL, though rare, shows an increased incidence and may present de novo, as seen in our study. This observation aligns with recent studies in which all histoid patients were de novo at presentation, including series by Raheja et al. and Bangaru et al. Although HL has traditionally been classified as a variant of lepromatous leprosy, sufficiently distinct clinical, bacteriological, histopathological, immunological features and its denovo occurrence, justify its consideration as a separate entity.

AP:14

Rising numbers or better detection of leprosy? A report from western Maharashtra

Dr Sakshi Pansari

INTRODUCTION

Leprosy was eliminated as a public health problem in India in 2005, with national prevalence declining from 57.2 per 10,000 (1981) to 0.57 (2025). However, Maharashtra reports 1.12 per 10,000 as of March 2025. Persistent new cases, reactions, and deformities indicate ongoing transmission in certain regions. Tertiary care centers encounter substantial case burden, suggesting gaps in early detection. This study assessed the clinico-epidemiological profile of leprosy patients at a tertiary care hospital in western Maharashtra during the post-elimination era. **MATERIALS AND METHODS** A prospective observational study was conducted over three years (Jan 2023- Jan 2026) at a tertiary care hospital. Patients with clinical features suggestive of leprosy were evaluated using slit-skin smear and histopathology; confirmed cases were enrolled. Data on demographics, clinical spectrum, peripheral nerve involvement, reactions, and deformities were recorded and analyzed using descriptive statistics. **RESULTS** A total of 312 patients were included, with male predominance (M:F = 2.18:1). Most belonged to the economically productive age group with five pediatric cases. Multibacillary disease accounted for 93.91%, predominantly borderline spectrum. Slit-skin smear positivity was 67.95%. Peripheral nerve involvement was common. Leprosy reactions occurred in 46.30%, with Type 2 more frequent than Type 1. WHO grade 2 deformities were present in 18.59%. **CONCLUSION** Leprosy remains a significant clinical and public health concern in the post-elimination era. The relatively lower proportion of deformities suggests earlier detection despite rising case numbers. The high burden of multibacillary disease and reactions underscores the need for sustained surveillance, early diagnosis, and strengthened control measures.

AP:15

Dermoscopic evaluation of cutaneous lesions across the spectrum of leprosy : A Prospective

observational study

Shikha Kumari

BACKGROUND: Leprosy is a chronic granulomatous disease with varied clinical presentations, often leading to diagnostic delay, especially in early or atypical cases. Dermoscopy is a non-invasive diagnostic tool that can aid in the visualization of subsurface morphological features and may help in the early recognition and characterization of leprosy lesions. **OBJECTIVES** To describe the dermoscopic features of cutaneous lesions in patients with leprosy and to assess the utility of dermoscopy in identifying characteristic patterns across the leprosy spectrum. METHODS A prospective observational study was conducted over a period of six months, including 40 clinically suspected and/or histopathologically confirmed cases of leprosy. Dermoscopic examination of representative skin lesions was performed using a handheld dermoscope. Dermoscopic parameters assessed included background color, vascular patterns, scaling, appendageal structures, pigmentation, and the presence of structureless areas. Findings were correlated with clinical diagnosis and disease spectrum. **RESULTS** Among the 40 patients studied, dermoscopy revealed consistent features across the leprosy spectrum. Common findings included yellowish-orange structureless areas corresponding to dermal granulomas, loss or reduction of hair follicles and skin appendages, white shiny lines suggestive of fibrosis, and diffuse erythema or pinkish backgrounds indicating active inflammation. Hypopigmented lesions demonstrated loss of pigment network and reduced skin markings, while lepromatous lesions showed homogeneous yellow-brown backgrounds with complete appendageal loss. Scaling and xerosis were frequently observed, reflecting autonomic nerve involvement. Reactional states showed erosions, hemorrhagic dots, and increased erythema. **CONCLUSIONS** Dermoscopy provides valuable adjunctive information in the evaluation of leprosy lesions by revealing characteristic patterns related to granulomatous infiltration, fibrosis, and appendageal destruction. It serves as a useful, non-invasive tool to support clinical diagnosis, assess disease spectrum, and identify reactional changes in leprosy.

AP:16

Histoid leprosy in the era of leprosy elimination- a case series

Dr. Shivam Pasi

INTRODUCTION- Histoid leprosy is a rare variant of lepromatous leprosy characterized by cutaneous & sub-cutaneous nodules & plaques of varying sizes over normal looking skin. It has a distinctive spindle-cells histopathology with heavy bacillary load. Once associated with relapse, increasing de-novo cases in post-MDT era makes this entity far more concerning. Its clinical mimicry and epidemiological significance owning to high bacillary load make early recognition & treatment crucial. **MATERIALS & METHODS-** This case series includes six patients presenting with nodular lesions and clinical suspicion of leprosy to a tertiary care dermatology outpatient department over a period of six months. After obtaining informed consent, thorough history taking and detailed clinical examination were performed. Pre-treatment photographs were obtained, followed by slit-skin smear and skin punch biopsy for histopathological analysis and fite-faraco staining to assess the bacillary load. Additionally, dermoscopy (Dermlite DL4, 10x) done in two cases. **RESULT-** All six patients were histopathological confirmed as histoid leprosy, characterized by spindle- cell &

fibrohistiocytic proliferation with high acid-fast bacillary index on fite-faraco staining. Clinically, two patients presented with typical nodular form, three with nodular skin infiltration among them one with trans-epidermal elimination of bacilli, one with resorption of digit & one with non-healing ulcer. Unusual presentation includes one with cutaneous plaque. Dermoscopy reveals central yellow-orange structureless areas with arborizing telangiectatic vessels. **CONCLUSION-** Histoid leprosy can manifest itself in various clinical presentations. High bacillary load makes early diagnosis and prompt treatment utmost important to prevent further transmission& control of disease specially in present leprosy elimination era.

AP:17

Comparison of auramine-o staining in slit skin smear against histopathology among clinically diagnosed patients of leprosy- a cross-sectional study

Tanya Gupta

INTRODUCTION: Leprosy, caused by Mycobacterium leprae, remains a major public health challenge in resource-limited countries. Accurate diagnosis is crucial for effective management. Histopathologic is conventionally used for conforming the diagnosis of leprosy but it requires a skin biopsy which is invasive and needs an expert histopathologist for reporting. Auramine-O fluorescent staining is simpler, user-friendly, and minimally invasive. However, its comparison in slit skin smear with histopathology has not been studied in Indian population as of now. hence this study was planned to compare Auramine-O in slit skin smear against histopathology**. MATERIAL AND METHODS:** A slit-skin smears was prepared for Auramine-O staining as per standard protocol. It was observed under fluorescent microscope and graded according to the Bacteriological Index (BI).A skin biopsy were taken and sent for histopathology. Patients with clinical symptoms and PCR positive were considered gold standard. RESULTS: Auramine-O showed a sensitivity of 71.26% and histopathology showed a sensitivity of 55.17% (p-value=0.014) suggesting significant better positivity rate of Auramine-O staining in SSS compared to invasive histopathology. This difference was observed along the spectrum from lepromatous to tuberculoid pole. **CONCLUSION:** Auramine-O staining in slit skin smear represents a valuable, cost-effective diagnostic option for leprosy in peripheral and resource-limited healthcare settings compared to invasive procedure like in histopathology which requires an expert histopathologist as well.

AP:18

Bedaquiline-Based Regimen for Multibacillary Leprosy Not Responding to WHO-MDT: A Proof-of-Concept Study

Himanshi Khera

BACKGROUND: Leprosy remains a public health concern in endemic regions despite long- standing implementation of World Health Organization–recommended multidrug therapy (MDT). Although most multibacillary (MB) patients respond favourably, a subset continues to exhibit persistent clinical disease and delayed bacteriological clearance even after completion of standard treatment. These patients face ongoing infectivity, recurrent lepra reactions, and progressive nerve damage, with limited therapeutic options

beyond treatment extension. In this context, evaluating alternative agents with strong bactericidal activity and acceptable safety becomes clinically important. Bedaquiline, a diarylquinoline with potent antimycobacterial activity and a prolonged half-life, represents a promising candidate for improving outcomes in MB leprosy patients with inadequate response to MDT, providing the rationale for the present clinical study. **METHODS:** This was a prospective, randomized, blinded end point clinical study conducted in multibacillary leprosy patients who had completed 12 months of World Health Organization–recommended multidrug therapy (WHO-MDT) but continued to demonstrate persistent bacteriological positivity, defined by a high bacteriological index and/or positive morphological index. Patients were randomized to receive either a bedaquiline-based regimen for six months (bedaquiline 200 mg daily for two weeks followed by 100 mg three times weekly, rifampicin 600 mg monthly, and clofazimine 300 mg monthly followed by 50 mg daily) or extended WHO-MDT for an additional one year. Clinical assessment, slit-skin smear examination for bacteriological index, molecular assessment of viable bacillary load, histopathology (where indicated), and safety monitoring including electrocardiographic evaluation were performed at baseline and during follow-up. **RESULTS:** At one-year follow-up, patients receiving the bedaquiline-based regimen demonstrated superior clinical and bacteriological outcomes compared with those receiving extended WHO-MDT. Clinical cure was achieved in 70% of patients in the bedaquiline arm, compared with 30% in the extended MDT group. A significant reduction in bacteriological index was observed as early as six months in the bedaquiline group and was sustained at one year, despite the shorter treatment duration (6 months vs. 12 months). Molecular assessment revealed a progressive decline in viable bacillary load in both groups, with more rapid clearance in patients treated with bedaquiline. The regimen was well tolerated, with no QTc prolongation ≥500 ms and no increase in the frequency or severity of erythema nodosum leprosum reactions compared with extended MDT. Baseline drug-resistance screening confirmed wild-type folP1, rpoB, and gyrA genes in all enrolled patients. **CONCLUSION:** Bedaquiline-based therapy demonstrated meaningful clinical and bacteriological benefit with an acceptable safety profile in multibacillary leprosy patients who failed to respond adequately to standard WHO-MDT. The achievement of earlier and sustained bacillary clearance with a shorter treatment duration highlights the translational potential of bedaquiline to simplify therapy while improving outcomes in refractory disease. Together, these findings offer a strong rationale for integrating bedaquiline into optimized treatment regimens and advancing toward more effective, patient-centered strategies for leprosy management.

AP:19

Whole-Genome Sequencing-Based Analysis of Mycobacterium leprae in North India

Manjot Kaur

INTRODUCTION: Leprosy is a complex dermato-neurological and systemic disease caused by Mycobacterium leprae and Mycobacterium lepromatosis. Globally, the registered prevalence of leprosy at the end of 2021 was 133,802 cases, corresponding to a prevalence rate of 16.9 per million population. M. leprae cannot be cultured in artificial media, which severely limits conventional phenotypic drug-susceptibility testing and delays resistance detection. Consequently, current molecular resistance testing methods are time-consuming, labour-intensive, and restricted to a limited number of target genes that may

not accurately correlate with clinical outcomes. In this context, whole-genome sequencing provides a comprehensive, culture-independent approach for improved detection of drug resistance and for elucidating genomic determinants of pathogenicity, transmission, and disease progression in M. leprae. **OBJECTIVE:** To characterize genomic diversity, drug-resistance mutations, and phylogeography of M. leprae in North India **MATERIAL & METHODS**: In this prospective study, skin biopsies were collected from 32 clinically suspected leprosy patients presenting in the tertiary care centre between January 2023 and January 2024. Clinical diagnosis was established using bacillary index (BI) assessment and histopathological examination. Genomic DNA was extracted from biopsy, followed by RLEP PCR for molecular confirmation of M. leprae. Sanger sequencing of the resistance genes (gyrA, rpoB, and folP) was performed to elucidate the resistance mutations. Whole genome sequencing was performed on Illumina NextSeq 2000. Downstream bioinformatic analyses were conducted to characterize drug resistance profiles, strain typing, and phylogenetic relationships among the isolates. RESULTS: Of the 32 clinically confirmed and RLEP - positive leprosy patients, 21 (65.62%) belonged to the lepromatous leprosy (LL) spectrum, 5 (15.62%) to borderline lepromatous (BL), 3 (9.37%) were histoid, 2 (6.25%) borderline tuberculoid (BT), and 1 (3.12%) indeterminate. 21 (65.62%) patients were treatment-naïve, while 7 (21.87%) were follow-up cases, 3 relapses (9.37%), and 1 (3.12%) defaulter. The BI ranged from 0 to 6, with 29 (90.62%) multibacillary (MB) and 3 (9.37%) paucibacillary (PB) cases. Sanger sequencing identified the gyrA A91V mutation in 3 patients, whereas all remaining isolates were wild type, with no resistance-associated mutations detected in rpoB or folP. Whole-genome sequencing generated a diverse yield of paired-end reads, ranging from 0.5 million to 108 million per sample. For the successfully sequenced isolates, the mean genome coverage ranged greater than 20X, with >99% of the M. leprae TN reference genome covered. Processed reads were successfully mapped to the M. leprae TN reference genome, achieving alignment rates of 92% to 99%. A total of 200 to 450 single nucleotide polymorphisms (SNPs) were identified per isolate in the high-coverage group, whereas low-coverage outliers exhibited hyper-variant profiles indicative of mapping artifacts. Further, the isolates belong to 1D subtype which is most commonly found in India. **CONCLUSION**: This study demonstrates the value of whole-genome sequencing in characterizing genomic diversity, drug resistance–associated mutations, and phylogenetic relationships of Mycobacterium leprae across the disease spectrum, supporting its role in molecular surveillance and improved leprosy management.

FREE PAPER PRESENTATION

FP:01

Spectrum Of Ocular Manifestations Among Patients With Hansen's Disease: A Cross-Sectional Observational Study

Dr Santoshdev P Rathod, NHL Municipal MC, Ahmedabad

INTRODUCTION: Hansen's disease is a chronic granulomatous infection caused by Mycobacterium leprae that can involve the eye through hematogenous spread, mainly affecting the eyelids, adnexa, and anterior segment. Ocular complications may occur before, during, or after MDT and include periocular skin lesions, madarosis, lagophthalmos, conjunctival and corneal changes, uveitis, scleral involvement, and cataract, potentially leading to visual impairment if untreated. **AIMS AND OBJECTIVES:** To study the occurrence and various types of ocular manifestations in Hansen's disease. **MATERIALS AND METHODS:** This cross-sectional observational study included all leprosy patients attending the dermatology OPD of a Tertiary Care Hospital for a period of 18 months. Inclusion criteria: All patients of any age who are clinically presented with ocular manifestation as a part of or secondary to Hansen's disease and the patient who gave consent. Exclusion Criteria: All patients of any age who were presented with eye diseases secondary to age, trauma and factor other than that mention. in inclusion criteria were excluded from study. **RESULTS:** Out of 45 patients, 26 (57.8%) had ocular manifestations, with male predominance 15 patients (57.69%). The most common symptom was decreased eyebrow hair in 11 patients (42.31%). Superciliary madarosis was the most frequent ocular finding 14 patients (53.85%), followed by eyebrow infiltration in 9 patients (34.62%). Eyelid changes included oedema (11.54%) and nodules in 2 patients (7.69%). Conjunctival congestion was seen in 6(23.08%) and reduced corneal sensation in 2(7.69%) of patients. **CONCLUSION:** Routine ophthalmic screening and referral to ophthalmology in leprosy patients is essential for early detection and prevention of vision-threatening complications.

FP:02

Investigating the regulation of cytokines production by Signal Transducers and Activator of Transcription (STAT) molecules in leprosy reactions

Dr. Bhawna Sharma, Dr. Keshar Kunja Mohanty, Dr. Raj Kamal, Dr Mamta Arora, Dr. Harish Sagar, Ms. Humera Hussain, Department of Immunology, ICMR-National JALMA Institute for Leprosy and Other Mycobacterial Diseases, Agra

Leprosy reactions are a challenging problem because they increase morbidity due to nerve damage even after the conclusion of MDT. It is possible that changes during reactions in leprosy are related to alterations in intracellular cytokine signalling mechanism. Most cytokines utilize the Janus kinase– signal transducers

and activators of transcription pathway (JAK-STAT). This pathway is negatively regulated by various mechanisms including Suppressors of Cytokine signaling (SOCS) proteins. SOCS proteins bind to JAK or cytokine receptors, thereby suppressing further signaling events. Reactions in leprosy lead to peripheral nerve damage that requires immediate medical attention. The regulation of cytokines production by STAT molecules, in leprosy reactions is not studied so far.

Our focus of the present study was to understand that how activation of STAT molecules and the functional T cell responses in conjunction with SOCS results in immunopathology of leprosy reactions. In the present study activation of different STAT molecules (STAT-3, 4 and 6) in blood of Leprosy patients with and without reactions was investigated using Western Blotting/flow cytometry and frequency of functional T cell responses was studied by flowcytometry. Alteration in the activation of STAT-3, STAT-4 and STAT-6 molecules as well as differences in the frequency of functional T cell (Th1, Th2, Th17 and Tregulatory cells) responses were observed in leprosy reactions as compared with non-reactions.

This study might give us leads for analyzing inflammatory mechanism involved during leprosy reactions and could help in identifying the biomarkers for the progression or prevention of disease. The understanding of cytokine production mechanism during leprosy reactions might prove critical to fully elucidate the pathophysiology of leprosy immune reactions. The findings of the study would impact on reducing the burden and disability in leprosy by increasing our understanding of the physiopathogenic mechanisms involve during the reactions in leprosy.

FP:03

Integrating Stigma Reduction into Leprosy Control Programmes: Lessons from GLRA India

Dr. Dinesh Kumar, Shibu George, Dr Aashish Wagh, German Leprosy and TB Relief Association (GLRA) India

Despite the availability of an effective treatment cascade- multidrug therapy (MDT)- for leprosy, social stigma remains a major barrier to leprosy eradication globally, including in India. Stigma contributes to delayed health-seeking behaviour, delay in case reporting, poor treatment adherence, and progression to permanent disability, thereby undermining the goal of a leprosy-free India.

This paper draws on programmatic experiences from German Leprosy and TB Relief Association (GLRA) India's leprosy initiatives across 105 districts in 12 states, implemented in close collaboration with the National Leprosy Eradication Programme (NLEP) and secondary and tertiary level care hospitals. Qualitative observations from field-level implementation and operational learning reveal that fear of social exclusion, loss of livelihood, marital rejection, and persistent misconceptions about disease transmission continue to influence delayed diagnosis and progression to disability, particularly among women and marginalized populations.

In response, GLRA India launched NIRAMAYA, a flagship project initiated in 2018, focusing on high-endemic, marginalized, and hard-to-reach areas to address gaps in early case detection, disability prevention, and continuity of care. By targeting leprosy-related stigma through community engagement, volunteer-led outreach, and capacity building of frontline health workers, the initiative directly reaches approximately 3.5

million people in 2025 and promotes timely diagnosis, restoration of dignity, and social inclusion of persons affected by leprosy. This integrated institutional and community-based approach has contributed to improved community acceptance, increased self-reporting, and better treatment adherence. Addressing stigma alongside clinical management is therefore essential to prevent disability, interrupt transmission, and sustain leprosy eradication efforts in India.

FP: 04

Clinical Dilemmas in the Management of Steroid-Induced Cataracts in Leprosy Patients: A Case Series from a Mission Hospital

Dr Saurabh Sharad Deshmukh (MS Ophthalmology), The Leprosy Mission Trust India (NGO)

BACKGROUND: Corticosteroids are indispensable in the management of neuritis and erythema nodosum leprosum (ENL) in Hansen's disease, but prolonged use predisposes patients to cataract formation. In leprosy hospitals, cataract surgery is complicated by systemic comorbidities, recurrent disease activity, and psychosocial stigma. **METHODS:** We present a case series of 8 patients (ages 35–67) with Hansen's disease, predominantly borderline lepromatous (BL) type, who developed visually significant cataracts after 1–5 years of systemic steroid therapy. Clinical records were reviewed for demographic details, steroid duration, cataract morphology, and associated comorbidities. Each case highlighted a distinct dilemma, including patient reluctance due to stigma, recurrent neuritis, rheumatic valvular heart disease, anemia requiring cessation of Dapsone, secondary glaucoma with poor compliance, recurrent iridocyclitis, recurrent ENL on Thalidomode, and uncontrolled diabetes with diabetic retinopathy. **RESULTS:** All patients underwent cataract extraction with intraocular lens implantation. While most achieved functional vision, complications included delayed healing, recurrent uveitis, and compliance-related challenges. **CONCLUSION:** Steroid-induced cataracts in leprosy patients demand individualized management strategies. This case series emphasizes the need for context-specific guidelines that balance vision restoration with systemic disease control, comorbidity management, and patient-centered counseling in resource-limited leprosy hospitals.
KEY WORDS: Leprosy, ophthalmology, steroids, steroid-induced cataract, glaucoma, uveitis, diabetic retinopathy, stigma.

FP:05

Advancing Leprosy Research through Innovative Animal Models: Bridging Translational Gaps for Novel Therapeutics in the Post-Elimination Era

Amit Kumar Singh, Vimal Kumar, Devendra Singh Chauhan; Experimental Animal Facility, ICMR-National JALMA Institute for leprosy & Other Mycobacterial Diseases, Agra

Despite India achieving the WHO-defined elimination threshold for leprosy, the disease persists as a public health concern in the post-elimination era. Recent programmatic data (2024–25) indicate a prevalence of ~0.5–0.6 per 10,000 population, with continued transmission reflected by child cases among new detections

(~5%) and Grade 2 disability (G2D) at diagnosis (~2%). Emerging reports of fluoroquinolone resistance further highlight the need for renewed therapeutic and translational research. The continued inability to cultivate Mycobacterium leprae in axenic media necessitates reliance on experimental animal models, an area where Indian institutions have made sustained and globally recognized contributions.

The classical mouse footpad model, pioneered by Shepard and extensively refined in Indian laboratories, remains central to leprosy research. It supports limited bacillary multiplication (~10^6–10^7 organisms/g tissue) and reproduces tuberculoid-like granulomatous responses. This model has been instrumental for bacillary viability assays, delayed-type hypersensitivity studies, immune mechanism elucidation, and early-phase screening of antileprosy compounds.

The nine-banded armadillo (Dasypus novemcinctus) uniquely reproduces disseminated lepromatous leprosy, supporting very high bacillary loads at lower physiological temperatures and enabling detailed investigation of systemic infection and peripheral neuropathy, including demyelination, axonal degeneration, and functional nerve deficits. Although armadillo studies are not established in India, global insights from this model remain invaluable.

Immunodeficient mouse models, particularly nude mice, offer accessible platforms for multibacillary infection and preclinical evaluation of newer drugs, including bedaquiline and telacebec (Q203), informing strategies for drug-resistant leprosy.

No single model fully recapitulates the immunological spectrum, chronicity, and reactional states of human leprosy. Emerging innovations—including tick cell–based M. leprae maintenance, genetically modified mice, and Schwann cell–neuron organoids—are addressing key gaps. Such a strategy is critical for advancing evidence-based therapeutics, identifying early biomarkers of nerve damage, addressing drug resistance, and strengthening disability prevention in India.

FP:06

Determinants of Disability Among Leprosy Patients Attending a Tertiary Care Hospital in North India

Dr. Neha Mishra, Dr. Raj Kamal, Dr. Dharmendra Singh, Dr. Harish Sagar, Deepa Kushwah, Himanshu
ICMR-National JALMA Institute of Leprosy and Other Mycobacterial Diseases Agra.

INTRODUCTION: Despite the widespread availability of effective multidrug therapy, disability remains a significant public health challenge in leprosy. Leprosy related disabilities result in functional limitations and are strongly associated with social stigma, delayed health-seeking behavior, and reduced quality of life. Identifying the determinants of disability among individuals affected by leprosy is therefore crucial for enabling early intervention and preventing long-term complications. **METHODOLOGY:** A hospital-based case control study is ongoing at ICMR – NJIL& OMD, Agra among leprosy patients attending a tertiary care hospital in North India. Cases were leprosy patients with disability (WHO Grade 1 or Grade 2), while controls were leprosy patients without disability (WHO Grade 0). Cases and controls were selected from the same clinical

setting. **RESULT:** Among 56 screened patients, 29 (51.8%) had Grade 0 disability, and 27 (48.2%) had Grade 1 or Grade 2 disability. Out of 56 screened patients, 85.47 % had paraesthesia, 78.6% had nerve pain, and 55.4 % had weakness and visible deformity. The majority of them were male (85.7%) and from rural areas (98.2%). Most of the cases were multibacillary (89.3%). Labourers constituted 28.6% of the study population. Nearly half of the patients reported using underground water as their primary source of drinking water. **CONCLUSION:** The high proportion of patients presenting with disability and multibacillary disease suggests delayed case detection, particularly in rural populations. These findings highlight the need to strengthen active case finding, promote early diagnosis and referral, and enhance community awareness, especially among rural and occupationally vulnerable groups, to prevent disability and reduce ongoing transmission.

FP:07

AN OBSERVATIONAL STUDY OF LEPROSY REACTIONS IN RELEASED FROM TREATMENT (RFT) CASES AT A TERTIARY CARE CENTRE

Dr. Riddhi Suresh Mehtha, NHL Municipal Medical College

INTRODUCTION: Although released from treatment (RFT) indicates completion of multidrug therapy, immune-mediated complications may persist beyond therapy. Leprosy reactions occurring after RFT represent a clinically significant yet under-recognized challenge in leprosy care**. AIMS AND OBJECTIVES:** To study the incidence, types and temporal distribution of leprosy reactions in patients post RFT**. MATERIALS AND METHODS:** This observational study included 43 patients with leprosy who had been released from treatment after completion of multidrug therapy, attending a tertiary care centre and evaluated for occurrence of leprosy reactions in the post-RFT period. Data regarding type of reaction, time of onset after RFT, presence of neuritis, clinical and bacteriological classification, demographic profile, and past history of leprosy reactions were recorded and analysed descriptively. RESULTS: Out of 43 post-RFT patients classified as multibacillary as per WHO therapeutic classification, 14 (32.56%) developed leprosy reactions. Reactions developed in 3 cases of borderline tuberculoid (21.43%), 3 cases of borderline lepromatous (21.43%), 6 cases of lepromatous leprosy (42.86%) and 2 cases of histoid leprosy. Of these, 4 (9.30%) developed type 1 reactions, and 10 (23.26%) type 2 reactions. The mean time to onset after RFT was 4 months for type 1 reactions and 6.7 months for type 2 reactions. A past history of leprosy reactions was present in 12 (85.71%) patients, and 10 (71.43%) had prior neuritis. **CONCLUSION:** Leprosy reactions continue to occur in a substantial proportion of patients after RFT and contribute to development of new disability post RFT with type 2 reactions being more frequent, indicating the need for continued follow-up in the post-RFT period. KEY WORDS: Leprosy reactions, Leprosy, Post-RFT**.**

FP:08

Efficacy of Molecular Point-of-Care Testing (POCT) in the Early Diagnosis of Leprosy

Vinay Kumar Pathak, Itu Singh, Rahul Sharma, Ravindra P Turankar, Mansi Gupta, Shivani Bhushal, Utpal Sengupta, Stanley Browne Laboratory, The Leprosy Mission Community Hospital, Nand Nagari, Delhi, India. PIN 110093.

INTRODUCTION: Early diagnosis and timely initiation of chemotherapy are critical for effective disease management and for interrupting transmission of Mycobacterium leprae. In our previous studies, M. leprae–specific multiplex PCR (MPCR) demonstrated 100% sensitivity and specificity for the diagnosis of multibacillary (MB) leprosy, and 93.3% sensitivity with 100% specificity for paucibacillary (PB) cases. The present study aimed to evaluate the MPCR-based Point-Of-Care Test (POCT), the TrueNat multiplex Real Time-PCR (TrueNat-mRT-PCR) for the detection of leprosy with high sensitivity and specificity. **METHODS:** The present study is a multi-centric, prospective cohort study. A total of 600 clinically confirmed untreated cases, including 200 PB leprosy patients and 400 MB leprosy patients were recruited based on cardinal signs and bacteriological examination. Additionally, 378 household contacts (HHCs) of PB leprosy patients, 742 HHCs of MB leprosy patients, and 50 healthy endemic controls (HCs) were recruited with informed consent. Slit skin smears (SSSs) and peripheral venous blood were collected from all participants. DNA extraction from SSSs was performed and further analyzed using mRT-PCR and MPCR and serum were separated from blood to perform ELISA against ND-O-BSA. **RESULTS**: We observed 97.63% positivity in MB cases with TrueNat-mRT-PCR and 92.65 % with MPCR, whereas the positivity in PB cases was 84.11 % and 74.30% with TrueNat-mRT-PCR and MPCR, respectively. Moreover, we found 3.10 % positivity in HHCs of MB cases with TrueNat-mRT-PCR and 1.89 % with MPCR. Similarly, the positivity in HHCs of PB cases was found to be 3.17% and 2.12% with TrueNat-mRT-PCR and MPCR, respectively. None of the HC tested positive using either TrueNat-mRT-PCR or MPCR. Seropositivity against ND-O-BSA was also found in concordance with the findings of mRT-PCR or MPCR. CONCLUSION: Our findings highlight the operational advantage of field-deployable point-of-care TrueNat-mRT-PCR over conventional MPCR or ELISA for the early diagnosis of leprosy in endemic settings. Integrating TrueNat-mRT-PCR into routine surveillance could enable the timely identification of leprosy, including preclinical and subclinical infections among household contacts (HHCs), thereby strengthening early case detection strategies. Collectively, these advances have the potential to reduce ongoing transmission and support global efforts toward leprosy elimination, in alignment with the Sustainable Development Goals (SDGs) by 2030. KEY WORDS: Point-of-Care Test, molecular diagnosis, TrueNat-mRT-PCR, MPCR

FP:09

THE PERILS, THE LIMITATIONS AND THE FUTURE OF ARTIFICIAL INTELLIGENCE (AI) IN LEPROSY CARE: A RETROSPECTIVE ANALYSIS OF LEPROSY CASES USING CHATGPT AT A TERTIARY CARE CENTRE

Dr FARIZ SARSHAR, ESIC MCH, Bihta, Patna

INTRODUCTION

Leprosy remains a public health challenge due to its clinical heterogeneity and the risk of delayed diagnosis leading to disability. AI tools, particularly models such as ChatGPT have shown promise in varied dermatological disease; however, its utilization in Leprosy care has not been systematically evaluated. **MATERIAL AND METHODS** This retrospective observational study was conducted using clinical records of leprosy patients from a tertiary care centre. Standardized clinical profiles including demographic details, lesion morphology, sensory loss, nerve involvement and reactional states were entered into ChatGPT version 5.2 using a fixed prompt and the response pertaining to Diagnosis, Ridley-Jopling (RJ) classification and

treatment were recorded and analyzed. **RESULT** A total of 61 patients were included in the study. ChatGPT gave correct diagnostic responses in 37.7% of cases. Accuracy was higher in advanced disease and in patients with Grade 2 Disability (G2D) as compared to early disease, reactional states and pure neuritic cases. Misclassification were common in indeterminate and borderline spectrum cases with accuracy for R-J classification being observed in 24.5% with frequent alternate diagnosis suggested in 62.3%. Patients with G2D were correctly identified in 100% cases and Lepra reactions were correctly identified in 42.9% cases. **CONCLUSION** ChatGPT demonstrates moderate diagnostic capabilities in classical leprosy cases but significant limitations in early disease, pure neuritic leprosy and reactional states. AI may serve as an adjunctive tool but cannot replace expert clinical judgment. AI in chronic diseases with varied presentations should be cautiously integrated.

FP:10

Dapsone-Induced Adverse Reactions: Retrospective Descriptive Analysis of 34 Cases from South Indian District-Erode

Dr.T.R.Ravindran. M.D.Dermatology.,District Leprosy Officer, Erode,Tamilnadu.

BACKGROUND: Dapsone remains a cornerstone drug in multidrug therapy (MDT) for leprosy. However, adverse reactions pose significant challenges to patient management and programmatic success. This study analyzes Dapsone-induced adverse reactions among leprosy patients registered under the National Leprosy Eradication Programme in Erode District, Tamil Nadu. Average new leprosy cases detected in Erode district is 225 per year. **METHODS** A retrospective descriptive analysis was conducted among 34 leprosy patients among 800 new leprosy patients , who developed documented Dapsone-induced adverse reactions Duration of the study: Four years 1-1-2022 to 31-12-2025 RESULTS • Age & Sex: Patients ranged from 8 to 77 years; majority were female (22/34). Adolescents and elderly were notably vulnerable. • Family history: No consistent familial clustering was observed. • Onset: Adverse reactions typically occurred within 1–30 days of MDT initiation, with hypersensitivity syndromes, hepatitis, Urticaria, anaemia, and erythema multiforme being predominant. • Symptom: Fever is the most common and early symptom helping to suspect Dapsone induced adverse reaction. • Detection: Most cases were identified by government health staff (NMS, DLO, PHC MO), with a few detected at private hospitals. • Management: 26 patients were managed at government institutions, while 8 required private hospital care, often incurring high costs (up to Rs.2,30,000). • Continuation of MDT: Majority continued MDT successfully with alternative regimens (Ofloxacin, Clofazimine), though 3 patients defaulted or were unwilling to continue. One mortality was reported due to cancer unrelated to leprosy /MDT. CHALLENGES Dapsone-induced adverse reactions significantly impact MDT continuity, healthcare costs, and patient confidence. Delayed detection and fragmented care pathways further compound these challenges. NEED OF THE HOUR Strengthening clinician awareness, early recognition of ADR, and standardized guidance for Dapsone-free MDT regimens are essential. **CONCLUSION** Dapsone-induced adverse reactions are frequent, diverse, and potentially life-threatening. Early detection by trained health staff and prompt substitution with alternative regimens ensured recovery in most cases. Financial burden was significant when private care was sought. Despite challenges, MDT continuation

without Dapsone was feasible and effective. Routine vigilance for Dapsone toxicity-examining biweekly in first 3 months of MDT, early withdrawal, and structured alternative regimens are critical to safeguard patient outcomes and sustain leprosy eradication efforts internationally.

FP:11

A clinical outcome-based evaluation of conventionally available materials vs polymer filament in the fabrication of finger gutter splints

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BACKGROUND: Leprosy is commonly associated with peripheral neuropathy, intrinsic muscle imbalance, finger deformities, and joint instability, requiring prolonged splint use for protection and functional alignment. Due to sensory loss and susceptibility to pressure-related injuries, the material properties of finger gutter splints play a critical role in determining safety, comfort, and clinical effectiveness. **OBJECTIVE:** To compare the clinical and biomechanical effects of finger gutter splints fabricated from polyvinyl chloride (PVC), polypropylene (PP), low-temperature thermoplastic (LTTP), and 3D-printed polymer Filament materials in individuals affected by leprosy, using defined clinical outcome measures. **METHODS:** Finger gutter splints were fabricated using three different materials using conventional fabrication methods and the polymer filaments for the 3D fabrication of splints. Clinical evaluation was carried out focussing on: ¬ Pressure tolerance, assessed by localized skin response and patient-reported comfort during prolonged wearing period of 24hrs ¬ Skin integrity, including incidence of redness, pressure marks, or ulceration ¬ Compliance, measured by daily wearing period of 8hrs per day and user acceptance ¬ Functional tolerance, evaluated by ease of performing basic Functional hand activities, fine motor tasks, ADL, Functional Movement Checks while splinted. ¬ Structural stability, assessed by maintenance of finger alignment over period of 8hrs per day. **RESULTS:** PVC splints demonstrated high structural stability but showed reduced pressure tolerance, with increased risk of localized pressure in insensate areas, leading to lower compliance. PP splints exhibited improved pressure tolerance and reduced skin irritation compared to PVC, resulting in moderate compliance and functional acceptance. LTTP thermoplastic splints provided superior anatomical conformity and pressure distribution, significantly improving pressure tolerance, preserving skin integrity, and enhancing patient compliance; however, reduced rigidity limited long-term structural stability in some cases. 3D-printed splints achieved optimal outcomes across most clinical measures, including high pressure tolerance, improved skin safety, superior compliance, and maintained alignment, attributed to patient-specific design, controlled material stiffness, and lightweight structure. **CONCLUSION:** Clinical outcomes in leprosy-related finger gutter splinting are strongly influenced by material selection. While PVC and PP offer acceptable structural support, LTTP thermoplastics and 3D-printed materials demonstrate superior performance in pressure tolerance, skin safety, and compliance- key considerations in neuropathic hands. Personalized splint fabrication using thermoformable and additive manufacturing technologies may

significantly improve rehabilitation outcomes and reduce secondary complications in leprosy patients. **KEYWORDS:** Leprosy, Finger gutter splint, 3D printing, Neuropathy, Orthosis

FP:12

Early diagnosis of malignant change in chronic plantar ulcers of leprosy patients.

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AIM 1. To diagnose malignancy early in chronic plantar ulcers of leprosy patients and to prevent amputations. 2. To prevent secondaries to regional lymph nodes or to other organs. **INTRODUCTION** Leprosy affects skin and peripheral nerves. Nerve destruction leads to anaesthetic feet and plantar ulcers are the common complication. Prolonged walking, field work without shoes and accidental injuries cause ulcers. In many patients ulcers heal and reoccur. In some patients, chronic ulcers transform into malignant ulcers due to prolonged mechanical irritation. Malignant transformation can be suspected when the ulcer exhibits 1.Recent fast growth; 2. Cauliflower like growth; 3. Irregular everted margins; 4. Bleeding on touch. **METHODOLOGY** In this retrospective study, ulcer biopsies received over the past 5 years (2020 – 2024) with a clinical diagnosis of "Suspected malignancy" were studied Histopathologically. 166 ulcer biopsies were received in the pathology department of SIHR&LC, Karigiri. Out of 166 biopsies, 86 were from surgery department of Karigiri hospital and remaining 80 were from The Leprosy Mission Hospitals. The tissue was fixed in 10% formalin, processed in tissue processor; tissue blocks prepared, 5µ thick sections were cut and stained with Haematoxylin and Eosin for histopathological examination. **RESULTS** Of the 166 Ulcers with suspected malignancy, 61 ulcers were diagnosed as malignant, 93 as nonspecific chronic ulcers and 12 ulcer biopsies were inadequate to comment on malignancy. All malignant ulcers were classified as: 1. Well differentiated squamous cell carcinoma – when neoplastic cells also resemble as normal squamous cells with areas of infiltration. 2. Moderately differentiated squamous cell carcinoma – Neoplastic squamous cells show cellular atypia, nuclear pleomorphism, hyperchromatic and increased mitotic activity. 3. Poorly differentiated squamous cell carcinoma. – Tumor cells cannot be recognised as squamous cells; but show nuclear pleomorphism, increased mitotic activity including atypical mitosis. **CONCLUSION** Early diagnosis of malignancy in plantar ulcers helps to prevent major amputations and allows the patient to walk on their own feet. Secondary deposit of tumor in regional lymph nodes or distant metastasis can be prevented so that patient can live without suffering.

FP:13

Diagnostic clinical utility of granulocytes to lymphocytes ratio in patients with leprosy reactions

Mansi Gupta, Mohd. Nadeem, Itu Singh, Vinay K. Pathak, Rahul Sharma, Ravindra P. Turankar, Reeta Devi, Ashiya James,Utpal Sengupta, Stanley Browne Laboratory, TLM Community Hospital, Nand Nagari, Delhi, India.

INTRODUCTION: Leprosy reactions are acute inflammatory episodes classified as Type 1 reactions (T1R) and Type 2 reactions (T2R), which significantly contribute to morbidity and disability in leprosy patients. Currently, no reliable biomarker exists to predict or diagnose leprosy reactions early. The granulocyte-to-lymphocyte

ratio (GLR) is an emerging inflammatory marker associated with several inflammatory, neoplastic, and cardiovascular conditions. **OBJECTIVES:** This study aimed to evaluate the diagnostic utility and accuracy of GLR in identifying leprosy reactions and differentiating between T1R and T2R. **METHODS:** A retrospective study was conducted using clinical and hematological data collected from patients attending the outpatient department of TLM Community Hospital, Shahdara, Delhi. GLR was calculated from routine blood parameters, and statistical analyses were performed to assess its association with leprosy reactions. **RESULTS:** A total of 72 leprosy patients were included in the study, of whom 27 (37.50%) had T1R, 21 (29.16%) had T2R, and 24 (33.33%) were non-reactional (NR). Mean granulocyte counts were significantly higher in T1R ($4.22 \pm 1.62 \times 10^9$/L) and T2R ($11.34 \pm 8.86 \times 10^9$/L) compared to NR cases ($3.61 \pm 0.81 \times 10^9$/L). Correspondingly, mean GLR values were 3.22 ± 1.42 for T1R, 10.77 ± 8.70 for T2R, and 3.39 ± 1.84 for NR patients. GLR was significantly elevated in reactional cases compared to non-reactional cases, with T2R showing markedly higher GLR values than T1R. **DISCUSSION:** The findings demonstrate a strong association between elevated GLR and the occurrence of leprosy reactions, particularly T2R. These results suggest that GLR reflects the underlying inflammatory burden and may serve as a useful diagnostic indicator. **CONCLUSIONS:** GLR shows promise as a simple, cost-effective diagnostic biomarker for leprosy reactions, especially in distinguishing T2R from T1R. Further prospective studies are warranted to validate GLR as a predictive biomarker for early detection of Type 2 leprosy reactions. **KEYWORDS:** Type 1 Reaction, Type 2 Reaction, Granulocyte-Lymphocyte Ratio, Predictive Biomarker

FP:14

FROM LENS TO MICROSCOPE: "HISTOPATHOLOGICAL DECODING IN TREATMENT-NAÏVE HANSENS DISEASE"

Dr. MANURAJ. S

INTRODUCTION: Despite achieving elimination status, India continues to report new cases of leprosy, and the disease remains socially stigmatizing. Accurate classification is essential for appropriate treatment, prevention of disability, and reduction of transmission. Clinical diagnosis alone may be challenging, particularly in borderline forms due to overlapping features. Histopathology and slit skin smear examination play a crucial role in confirming the diagnosis and defining the disease spectrum especially in unstable borderline forms **OBJECTIVES:** To evaluate the clinico-histopathological correlation in newly diagnosed leprosy patients attending a dermatology OPD of a tertiary care centre. **MATERIALS AND METHODS:** This observational cross-sectional study was conducted over one year at a tertiary care hospital. Fifty newly diagnosed, treatment-naïve leprosy patients were included. Patients already on multidrug therapy, pregnant, lactating women, and children below five years were excluded. Cases were classified clinically according to the Ridley–Jopling classification. Slit skin smear and skin biopsy for histopathological examination were performed in all patients, and clinico-histopathological correlation was analyzed **RESULTS:** Among 50 patients, 29 were males and 21 females. Borderline Tuberculoid was the most common subtype clinically (48%) and histopathologically (38%). Overall concordance was 72%. Highest correlation was seen in Lepromatous (91.7%) and Tuberculoid (80%) leprosy, and lowest in Borderline Borderline (33.3%). Slit skin smear positivity increased toward the lepromatous pole. **CONCLUSION:** Denovo cases, despite elimination,

call for stringent case diagnosis and early treatment. Histopathology, along with slit skin smear examination, is indispensable for precise classification, facilitating early initiation of multidrug therapy, preventing disability, transmission, and ultimately strengthening ongoing leprosy control efforts. Clinico-histopathological correlation is highest at the polar ends of the spectrum and lowest in borderline forms.

FP:15

Translating Prevention into Practice: A District Foot Health Model for Leprosy and Diabetes

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BACKGROUND Peripheral neuropathy (PN) is a common yet underdiagnosed complication of both diabetes and leprosy, often progressing to chronic ulcers, deformities, and amputations if unidentified early. At the primary care level, detection remains suboptimal due to limited awareness, inadequate screening tools, and fragmented referral systems. Addressing these gaps is critical to reducing disability and advancing leprosy elimination goals. **AIM** To implement and evaluate a comprehensive district-level healthcare model for early detection and management of peripheral neuropathy among individuals affected by diabetes and leprosy. **OBJECTIVES** To design, implement, and assess an integrated district healthcare model that strengthens early identification, referral, and management of PN in diabetes and leprosy through capacity building and system strengthening. **MATERIALS AND METHODS** The project was implemented in Medchal–Malkajgiri district, Telangana, across 12 Primary Health Centres (PHCs), 24 Urban PHCs, and 25 Basti Dawakhanas. The model comprised three interlinked components: 1. Situational Analysis: A cross-sectional qualitative study involving 236 in-depth interviews with medical officers, paramedical staff, ASHAs, and patients assessed gaps in awareness, diagnostic practices, and health-seeking behavior. 2. Capacity Building: A quasi-experimental training programme conducted in 49 batches, covering 900 healthcare workers, focused on patient education, manual screening techniques (monofilament testing and tuning fork), risk stratification, documentation, and referral protocols. 3. Intervention and Evaluation: A prospective intervention incorporating baropodometric foot pressure assessment and provision of customized protective footwear is initiated. Referral pathways are being strengthened from primary to tertiary care. ASHAs are being trained for community-based education, early identification, referral, and follow-up. **RESULTS** The situational analysis revealed gaps in provider training, availability of screening tools, and community awareness regarding PN. Post-training assessments demonstrated a marked improvement in healthcare workers' knowledge, particularly in recognizing early signs of PN, appropriate use of manual screening tools, and referral protocols. Standardized training modules, IEC materials (posters and handouts), and referral formats were developed in English and Telugu to facilitate scalability. Sustainability measures included monthly follow-ups and digital peer-support groups for trained providers. **CONCLUSION** This integrated district-level model demonstrates the feasibility and effectiveness of strengthening peripheral neuropathy care through frontline worker empowerment, structured referral networks, and use of low-cost diagnostic and footwear technologies. The approach has significant potential to reduce disability and improve quality of life among individuals affected by diabetes and leprosy.

FP:16

Study of diagnostic efficacy of Fite-Faraco stain on histopathology of slit-skin smear negative, Borderline Tuberculoid Leprosy.

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BACKGROUND Leprosy continues to be a significant infectious cause of neuropathy in India. Slit-skin smear (SSS) examination is a simple diagnostic tool but often fails to detect Mycobacterium leprae in early or paucibacillary cases. Fite-Faraco (FF) stain, used on histopathology sections, may demonstrate bacilli not seen on SSS. **AIMS AND OBJECTIVE:** This study aims to evaluate the diagnostic yield of Fite-Faraco staining in clinically suspected leprosy cases with negative SSS results. **MATERIALS AND METHODS:** A cross-sectional observational study was conducted on 20 clinically suspected leprosy patients with negative SSS. Punch biopsies were taken from active lesions and processed for routine haematoxylin and eosin (H&E) and Fite-Faraco staining. Detection of acid-fast bacilli (AFB) and histopathological classification based on the Ridley–Jopling system were assessed. **RESULTS:** Among twenty SSS-negative cases, sixteen (80%) showed positivity for AFB on Fite-Faraco staining, all graded as 1+, while four (20%) were negative. Most Fite-Faraco–positive biopsies revealed features consistent with borderline tuberculoid leprosy. In several cases, Fite-Faraco positivity provided definitive confirmation and guided initiation of multidrug therapy. **LIMITATION:** The present study includes a small sample size and therefore limits generalisation. **CONCLUSION:** Fite-Faraco staining significantly enhances detection of M. leprae in SSS-negative clinically suspected leprosy. Routine inclusion of this stain in histopathological evaluation may facilitate early diagnosis and accurate classification of leprosy.

FP:17

EXPLORING THE ATYPICAL PRESENTATIONS OF LEPROSY: A RETROSPECTIVE CROSS-SECTIONAL STUDY

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INTRODUCTION: Leprosy is a chronic infectious disease with a wide clinicopathological spectrum. Atypical manifestations may mimic inflammatory, autoimmune, infectious, and drug-induced dermatoses, leading to diagnostic delay. This study aimed to analyse and describe unusual presentations of leprosy across the Ridley–Jopling spectrum. **MATERIALS AND METHODS:** Retrospective cross-sectional study was conducted at a tertiary care institute between January 2021 and January 2024 after obtaining institutional ethical clearance. Medical records of 262 patients aged >18 years diagnosed with leprosy according to World Health Organization (WHO) criteria were reviewed. Cases were classified as per the Ridley–Jopling spectrum. Clinical features, histopathological findings, treatment details, and outcomes were analysed. **RESULTS:** Atypical presentations were identified in 21 patients (8.01%). Borderline Tuberculoid leprosy (n=5) showed tenosynovitis with bony erosions, cutaneous nerve abscess, genital and palmar involvement, and Type 1 reaction mimicking tinea corporis. Borderline Borderline leprosy (n=2) presented as phimosis and acute cutaneous lupus erythematosus like lesions. Borderline Lepromatous leprosy (n=6) demonstrated olecranon bursitis, granuloma annular like ENL, blue tika-like pigmentation, subacute cutaneous lupus erythematosus like lesions, and psoriasiform morphology. Lepromatous leprosy (n=9) included lepromatous exacerbation, erythema multiform like ENL, lymphadenopathy with moth-eaten alopecia mimicking secondary syphilis, ENL

mimicking acute cutaneous lupus erythematosus, nodular leprosy with laryngeal involvement, association with phaeohyphomycosis, and toxic epidermal necrolysis like presentation. All patients responded well to appropriate therapy. **CONCLUSION:** This study underscores the extensive clinicomorphological diversity of leprosy. Awareness of atypical presentations, supported by histopathological and radiological correlation, is crucial to prevent misdiagnosis and treatment delay.

FP:18

Pattern of Drug-Resistant Mycobacterium leprae in Endemic regions of India

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BACKGROUND: Despite the widespread implementation of WHO-recommended multidrug therapy (MDT), leprosy continues to persist in endemic regions, with emerging antimicrobial resistance (AMR) posing a significant threat to disease control. India contributes nearly 60% of global leprosy cases, yet systematic data on the geographical distribution of drug-resistant Mycobacterium leprae remain limited. **OBJECTIVES:** This study aimed to investigate the magnitude, clinical distribution, and geographical clustering of drug-resistant M. leprae strains among leprosy patients across multiple endemic regions of India. **METHODS:** A cross-sectional study was conducted from January 2021 to January 2025 across 11 hospitals of The Leprosy Mission Trust India, spanning eight Indian states. Slit-skin smears and biopsy samples were collected from 3,030 RLEP-PCR–confirmed leprosy patients, including new, relapse, defaulter, and reactional (T1R and T2R) cases. Molecular detection of drug resistance was performed by PCR amplification and Sanger sequencing of resistance-determining regions of rpoB, folP1, and gyrA genes, following WHO guidelines. **RESULTS:** Overall resistance to rifampicin, dapsone, and ofloxacin was observed in 7.8%, 5.9%, and 7.0% of cases, respectively, while multidrug resistance was detected in 2.1% of patients. Rifampicin resistance was highest among defaulters (13.8%) and relapse cases (11.6%), but was also detected in new cases (2.4%), indicating emerging primary resistance. Geospatial analysis revealed clustering of rifampicin-resistant cases in specific districts, notably Prayagraj (Uttar Pradesh), Purulia (West Bengal), Bokaro (Jharkhand), and Champa (Chhattisgarh). **CONCLUSIONS:** The detection of both primary and secondary drug resistance, along with district-level clustering, underscores active transmission of drug-resistant M. leprae in endemic regions of India. These findings highlight the urgent need for strengthened molecular AMR surveillance, routine resistance testing, and reinforced treatment adherence to support India's goal of zero leprosy.

FP:19

Incomplete Nasal Clearance of Viable Mycobacterium leprae After a Single Dose of Rifampicin: Evidence from a Prospective Cohort Study

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BACKGROUND: Rifampicin, a key component of multidrug therapy (MDT) for leprosy, is generally expected to quickly eradicate 99.99% of living Mycobacterium leprae. Nonetheless, its effect on nasal carriage—the primary route of transmission—has not been adequately studied. **OBJECTIVE:** To examine how long M. leprae remains viable and persists in the nasal mucosa of both paucibacillary (PB) and multibacillary (MB) patients after a single supervised MDT dose. **METHODS:** This prospective cohort study involved collecting 275 nasal swab samples from newly diagnosed patients with PB (n=124) and MB (n=151) leprosy. Acid-fast bacilli (AFB) detection was performed using Ziehl–Neelsen staining. Molecular viability was evaluated through quantitative real-time PCR targeting the 16S rRNA and esxA genes. **RESULTS:** At baseline, 6% of PB and 23% of MB patients were AFB-positive. After a single MDT dose, all PB patients cleared AFB, whereas 7% of MB patients remained smear positive. Real-time PCR revealed baseline positivity rates of 44% for 16S rRNA and 60–61% for esxA in MB patients. One month after starting MDT, 34% of MB patients still had viable bacilli, as indicated by both the molecular markers. Although positivity decreased to 23% at 6 months, residual 16S rRNA detection (1%) remained at 12 months. **CONCLUSION:** A single dose of Rifampicin significantly decreases nasal M. leprae load, but it does not guarantee immediate sterilization in MB patients. These results emphasise the ongoing transmission risk early in treatment and stress the importance of full adherence to MDT.

FP:20

BEYOND ELIMINATION : NATIONAL LEPROSY TRENDS WITH SPECIAL FOCUS ON WEST BENGAL

SHAILJA VERMA

INTRODUCTION Despite achieving national elimination targets, leprosy remains a public health challenge in India. Monitoring National Leprosy Eradication Program indicators is essential to assess performance, identify gaps and detect ongoing transmission. This study analyses national and district-level trends in West Bengal. **MATERIALS AND METHODS** A secondary descriptive analysis was conducted using national NLEP indicator data from 2019–20 to 2024–25 and district-wise data from West Bengal for April 2024 to January 2025. Indicators analysed included Annual New Case Detection Rate (ANCDR), prevalence rate (PR), treatment completion rate, multibacillary case indicators, Grade-2 disability, child and female case proportions and programme indicators such as contact tracing, post-exposure prophylaxis and rehabilitation services. **RESULTS** Nationally, new case detection declined during the COVID-19 pandemic, followed by recovery and stabilisation after 2022 with restoration of surveillance activities. ANCDR remained within the elimination target of <10 per 100,000 population, while PR remained below 1 per 10,000 population. Treatment completion rates exceeded 90% across all years. However, persistently high multibacillary case indicators, continued Grade-2 disability, and detection of child cases suggested delayed diagnosis and ongoing transmission. In West Bengal, state-level elimination status was maintained, but marked district-level heterogeneity was observed. Purulia, Jhargram, Bankura, and Uttar Dinajpur reported ANCDR ≥10, identifying active transmission hotspots. Higher prevalence in selected districts reflected increased treatment load. Gaps were noted in contact tracing, post-exposure prophylaxis and disability care services. **CONCLUSION** Despite sustained elimination, district-level hotspots and delayed detection persist. Intensified case finding and improved contact management are needed in high-burden districts.

FP:21

Library of Leprosy Literature: From Ancient Texts to Modern Journals, A Librarian's Perspective

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Leprosy is one of the oldest known human diseases, with its documentation spanning ancient civilizations to modern biomedical science. This paper presents a concise overview of the evolution of leprosy literature from a librarian's perspective, highlighting the role of medical libraries in preserving, organizing, and disseminating this knowledge. Early descriptions of leprosy are found in classical Ayurvedic texts such as the Sushruta Samhita and Charaka Samhita, as well as in ancient Egyptian papyri and Greco-Roman medical writings. These sources, preserved within historical library collections, form the foundational knowledge base of leprology.

The nineteenth century marked a major transition with the emergence of systematic clinical science. Seminal works by Danielssen and Boeck and the discovery of Mycobacterium leprae by Armauer Hansen established leprosy as a distinct infectious disease, leading to advances in bacteriology, epidemiology, and public health. Archival hospital records, missionary reports, and government documents, particularly from India, became significant resources for research and disease control.

The establishment of specialized journals, including the International Journal of Leprosy and Leprosy Review, enabled structured scholarly communication and global knowledge exchange. Subsequent WHO guidelines and the introduction of multidrug therapy (MDT) transformed leprosy management, with national program documents such as India's National Leprosy Eradication Programme forming an essential part of contemporary collections.

In the digital era, open-access publishing and digitization initiatives have expanded access and ensured long-term preservation of rare and current literature. This paper emphasizes the evolving role of librarians as knowledge facilitators who bridge historical texts and modern evidence, supporting research, clinical practice, and global leprosy elimination efforts.

FP:22

A comparative study to determine the sensitivity and specificity of light microscopy vs fluorescence microscopy to detect acid fast bacilli in slit skin smears in patients of borderline lepromatous and lepromatous leprosy.

Shiba Ranjan Kr

INTRODUCTION- Diagnosis of leprosy depends on slit skin smear and histopathology. Sensitivity of Ziehl-Neelsen stain is inconsistent from 18% - 56%. An acceptable alternative would be fluorescent microscopy using auramine rhodamine stain on SSS with higher percentage of sensitivity. **OBJECTIVES-** To compare the

sensitivity and specificity of light microscopy Versus fluorescence microscopy to calculate bacteriological index of bacilli in SSS in patients with BL and LL leprosy. **METHODOLOGY-** Analytical Cross sectional study design with Sample size 60. leprosy included-BL, LL. SSS was taken from right earlobe, two slides were taken - one for light microscopy and another for fluorescence microscopy. ZN stain for light microscope and AR stain for fluorescence microspore. BI was calculated using ridleys logarithmic scale. **RESULTS /CONCLUSION-** From 60 patients, 19 were BL and 41were LL. from 19 patients of BL, SSS was positive in 13 pts using light microscope and in 16 patients using fluorescence microscope. Out of 41 patients of LL, SSS was positive in 31 patients using light microscope and in 40 patients using fluorescence microscope. The diagnostic accuracy of fluorescence microscopy for the detection of acid-fast bacilli among patients with borderline lepromatous (BL) demonstrated a sensitivity of 92.3% and a specificity of 33.3%. The positive predictive value (PPV) was 75.0%, while the negative predictive value (NPV) was 66.7%. The diagnostic accuracy of fluorescence microscopy among patients with lepromatous leprosy (LL) demonstrated a sensitivity of 94.3% and a specificity of 10.0% with a PPV of 77.5%. AR staining is simple procedure due to ease of detection of fluorescent stained bacilli. Fluorescence microscopy not only yielded higher detection rates and bacteriological indices but also proved more effective in identifying smear-positive cases missed by conventional methods.

FP:23

Systematic Documentation of Contacts in the Leprosy Post-Exposure Chemoprophylaxis with Single Dose Rifampicin improves contact tracing and screening, Tiruvallur district, Southern India, December 2023 – April 2024

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BACKGROUND: The WHO technical guidance 2018 recommended post-exposure prophylaxis with single dose rifampicin (SDR-PEP) to close contacts as key strategy towards zero transmission in leprosy which was implemented in India's National Leprosy Eradication Programme (NLEP). However, systematic documentation and data on its implementation are limited. We assessed the utility and feasibility of contact registers towards improving SDR-PEP coverage and timeliness in Tiruvallur district, Southern India. **METHODS:** We conducted a quasi-experimental study from January to April 2024 involving all 67 government primary health centres (PHC) in Tiruvallur district. Data from January to April 2023 on newly diagnosed leprosy patients (=index patients) and their contacts served as the pre-implementation baseline. We collected details of index patients and their contacts including age, gender, type of contact, date of identification, screening and administration of SDR through contact registers during January to April 2024. We compared the proportions of contacts identified, screened and administered SDR of pre-implementation with that of during implementation using chi-square test and p-value <0.05 were considered statistically significant. Timeliness was analysed based on the time of MDT initiation to index patient to SDR administration to contacts. **RESULTS:** Among 67 primary health centres, 54 (81%) implemented contact registers, with 42 (78%) having complete entries. Identified number of contacts almost doubled (222 to 433), and number screened improved significantly from 66% [147 of 222] to 91% [394 of 433] ($p < 0.001$). However, number of contacts receiving SDR-PEP declined from 95% [124 of 132] to 70% [268 of 383]. Among household contacts, no new leprosy patients were diagnosed during the implementation period compared to 11 diagnosed during the pre-implementation. Timeliness of

administration of SDR-PEP varied, majority receiving it within 21-30 days. **CONCLUSIONS:** Contact registers improved leprosy screening but reduced SDR-PEP uptake. Use of contact registers recommended for long term follow-up and barriers in administration to be addressed. **KEY-WORDS:** Leprosy, neglected disease, mycobacterial infection, chemoprophylaxis, Epidemiology

FP:24

RLEP-PCR–based screening of nasal samples for the detection of Mycobacterium leprae in leprosy patients and healthy humans from Uttar Pradesh, North India

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Despite being one of the oldest infectious diseases known to humanity, the mechanisms of leprosy transmission remains poorly understood. The nasal mucosa has recognized as an important site for colonization and is thought to play a crucial role in disease transmission. The present study aimed to investigate the prevalence of Mycobacterium leprae in nasal samples of leprosy patients and apparently healthy individuals from Uttar Pradesh using PCR targeting RLEP sequence. Nasal swab samples were collected from untreated leprosy patients (n=56) diagnosed at the outpatient department of the ICMR-National JALMA Institute for Leprosy & Other Mycobacterial Diseases, Agra, India, and from apparently healthy individuals (n=21). Among the 56 leprosy patients, 21 were classified as borderline tuberculoid (BT), 17 as borderline (BB), 8 as borderline lepromatous (BL), 8 as lepromatous (LL), and 2 were identified as neuritic cases of leprosy. The nasal samples of all the study participants were screened for the presence of M. leprae by polymerase chain reaction (PCR) targeting RLEP sequence. Out of 56 leprosy patients, 4 (7.14%) patients were found positive for the presence of M. leprae DNA in nasal samples using PCR. Out of these, two were from LL cases, while one each was from BL and BT cases. Out of four M.leprae positive nasal samples, three were slit-skin smear positive patients and one from a slit-skin smear negative patient of leprosy. None of the nasal sample of apparently healthy humans was found positive for the presence of M.leprae DNA. These findings indicate that only a small proportion of leprosy patients harbor M. leprae DNA in the nasal mucosa and the integrated diagnostic approach incorporating clinical examination, slit skin smear analysis, and molecular testing of multiple sample types could be a more reliable strategy for improving the case detection in Uttar Pradesh, North India.

FP:25

Multimorbidity In Leprosy: A Retrospective Study

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INTRODUCTION Leprosy remains a public health concern due to stigma, disability, and limited healthcare access. Comorbidities such as diabetes, mental illness, and nutritional deficiencies have been reported, but literature on multimorbidity (the coexistence of multiple conditions) in leprosy remains scarce. This study

was conducted to evaluate the prevalence and patterns of multimorbidity in leprosy. **METHODS** A mixed-methods study was conducted in six tertiary referral hospitals of The Leprosy Mission, India. The clinical details of the first visit were obtained from electronic medical records of the patients who had registered during 2021-2022 and analysed quantitively. Multimorbidity was defined ≥2 conditions other than leprosy. Qualitative insights came from focused group discussions (FGDs) with patients and healthcare providers. **RESULTS** Among 10,428 patients included in the study 81.9% had leprosy as the only disease, 16.4% had one additional condition, and 1.7% had multimorbidity. Diabetes (9.3%), followed by poor wellbeing (5.6%) and cataract (1.5%) were the common comorbidities. Multimorbidity was linked to older age, male gender, care after cure (from leprosy) and disability. FGDs highlighted limited awareness, affordable and accessible services and the need for a guideline addressing multimorbidity. **CONCLUSION** Multimorbidity among people with leprosy was observed only in 1.7% of the patients. Diabetes, mental health issues, disability and malnutrition underscore the need for integrated, person-centred care. Adopting multimorbidity sensitive guidelines to strengthen primary care are vital to enhance outcomes and support holistic wellbeing.

Key words: Leprosy; Multimorbidity; Diabetes; Mental health; Cataract; Disability; Integrated care

FP:26

Leprosy Reactions at Diagnosis in Multibacillary Patients: Baseline Data from a WHO MB-MDT vs Rifampicin, Moxifloxacin and Clarithromycin (RMC) Trial

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BACKGROUND Leprosy reactions, Type 1 and erythema nodosum leprosum (ENL)are acute immunological episodes triggered by Mycobacterium leprae infection. The reactions are the major cause of nerve damage, disability, and stigma. Reactions at the time of leprosy diagnosis represent an under-recognized burden with profound clinical and operational implications. Therefore, this study aims to describe the clinical profile and severity of leprosy reactions among newly diagnosed patients presenting with reactions for the first time, and to quantify the burden of ENL using the ENLIST Severity Score. **METHOD** This study is an ongoing, multicentre open label non inferiority clinical trial (CTRI/2024/064435, ICMR grant number DDR/IIRP23/4691) of monthly supervised regimen of Rifampicin, Moxifloxacin and Clarithromycin verses routine WHO MB MDT. T1R severity was evaluated using a composite clinical–neurological score (A+B+C), and ENL severity using the ENLIST severity scale. Descriptive statistics and multivariable regression analyses were performed. The primary outcome was the proportion of newly diagnosed leprosy patients presenting with reactions, stratified by reaction type (Type 1 and Type 2) along with severity scores. **RESULTS** Of 280 enrolled patients 134 (47.8%) presented with reactions: 104 (37.1%) with T1R (44 mild, 44 moderate, 16 severe) and 30 (10.7%) with ENL, of whom 20 were severe. Among T1R patients, 21.2% had at least one motor impairment and 57.7% had at least one sensory impairment. Most patients (56.7%) were aged 35–64 years, and 33.6% had at least one comorbidity. Over half of ENL patients had sensory impairment. 59.6% of T1R cases had positive bacteriological Index (BI), whereas 80% of ENL cases had BI >3. **CONCLUSION** Nearly half of newly diagnosed MB patients presented with reactions, many with significant nerve impairment. Early recognition and severity assessment are critical to prevent disability and inform programmatic strategies

including improved awareness, timely reporting, and frontline worker education for appropriate recognition and referral. These findings highlight that reactions are not merely complications but a major component of disease burden at diagnosis, recognizing the need for reaction-sensitive diagnostic pathways and strengthened health system preparedness.

Key word - Leprosy reactions; Type 1 reaction; Erythema nodosum leprosum; ENLIST Severity Score; Multibacillary leprosy; Nerve impairment; Baseline characteristics; non-inferiority trial; RMC regimen; Bacteriological Index

FP:27

Experience in Management of Rifampicin Resistant Cases of Leprosy

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INTRODUCTION Multidrug therapy has been essential in the effective killing of Mycobacterium leprae, significantly enhancing leprosy cure rates. The emergence of rifampicin resistance necessitates the use of alternative regimens. Evidence on the effectiveness of such regimens in routine program settings remains limited. This study seeks to assess the effectiveness of an alternate anti-leprosy regimen among patients who completed a 24month treatment. **MATERIALS AND METHODS** A retrospective observational study was conducted at The Leprosy Mission (TLM) Chandkhuri Hospital, Chhattisgarh, India, from 2020–2024. The antimicrobial resistance (AMR) testing was done in Stanley Browne Laboratory, Delhi. This study included patients who were given WHO recommended alternate regimen due to rifampicin resistance. The data was retrieved from patients' medical records. **RESULTS** Out of 510 patients tested, 39 showed rifampicin resistance. Of these, 9 completed 24 months of alternate regimen, 12 remain under treatment, 10 discontinued, and 8 were lost to follow-up. Resistance was most common in Lepromatous Leprosy cases with chronic erythema nodosum leprosum (ENL) while one Borderline tuberculoid (BT) patient had relapsed with new lesions. Among those completing treatment, outcomes were favourable: ENL resolved in 8/9 and bacteriological index declined in 8/9, while the BT patient stayed smear negative. **CONCLUSION** The alternate regimen promotes bacterial clearance and clinical improvement The integration of AMR testing into routine diagnostics, training healthcare providers and equitable access to affordable regimens are key to improving outcomes in rifampicin resistant leprosy.

Key words: Rifampicin resistance, Alternate regimen, antimicrobial resistance (AMR) testing

FP:28

Gendered Vulnerabilities and Strengths among Female Leprosy Patients: A Community- based Quantitative Study.

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BACKGROUND: Leprosy continues to present significant public health and social challenges in India, with women often facing compounded vulnerabilities due to gender based discrimination, stigma, disability, and socio-economic inequities. Despite increasing recognition of these challenges, there remains limited quantitative, community-based evidence exploring how gendered risks and protective factors shape social participation and quality of life among women affected by leprosy. **OBJECTIVES:** This study aimed to assess gender specific vulnerabilities and strengths among women affected by leprosy in a community setting and interpret these findings using a SWOT (Strengths, Weaknesses, Opportunities, Threats) framework.

METHODS: A community based cross sectional quantitative study was carried out among adult women living with leprosy in Purulia district. Participants included women currently receiving multidrug therapy as well as those released from treatment. Social participation was measured using the Participation Scale (P Scale), while quality of life was assessed using the WHOQOL BREF instrument. Descriptive statistics and association analyses were conducted to examine links between disability status, stigma related participation restrictions, and domain specific quality of life scores. **RESULTS:** A total of 40 female persons affected by leprosy from the community were included in the study. Participation restriction was measured using the Participation Scale, and quality of life was assessed using the WHOQOL-BREF developed by the World Health Organization. The mean Participation Scale score was 31.6 ± 10.2, indicating moderate to severe participation restriction among the participants. Nearly 65% of the women experienced moderate restriction, while 25% reported severe restriction, and only 10% had mild restriction. The most affected areas were social participation, employment opportunities, and involvement in community activities. The WHOQOL-BREF domain scores showed that the physical health domain had the lowest mean score (49.8 ± 9.5), followed by the psychological domain (52.4 ± 8.7). The social relationship domain score was 55.9 ± 10.1, and the environmental domain score was 57.3 ± 9.2. Overall, higher participation restriction was associated with lower quality of life, particularly affecting physical and psychological well-being. **CONCLUSION:** The study findings indicate that female persons affected by leprosy experience considerable participation restriction and reduced quality of life, especially in physical and psychological aspects. Social stigma, reduced mobility, and limited opportunities contribute to their vulnerabilities. However, family support and community acceptance acted as important strengths for some participants. The findings highlight the need for gender-sensitive rehabilitation programs, psychosocial support, and community-based interventions to improve participation and quality of life among female leprosy patients.

Keywords: Leprosy; Women; Gendered vulnerability; Social participation; Quality of life; Stigma; Community based rehabilitation.

FP:29

Impact of reaction and neuritis on mental well-being among female patients with leprosy- A case series study.

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INTRODUCTION: Leprosy reactions and neuritis are inflammatory complications that cause pain and nerve damage. These conditions may significantly affect the mental well-being of female patients due to fear of disability, social stigma, and emotional stress. **OBJECTIVES:** 1. To assess the relationship between reaction and neuritis and mental well-being among female leprosy patients. 2. To identify psychological issues among affected female patients. **MATERIALS AND METHODS:** A descriptive case series study was conducted over four weeks among 10 female leprosy patients (both inpatients and outpatients) aged above 18 years. Mental well-being was assessed using the Warwick–Edinburgh Mental Well-being Scale (WEMWBS), a 14-item questionnaire based on experiences during the previous four weeks. Data were collected individually and analysed descriptively. **RESULTS:** A total of 10 participants included in the study with an age group range from 20-65 years. The total wellbeing score ranges from 27-52. The mean of the score was 36. The highest score

was 52 and the lowest was 27. The study indicates that the mental well-being of the study participants was moderate and one shown low mental well-being. **CONCLUSION:** The study finding demonstrates that there is a direct relationship between the reaction neuritis and mental well-being. More number of participants are required to validate and to generalise the study into community level. Keywords: Leprosy reaction, Neuritis, Mental well-being, Female patients, WEMWBS.

FP:30

Profile of Grade 2 Disability Among New Cases Presenting at Tertiary Hospitals

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INTRODUCTION Despite achieving national elimination of leprosy as a public health problem in 2005, India faces a persistent threat where the proportion of Grade 2 Disability (G2D) at the time of diagnosis is trending upward. This rise indicates significant delays in case detection and ongoing community transmission. The Government of Tamil Nadu has set an ambitious goal to eliminate leprosy by 2027, three years ahead of the global Sustainable Development Goal (SDG) mandate. **OBJECTIVES** To recommend targeted interventions to reverse the G2D trend, which is essential for interrupting transmission. To critically examine the feasibility of the State Government's 2027 elimination deadline. **MATERIALS AND METHODS** Study Population: Patients presenting with G2D at the time of diagnosis. Study Site: TLM Hospital, Vadathorasalur, Tamil Nadu. Study Duration: January 2021– December 2025 (5 years). Methodology: A retrospective observational study comparing data on new cases and G2D deformities acquired from the study center and the Government of Tamil Nadu. **RESULTS** The study analysed Grade 2 Disability within 389 new leprosy cases over a period of 5 years (2021-2025) out of which 346 are adults and 43 are pediatric new cases . The final analysis on trends in the demographic and clinical variables will be done and presented **CONCLUSION** The study evaluates whether achieving a leprosy-free; status is feasible in the near future, given current clinical and systemic challenges.

FP:31

Mycobacterium indicus pranii as Adjunct Immunotherapy in Leprosy: Clinical outcomes from a Retrospective Case Series

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BACKGROUND: Mycobacterium indicus pranii (MIP), formerly Mycobacterium w, is a killed, non-pathogenic mycobacterium developed in India as an immunotherapeutic and immunoprophylactic agent for leprosy. Despite effective multidrug therapy (MDT), a subset of multibacillary (MB) leprosy patients demonstrate incomplete clinical response, delayed bacillary clearance, persistent antigenic load, and recurrent lepra reactions requiring prolonged corticosteroid therapy. MIP has been shown to enhance host cell-mediated

immunity, promote Th1/Th17 responses, accelerate bacillary clearance, and modulate lepra reactions when used as an adjunct to MDT. **OBJECTIVES:** To assess the clinical efficacy and safety profile of MIP vaccine in patients with leprosy. **METHODS:** This retrospective case series included leprosy patients who received intradermal MIP vaccine as an adjunct to antileprosy drugs at a tertiary care centre in Central India. Data regarding demographic characteristics, Ridley–Jopling classification, bacterial index (BI), nerve involvement, lepra reactions, MIP dosing schedule, concomitant immunosuppressive therapy, and adverse events were extracted using a standardized clinical proforma. The MIP regimen consisted of 0.2 mL intradermal injection at month 0, followed by 0.1 mL intradermally every 3 months at months 3, 6, 9, and 12. Outcomes were evaluated at baseline and during follow-up at 3, 6, and 12 months. **RESULTS:** A total of 40 patients were analysed, of whom 7 patients completed the full MIP regimen. MIP was given to the majority of patients with multibacillary disease and a history of recurrent or severe lepra reactions. Adjunct MIP therapy was safe and well tolerated, with local injection-site reactions being the most common adverse events. Notably, MIP administration was associated with a reduction in the frequency and severity of lepra reactions, particularly type 2 lepra reactions. A significant steroid-sparing effect was observed, with reduction in cumulative corticosteroid dose and decreased requirement for other immunosuppressive or immunomodulatory agents. Patients with recalcitrant and steroid-dependent lepra reactions showed improved disease control following MIP therapy. **CONCLUSION:** MIP is a safe and effective adjunct immunotherapeutic option in leprosy, particularly in patients with incomplete response to MDT and recurrent or steroid-dependent lepra reactions. Its reaction-modulating and steroid-sparing benefits make it a valuable therapeutic option in difficult-to-treat cases.

FP:32

CHILDHOOD HANSEN'S DISEASE IN CENTRAL INDIA: A CLINICO-EPIDEMIOLOGICAL STUDY HIGHLIGHTING ONGOING TRANSMISSION

DR. DEWASHISH GHUGE.

INTRODUCTION: Childhood Hansen's disease reflects ongoing transmission in the community. Despite national elimination, new paediatric cases continue to occur in endemic regions, underscoring the need for clinico-epidemiological evaluation. **MATERIALS AND METHODS:** This prospective observational study was conducted in the Department of Dermatology of a tertiary care hospital. All new patients up to 14 years of age diagnosed with Hansen's disease in the outpatient department were included. Demographic data, clinical findings (cutaneous lesions, nerve involvement, sensory loss, deformities, and reactions), dermoscopy, slit-skin smear, histopathology, and treatment details were recorded. Patients were classified according to the Ridley–Jopling spectrum, and data were analysed. **RESULTS:** Out of 120 leprosy cases registered during the study period, 25 (20.83%) were childhood leprosy cases. Twelve (48%) children were aged 6–10 years. Fifteen (60%) reported contact with a diagnosed leprosy case. Cutaneous lesions were present in 24 (96%) children, while one (4%) had pure neural involvement. Borderline tuberculoid leprosy was the most common type in 12 (48%), followed by tuberculoid leprosy in 10 (40%). Grade 2 disability was detected in 2 (8%) children. All patients received multidrug therapy, with multibacillary regimen in 20 (80%) and paucibacillary in 5 (20%). **CONCLUSION:** Childhood Hansen's disease constituted nearly one-fifth of new cases, reflecting ongoing community transmission. Borderline tuberculoid was the predominant type, with over half reporting contact history. Detection of Grade 2 disability highlights the need for early diagnosis and intervention. Contact

tracing, health education, and surveillance is vital to reduce disease burden and prevent long-term sequelae in children.

FP:33

Pediatric Leprosy as an Indicator of Ongoing Transmission in the Community

Sangita Singh, IGIMS Patna

BACKGROUND Pediatric leprosy is considered a sensitive epidemiological indicator of active and ongoing transmission of Mycobacterium leprae within the community. The occurrence of leprosy in children reflects recent infection, continued bacillary circulation, and possible gaps in early detection and contact surveillance. Despite global elimination efforts, new pediatric cases continue to be reported from endemic regions, highlighting persistent transmission dynamics. **OBJECTIVE** To evaluate the clinico-epidemiological profile of pediatric leprosy cases and assess their significance as an indicator of ongoing community transmission. **METHODS** This observational study included diagnosed cases of leprosy in patients aged ≤14 years presenting to our tertiary care center. Detailed history including contact tracing, clinical examination, slit-skin smear where indicated, and classification according to WHO criteria were performed. Data regarding type of leprosy, presence of reactions, deformities, and household contact history were recorded and analyzed. **RESULTS** Among the total new leprosy cases registered during the study period, pediatric cases constituted a significant proportion, indicating sustained transmission. The majority belonged to the borderline spectrum, with a notable percentage reporting household contact with known leprosy patients. A small proportion presented with reactions and early deformities, reflecting delayed detection in some cases. **CONCLUSION** The persistence of pediatric leprosy cases underscores ongoing transmission of M. leprae in the community. Strengthening active surveillance, early case detection, contact screening, and community awareness programs is essential to interrupt transmission chains. Pediatric cases serve as a crucial epidemiological marker for assessing the effectiveness of leprosy control strategies.

FP:34

Clinical, Therapeutic, and Stigma-Related Challenges in Lepromatous Leprosy with the Emerging Role of Apremilast in Type 2 Reaction

Priya Kumari, Katihar Medical College

BACKGROUND Lepromatous leprosy (LL) represents the multibacillary pole of the disease spectrum, characterized by high bacillary load, diffuse cutaneous infiltration, symmetric nerve involvement, and systemic complications. Type 2 lepra reaction, also known as erythema nodosum leprosum (ENL), is an immune complex–mediated inflammatory complication that significantly contributes to morbidity. Despite advances in multidrug therapy (MDT), LL continues to pose substantial clinical, therapeutic, and psychosocial challenges. **OBJECTIVE** To highlight the clinical complexity, treatment-related limitations, and stigma burden in LL, and to explore the emerging role of Apremilast in managing Type 2 lepra reaction. **CLINICAL CHALLENGES** LL presents with widespread nodules, plaques, madarosis, sensory impairment, and late deformities. ENL episodes are often recurrent and systemic, manifesting with painful nodules, fever, neuritis, arthritis, orchitis, and iritis. Chronic inflammation predisposes patients to nerve damage and disability, even during adequate MDT. **THERAPEUTIC CHALLENGES** While WHO-recommended MDT effectively reduces bacillary load, ENL management relies on corticosteroids, thalidomide, and clofazimine. Long-term

corticosteroid therapy is associated with metabolic, infectious, and skeletal adverse effects. Thalidomide, though effective, is teratogenic and restricted in women of childbearing age. Clofazimine has delayed onset and pigmentation-related cosmetic concerns. These limitations necessitate safer steroid-sparing alternatives. **STIGMA-RELATED CHALLENGES** Visible deformities, facial infiltration, and social misconceptions perpetuate stigma, leading to social isolation, psychological distress, delayed presentation, and poor treatment adherence. Gender-based and socioeconomic discrimination further aggravate disease burden. **EMERGING ROLE OF APREMILAST** Apremilast, an oral phosphodiesterase-4 inhibitor, modulates inflammatory cytokines including TNF-α, IL-6, and IFN-γ. Preliminary evidence suggests its potential as a steroid-sparing agent in chronic or recurrent ENL, with a favourable safety profile and minimal immunosuppression risk. Early clinical experiences indicate reduction in ENL severity and recurrence. **CONCLUSION** Lepromatous leprosy remains a multidimensional challenge encompassing medical, therapeutic, and social domains. Apremilast shows promise as a novel adjunct in Type 2 reaction, warranting larger controlled studies to establish its efficacy and long-term safety.

FP:35

Clinical, Epidemiological and Histopathological Profile of Histoid Leprosy: A Case Series from a Tertiary Care Centre in Chhattisgarh.

Dr Shashi Shekhar Pandey, Chhattisgarh Institute of Medical Sciences, Bilaspur, Chhattisgarh

BACKGROUND Histoid leprosy is a rare variant of multibacillary leprosy characterized by the sudden eruption of dome-shaped lesions usually associated with dapsone resistance. Early diagnosis and treatment of histoid leprosy is important as it might serve as a reservoir and source of community spread of leprosy. **CASE SERIES** The present study comprises fifteen biopsy proven cases of histoid leprosy evaluated over a one-year period. All the patients were clinically assessed and evaluated with slit-skin smear examination and histopathological analysis; fite–faraco staining was performed in diagnostically doubtful cases. In addition, the study highlights three cases of particular significance due to associated social stigma and clinical diagnostic dilemmas, which, if left unrecognized, could potentially contribute to continued transmission, given the high bacillary load characteristic of histoid leprosy. **DISCUSSION** These cases highlight the clinical diversity of histoid leprosy and emphasize the importance of maintaining a high index of suspicion for its diagnosis, particularly in atypical presentations. The study also discusses various treatment regimens that have been recommended or practiced specifically for histoid leprosy, considering its high bacillary load. Furthermore, it underscores the need for heightened clinical vigilance in endemic regions and continuous monitoring for subtle lesions at other body sites.

FP:36

OCULAR CHANGES IN LEPROSY: A CROSS-SECTIONAL STUDY

Komal Kumari, ANMCH Gaya

BACKGROUND: Leprosy is a chronic mycobacterial infection, highly prevalent in developing countries like India, which often involves the eyes estimated to be 70-75% worldwide. Around 10-50% suffer from severe ocular symptoms and vision loss occurs in 5% of cases approximately. Ocular involvement may be due to direct invasion, lepra reaction, other miscellaneous conditions not related to leprosy. As per WHO, ocular

disability in leprosy is graded as Grade 0 (no ocular involvement), Grade 1 (ocular involvement with normal vision), Grade 2 (visual impairment). **METHODOLOGY:** It is a cross- sectional study, conducted at a tertiary care center of Bihar for 12 months. All the cases of Hansen Disease presenting to Dermatology OPD were examined, evaluated and referred to Ophthalmology Dept. for gross examination, visual acuity and slit lamp examination. Both Leprosy related and general ocular changes were evaluated and tabulated as per WHO disability criteria for eye changes. **RESULTS:** Out of total 70 cases, ocular examination by naked eye revealed diminution of vision in 67 percent cases followed by madarosis in 51 percent cases. Slit lamp examination revealed posterior subcapsular cataract in 46 percent cases followed by immature senile cataract in 39 percent cases. **CONCLUSION:** WHO Disability Grade 0 was found in 84 percent cases followed by Grade 1 in 15 percent cases followed by Grade 2 in 1 percent cases.

FP:37

Accelerating Leprosy Elimination through Rapid Point-of-Care Molecular Diagnosis Using RLEP LAMP Assay

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BACKGROUND: Despite sustained efforts under India's National Leprosy Eradication Programme (NLEP), delayed diagnosis remains a major barrier to achieving zero transmission and Grade-2 disability reduction targets. Conventional diagnosis relies primarily on clinical examination and slit-skin smear (SSS) microscopy, which has limited sensitivity in paucibacillary (PB) cases. Rapid, sensitive, and field-deployable molecular diagnostics using appropriate clinical samples are urgently needed to strengthen early case detection. **OBJECTIVES:** To evaluate the feasibility, diagnostic performance, and field applicability of RLEP-based Loop-Mediated Isothermal Amplification (LAMP) assay for detection of Mycobacterium leprae DNA from clinical samples, including nasal swab and slit-skin smear. **METHODS:** A cross-sectional diagnostic evaluation was conducted among clinically suspected leprosy cases and household contacts in endemic settings. Paired nasal swab and SSS samples were collected. DNA extracted from these clinical samples was subjected to RLEP LAMP assay targeting the repetitive element (RLEP) sequence of M. leprae under isothermal conditions. Diagnostic performance was compared with SSS microscopy and conventional PCR as reference standards. Turnaround time, operational feasibility, and usability at peripheral health facilities were assessed. **RESULTS:** RLEP LAMP demonstrated higher sensitivity than SSS microscopy, particularly in PB cases, with amplification achieved within 30–60 minutes. Both nasal swab and SSS samples yielded reliable detection, highlighting nasal swab as a non-invasive and field-friendly specimen. The assay required minimal laboratory infrastructure and was successfully implemented using portable equipment in decentralized settings. **CONCLUSION:** RLEP-based LAMP assay using nasal swab and slit-skin smear samples offers a rapid, sensitive, and operationally feasible point-of-care molecular diagnostic approach. Its integration into routine leprosy control programs can strengthen early detection, contact screening, and accelerate leprosy elimination efforts in India.

Keywords: Leprosy, Mycobacterium leprae, RLEP LAMP assay, Nasal swab, Slit-skin smear, Point-of-care diagnosis.

FP:38

Relationship Between Nerve function impairment and Motor Dexterity in People Affected by Leprosy Using the Jebsen–Taylor Hand Function Test

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INTRODUCTION Leprosy is a chronic infectious disease that primarily affects the peripheral nerves, leading to sensory and motor impairments. Sensory loss is usually the earliest manifestation and plays a crucial role in hand function. Adequate sensory feedback is essential for fine motor control, coordination, and dexterity. In people affected by leprosy, loss of sensation in the hands can result in reduced motor performance even before significant muscle weakness develops. This study aims to explore the relationship between sensory loss and motor dexterity using a standardized hand function assessment. **OBJECTIVE** 1. To know relationship between nerve function impairment and motor dexterity. 2. To evaluate motor dexterity of the hand using the Jebsen–Taylor Hand Function Test. **INCLUSION CRIERIA** 1. Patient diagnosed with leprosy PB or MB as per WHO criteria. 2. Must documented with nerve function impairment. 3. Medically stable and able to follow verbal instruction 4. Cooperative patients 5. Age between 18 - 60 both genders . **EXCLUSION CRITERIA** 1. Patient with visible deformities . 2. History of neurological disorder or peripheral neuropathy other then leprosy . 3. Sever visual or cognitive impairment. 4. Presence of any acute lepra reaction at the time of assessment. **MATERIAL AND METHODS** A cross-sectional observational study was conducted at TLM Purulia Home and Hospital over a period of two weeks to examine the relationship between sensory loss and motor dexterity in people affected by leprosy. A total of 60 patients diagnosed with leprosy, aged between 18 and 60 years, including both males and females, were included in the study. Patients with sensory impairment in one or both hands, with or without mild motor impairment, confirmed through clinical sensory examination, were included, as the study aimed to assess the impact of sensory loss on hand motor dexterity under natural clinical conditions. Participants were required to be medically stable, able to understand instructions, and willing to participate. Patients with severe hand deformities preventing test performance, active hand ulcers or infections, history of hand injury or surgery unrelated to leprosy, or any other neurological or musculoskeletal condition affecting hand function were excluded from the study. **RESULT** A total of 30 leprosy patients were included in the study. Among them, 15 patients (26.9%) had sensory loss, while 15 patients (42.3%) had intact sensation. The remaining entries had incomplete sensory data. Assessment of hand function using various activities such as writing, card turning, handling small objects, feeding, checkers, and lifting light and heavy objects showed wide variation in performance among patients. Patients with sensory loss generally required more time and showed poorer performance compared to those with intact sensation. Activities involving fine motor skills, such as writing and handling small objects, were more affected than gross motor activities like lifting large objects. These findings indicate that sensory impairment has a negative impact on hand function and daily activities. **CONCLUSION** The study concludes that sensory loss in leprosy patients is associated with reduced hand functional ability, particularly in tasks requiring precision and coordination. Patients with intact sensation demonstrated better performance and functional independence.

This highlights the importance of early detection of sensory impairment and timely physiotherapy and rehabilitation interventions to improve hand function and prevent disability. Proper management can enhance the functional independence and overall quality of life of leprosy patients. Key words: Leprosy, Sensory loss, Motor dexterity, Hand function, Jebsen–Taylor Hand Function Test

FP:39

From Detection to Elimination: The Role of Multiplex PCR in Leprosy Control

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BACKGROUND: Leprosy diagnosis remains challenging in paucibacillary (PB), pure neuritic leprosy (PNL), and child leprosy cases due to low bacillary load and atypical clinical presentations. Conventional RLEP PCR, though widely used, often yields limited sensitivity in these groups. **OBJECTIVE:** To evaluate the clinical utility of multiplex PCR in comparison to RLEP PCR for improved detection of Mycobacterium leprae in diagnostically difficult cases. **METHODS:** Suspected leprosy cases, including PB, PNL, and child leprosy, were subjected to both RLEP PCR and multiplex PCR assays targeting multiple M. leprae genetic loci (RLEP, 16S rRNA and SodA). Percentage positivity was compared across groups. **RESULTS:** Multiplex PCR demonstrated higher positivity rates than RLEP PCR in PNL, child leprosy, and PB cases. This enhanced sensitivity underscores its ability to detect M. leprae DNA in low-bacillary-load samples, thereby reducing false negatives. **CONCLUSION:** Multiplex PCR offers superior diagnostic yield over RLEP PCR in clinically challenging leprosy groups. Its integration into diagnostic algorithms and surveillance frameworks can strengthen early case detection, improve child leprosy monitoring as a sentinel indicator of transmission, and accelerate progress toward leprosy elimination. In summary, multiplex PCR is not just a laboratory innovation—it is a clinical enabler for leprosy elimination, bridging the gap between early detection, contact tracing, and programmatic surveillance.

FP:40

Understanding Healing: A comparative analysis in Chronic Diseases with leprosy — A Scoping Review

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BACKGROUND: Healing in leprosy has traditionally been equated with bacteriological cure, often overlooking persistent disability, stigma, and long-term psychosocial consequences. In contrast, other chronic diseases increasingly conceptualise healing as a broader process of recovery and adaptation. Exploring these perspectives may inform a more comprehensive approach to post-cure leprosy care. **OBJECTIVES:** To map how healing is defined and experienced in leprosy, tuberculosis, HIV/AIDS, diabetes mellitus, and schizophrenia, and to identify conceptual and practical lessons relevant to post-treatment leprosy care. **METHODS:** A scoping review was conducted following the Arksey and O'Malley framework and reported in accordance with PRISMA-ScR guidelines. PubMed and PsycINFO were searched for qualitative studies published in English between January 2012 and December 2022 from low- and middle-income countries. Eligible studies examined definitions, determinants, or models of healing across the five conditions. Data

were charted and thematically synthesised using the Joanna Briggs Institute approach, with analysis organised across physical, psychological, socio-economic, socio-relational, and spiritual domains. **RESULTS:** Eighty-five studies met the inclusion criteria (leprosy = 20, tuberculosis = 9, diabetes = 8, HIV/AIDS = 36, schizophrenia = 12). Across conditions, healing was more commonly described as adaptation, resilience, and social reintegration rather than complete biomedical cure. Five interrelated dimensions—physical, psychological, socio-economic, socio-relational, and spiritual—consistently shaped recovery experiences. Compared with other chronic diseases, leprosy literature remained predominantly biomedical, with limited exploration of psychosocial, socio-economic, relational, and spiritual aspects of healing. **CONCLUSION:** Healing in chronic diseases is multidimensional and extends beyond clinical cure. Broadening leprosy care to incorporate holistic, post-cure approaches is essential to improve long-term outcomes, dignity, and quality of life for persons affected by leprosy.

Keywords: Leprosy, healing, chronic disease, scoping review, holistic care
Funding: This study was supported by the Leprosy Research Initiative (LRI), grant number FP23/100019.

FP:41

Aarogyata ki Ore: Development of a Holistic Health Education Guideline for Healing Beyond Cure in Leprosy

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BACKGROUND: While multidrug therapy (MDT) achieves bacteriological cure in leprosy, many persons affected continue to experience reactions, nerve impairment, disability, psychosocial distress, stigma, and economic vulnerability. Conventional leprosy education focuses largely on biomedical aspects, often failing to address the broader dimensions of healing required for long-term well-being. The Aarogyata ki Ore (Towards Wholeness) guideline was developed to address this gap through a structured, holistic health education approach. **METHODS:** The guideline was developed using a systematic, iterative, and participatory process. An initial scoping review of chronic disease healing literature was undertaken, starting with physical, psychological, and social dimensions of care, while remaining open to emergent themes through inductive analysis. This led to the expansion of the framework into five core pillars: physical, psychological, socio-economic, socio-relational, and spiritual well-being. Formative qualitative research with healthcare providers and persons affected by leprosy was conducted to assess relevance and feasibility. The draft guideline subsequently underwent expert review across clinical, psychosocial, rehabilitation, and programmatic domains, alongside validation by persons affected by leprosy to ensure cultural relevance and alignment with lived experience. **RESULTS:** The final guideline presents a five-pillar holistic healing framework operationalised through a stepwise, stage-specific health education pathway from diagnosis through treatment, completion, and post-treatment care. It adopts a bipartite structure, providing parallel guidance for healthcare providers and persons affected by leprosy, thereby strengthening provider–patient communication, self-care practices, treatment adherence, and participation in family and community life. Case narratives are integrated to contextualise medical information and reinforce hope and resilience. **CONCLUSION:** Aarogyata ki Ore offers a field-validated, evidence-informed, and person-centred health education guideline that reframes leprosy care as a journey of healing beyond cure. The framework provides

a scalable model for integrating holistic well-being into routine leprosy services, with potential to improve long-term outcomes, dignity, and social inclusion.
Keywords: Leprosy, holistic care, health education, healing framework, psychosocial support, disability Prevention

FP:42

Clinicoepidemiological study of Hansen's disease in pediatric age group.

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INTRODUCTION : Leprosy is a chronic granulomatous infection caused by Mycobacterium leprae that primarily affects skin and peripheral nervous system. Although India achieved elimination in 2006, new cases continue to be reported every year, with children constituting a significant proportion. Childhood leprosy reflects ongoing transmission in the community. Early diagnosis and treatment are essential to prevent deformities and reduce psychosocial and economic burden. **OBJECTIVE :** To study the clinical and epidemiological profile of childhood leprosy in patients <15 years attending Nalanda Medical College and Hospital, Patna. **MATERIALS AND METHODS :** This hospital-based cross-sectional study included 60 children diagnosed with leprosy over 18 months. Detailed history, clinical examination, and slit-skin smear (in selected cases) were performed. Epidemiological variables including age, sex, socioeconomic status, and contact history were analyzed. **RESULTS :** Majority were in the 10–14 years age group with male predominance (M:F = 1.5:1). Multibacillary leprosy was observed in 30% cases. Tuberculoid leprosy (TT) was the most common clinical type. Positive household contact was present in 70% cases. Nerve involvement was seen in 30%, deformities in 16.66%, and lepra reactions in 5% cases. **CONCLUSION :** Tuberculoid leprosy was the most common clinical type. Prevalence of lepromatous leprosy, lepra reactions, and deformity was low.

FP:43

Comparative Evaluation of Sequencing Methodologies for Whole-Genome Analysis of Mycobacterium leprae to study Antimicrobial Resistance and Lineage Patterns

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INTRODUCTION Leprosy, a chronic illness that has persisted for centuries, continues to be a significant public health concern. Although the existing worldwide strategy for leprosy aims for zero cases, disabilities, and stigma by 2030, India still reports the greatest incidence of cases. Mycobacterium leprae, the primary causative agent of leprosy, exhibits minimal genetic heterogeneity among its strains, which complicates differentiation using traditional genotyping techniques. Recent development in sequencing-based approaches has facilitated advancement of enhanced genotyping methods for the molecular epidemiology of leprosy. **METHODOLOGY** This study compares sequencing methodologies for Mycobacterium leprae - positive biopsy samples to determine the most suitable approach for detection, strain typing, and phylogenetic analysis. In our first approach, DNA was isolated from positive biopsy samples and directly

sequenced using whole genome shotgun sequencing on Illumina NextSeq 2000. In our second approach, targeted enrichment was performed using the Twist Target Enrichment Standard Hybridization v2 protocol which was applied to two sample types: one in which DNA was directly isolated from positive biopsy samples, and other in which host depletion was performed before isolation of Mycobacterium leprae DNA. Following this, 15 samples were sequenced using this combined technique to confirm our findings. The sequenced data received from all techniques were analysed using a comprehensive bioinformatic workflow and filtered using R for effective visualization. **RESULTS** The results obtained after analyzing the paired end sequencing reads from direct shotgun sequencing approach showed an approximate coverage of (<50%) and depth (<5X). However, after employing the combined approach that incorporated host depletion and target enrichment for whole genome sequencing of Mycobacterium leprae, we achieved ideal levels of coverage (>95%) and depth (>10X). Further downstream analysis using this combined approach revealed high confidence single nucleotide polymorphisms (SNPs) not only within the DRDR regions but also across other genes, consistent with long term microevolution. **CONCLUSION** The combination of host depletion and targeted enrichment using the customized hybridization protocol provided optimal levels of coverage and depth, proving to be a reliable method for providing insights into evolution, antimicrobial resistance and phylogeographic patterns in the present Indian scenario.

FP:44

BEYOND MDT-MBR: HEMATOLOGICAL MARKERS ASSOCIATED WITH TREATMENT NON-RESPONSE IN LEPROSY

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BACKGROUND: The detection of haematological variation between responder and non-responder leprosy patients is crucial in identifying potential diagnostic or prognostic biomarkers. This study is an evaluation of immune-inflammatory markers, including neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR), monocyte-to-lymphocyte ratio (MLR), systemic immune-inflammation index (SII), and other haematological parameters in patients with leprosy who received a 1-year multidrug therapy multibacillary regimen (MDT-MBR). **OBJECTIVE:** To analyse the variations in haematological parameters, including NLR, PLR, MLR, and SII between responder and non-responder leprosy patients and determine their statistical significance. **METHODS:** This is a cross-sectional, retrospective study that includes 20 patients (8 responders and 12 non-responders) recruited between February to December 2025 from the Leprosy Clinic, Department of Dermatology, PGIMER. Parameters evaluated included absolute neutrophil count (ANC), absolute lymphocyte count (ALC), absolute monocyte count (AMC), absolute platelet count (APC), NLR, PLR, MLR, and SII. Descriptive statistical analysis and visualizations were done using GraphPad Prism 8.0.2 to highlight trends and distributions. **RESULTS:** The ANC indicates similar averages between non-responders (5.76 ± 2.06) and responders (5.88 ± 3.08) (p = 0.918). Non-responders have slightly higher ALC values (2.63 ± 1.12) compared to responders (1.98 ± 0.83) (p = 0.179). The values of AMC are somewhat higher in non-responders (0.85 ± 0.47) than in responders (0.69 ± 0.25) (p = 0.385). Non-responders show higher APC values (269.08 ± 67.22) compared to responders (236.13 ± 99.75) (p=0.386). The values of NLR are elevated in responders (3.25 ± 1.44) compared to non-responders (2.58 ± 1.68). PLR values are comparable between both groups, with non-

responders at (126.31 ± 75.10) and responders at (130.95 ± 59.62) (p=0.885). Value for MLR is higher in responders (0.40 ± 0.18) than in non-responders (0.33 ± 0.13) (p=0.338). SII is slightly higher in responders (748.39 ± 434.51) than non-responders (692.13 ± 452.71) (p=0.785). **CONCLUSIONS:** A comparison of haematological parameters between responders and non-responders to leprosy patients treated with a 1-year MDT-MBR regimen showed that the differences were not statistically significant (p > 0.05). Non-responders showed an increased ALC, AMC, and APC, whereas responders exhibited an increased NLR, MLR, and SII. Such disparities highlight the significance of these haematological indicators in the management of leprosy disease. More research with large patient groups is required to validate these markers and enhance personalised treatment strategies.

Keywords: Haematological markers, immune biomarkers, MDT non-responders, inflammatory markers, systemic immune-inflammation index

FP:45

Neuroimaging Spectrum of Central Nervous System and Brachial Plexus Involvement in Hansen's Disease: A Case Series

Divya Priyadarshi, KGMU

BACKGROUND: Hansen's disease (HD) predominantly affects peripheral nerves; however, emerging evidence suggests involvement of the central nervous system, dorsal root ganglia, and proximal nerve plexuses. Magnetic resonance (MR) imaging has proven useful in detecting such subclinical involvement. **METHODS:** This case series included Seven multidrug therapy (MDT)–naïve patients with multibacillary HD and cranial nerve palsy, confirmed on skin biopsy using Wade–Fite staining. All patients were immunocompetent. MR imaging of the brain, spinal cord, proximal nerve plexuses, and dorsal root ganglia was performed, with clinical correlation. Follow-up MR imaging after one year of MDT was available in two patients. **RESULTS:** Seven male patients aged 18–64 years (mean 34.9 years) were included. Four patients had borderline tuberculoid HD and three had borderline lepromatous HD; three patients experienced type 1 lepra reaction. Eye–Hand–Foot scores ranged from 4 to 7. Facial nerve (VII) palsy was observed in six patients, while one patient showed lower cranial nerve involvement (IX, X, XII). MR imaging abnormalities limited to the spinal cord were observed in four patients, characterized by unilateral brachial plexus thickening, hyperintensity of the anterior horn cells, and hyperintense signals in the upper cervical cord, extending from C3 to C7 levels. Two patients, including one with lower cranial nerve involvement, showed hyperintense signals in the medulla involving the left olivary nucleus and pyramidal tract on MR imaging. One of them demonstrated complete resolution of medullary hyperintensity in follow up imaging. **CONCLUSION:** This series demonstrates that HD may involve the brain, spinal cord, and brachial plexus beyond peripheral nerves. An immune-mediated response to Mycobacterium leprae antigens likely underlies these imaging findings.

POSTER PRESENTATION

EP:01

FACIAL NERVE INVOLVEMENT IN LEPROSY: CASE SERIES FROM A TERTIARY CARE CENTRE

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INTRODUCTION: Leprosy is a chronic granulomatous disease with a marked predilection for peripheral nerves. Although the ulnar, median, and common peroneal nerves are most frequently involved, recognizing facial nerve involvement in leprosy is crucial for appropriate management, even though it is relatively uncommon and often under-recognized. When present, can lead to significant functional impairment and cosmetic deformity, especially because of the involvement of ocular and facial muscles. **MATERIALS AND METHODS** This study included ten patients diagnosed with leprosy based on clinical features and supported by slit-skin smear and/or histopathological examination. All patients underwent a comprehensive clinical evaluation of the facial nerve and its branches, including assessment of motor function, sensory function, and nerve conduction. Electrophysiological assessment, through facial nerve conduction studies, was conducted to identify clinical and subclinical involvement of the facial nerve in leprosy patients. **RESULTS** Facial nerve involvement was detected in 2 out of 10 patients. Both patients exhibited subclinical facial nerve involvement without overt clinical facial palsy and belonged to the borderline tuberculoid (BT) and lepromatous leprosy (LL) spectrum. Electrophysiological studies revealed prolonged latency in the zygomatic and temporal branches of the facial nerve in these patients. Conclusion The presence of electrophysiological abnormalities in leprosy patients, even without clinical signs, underscores the need for comprehensive monitoring and early intervention. The incidence of subclinical facial nerve involvement highlights the importance of electrophysiological monitoring and thorough assessment of facial and autonomic nerve functions to facilitate early detection and prevent long-term disability.

EP:02

Lucio Phenomenon – Unmasking a Forgotten Reactional State in Leprosy: A Case Report

Dr. Sangita Singh, I.G.I.M.S., Patna

BACKGROUND: Lucio phenomenon is a rare, severe necrotizing reactional state seen predominantly in patients with diffuse lepromatous leprosy, often underrecognized outside endemic regions. It represents an immune complex–mediated vasculopathy and is associated with significant morbidity and mortality if not promptly diagnosed and treated. **CASE REPORT:** We report a case of a middle-aged patient presenting with painful, irregular purpuric plaques rapidly progressing to necrotic ulcers predominantly over the extremities. There was no prior diagnosis of leprosy. Cutaneous examination revealed sharply demarcated ulcers with surrounding livedoid changes. Slit skin smear demonstrated a high bacillary index. Histopathology showed features of necrotizing vasculitis with endothelial proliferation, thrombosis, and abundant acid-fast bacilli within vessel walls, confirming Lucio phenomenon. The patient was managed with multidrug therapy for leprosy along with systemic corticosteroids and supportive care, leading to gradual clinical improvement. **CONCLUSION:** Lucio phenomenon remains a forgotten and often misdiagnosed reactional state of leprosy.

Early recognition based on clinical suspicion, bacteriological examination, and histopathology is crucial to prevent fatal outcomes. This case highlights the importance of considering Lucio phenomenon in patients presenting with necrotic ulcers in endemic areas, even in the absence of a prior leprosy diagnosis.

EP:03

Penile Involvement in Hansen's Disease: A Case Series

Abhijeet Brizawasi

Penile involvement in Hansen's disease is distinctly uncommon and often under-recognized, particularly in the lepromatous spectrum. We report four cases of penile involvement across different spectra of leprosy, predominantly lepromatous leprosy. Four patients of age group 20-60 years presented with penile lesion. Clinical presentations included infiltrated plaques, nodules, and penile involvement presenting as phimosis or paraphimosis, occurring in association with systemic features of multibacillary disease. All cases demonstrated a high bacillary load with histopathological features consistent with lepromatous or borderline lepromatous leprosy. Recognition of genital involvement is crucial, as it may mimic sexually transmitted or inflammatory dermatoses, leading to diagnostic delay. Early diagnosis and appropriate multidrug therapy resulted in significant clinical improvement, underscoring the importance of meticulous genital examination in Hansen's disease.

EP:04

MDT: The difference between life and death in a case of Erythema Nodosum Necroticans

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BACKGROUND: Erythema nodosum necroticans is an uncommon and severe complication of type 2 Erythema Nodosum Leprosum reaction encountered in lepromatous and borderline lepromatous leprosy , characterised by painful ulcerating nodules due to intense neutrophilic panniculitis and vasculitis. Non adherence to MDT disrupts immune balance leading to recurrent flares and severe outcomes. **CASE REPORT**: A 35 year old female presented with evanescent crops of multiple erythematous tender nodules and ulcers over the body associated with fever ,she was on MDT for lepromatous leprosy without dapsone(Because of hemolysis) which she discontinued .patient was admitted and managed with corticosteroids , thalidomide and MDT (without dapsone) started again ,later she presented to emergency with deep non healing ulcers and signs and symptoms of septicemic shock and history of treatment default ,she died of multiorgan dysfuntion as a sequelae. **EXAMINATION**: Lepromatous facies , madarosis and infiltration of pinna. Multiple erythematous evanescent tender nodules, blisters and ulcers with punched out appearance all over the body. Thickened bilateral ulnar nerve and tender cervical lymphadenopathy **INVESTIGATION**: Blood investigations showed neutrophilic leucocytosis ,raised ESR and CRP, Slit skin smear –Positive for acid fast bacilli Histopathology – epithelioid granuloma with lepra cells and neutrophilic infiltration in dermis **CONCLUSION**: This case highlights how treatment non adherence can transform a manageable hypersensitivity reaction into a multisystem emergency with high mortality risk.

EP:05

Towards Zero Disability at Diagnosis: Trend of Disability Grades at First Presentation among Persons Affected by Leprosy (2021–2025)

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Disability at the time of leprosy diagnosis is preventable. The presence of disability at first presentation reflects delayed detection and missed opportunities for early intervention within the healthcare system. **OBJECTIVE** To assess the year-wise trend of WHO Grade 1 and Grade 2 disability at first presentation To evaluate disability at diagnosis as an indicator of early detection system performance in relation to the goal of zero disability **ANALYSIS** From 2021–2025, 1,283 new leprosy cases presented with disability at diagnosis Grade 1: 462 cases Grade 2: 821 cases Grade 2 (≈64%) indicates delayed detection after preventable nerve damage Disability persisted every year (114–343 cases annually), reflecting gaps in early detection and referral From a zero-disability perspective, disability at diagnosis represents failure of early detection systems **RESULTS/FINDINGS: KEY MESSAGE** "Persistent disability at diagnosis reflects missed opportunities for early detection—moving towards zero disability requires system-wide action. **CONCLUSION** The continued occurrence of disability at first presentation demonstrates that the goal of zero disability at diagnosis has not yet been achieved. Disability at diagnosis should be recognised as a health system performance indicator, reinforcing the need to strengthen community awareness, early screening, timely referral, and coordinated care across all levels of the healthcare system.

EP:06

Beyond Neuropathy: Integrating Vascular Assessment into Foot Care Strategies for Leprosy-Affected Persons

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BACKGROUND: Foot complications in leprosy are traditionally attributed to peripheral neuropathy, leading to a strong focus on sensory protection and wound prevention. However, compromised arterial perfusion may coexist and exacerbate tissue vulnerability. Failure to recognize vascular insufficiency can undermine foot care interventions and contribute to non-healing ulcers and amputations. **AIM:** To evaluate the role of Ankle-Brachial Index (ABI) measurement in enhancing comprehensive foot risk assessment among multibacillary leprosy patients with sensory impairment. **METHODS**: This hospital-based cross-sectional study included 100 multibacillary leprosy patients with loss of foot sensation, all on multidrug therapy. ABI was measured using handheld Doppler ultrasound to assess arterial perfusion. Demographic data, duration of disease, and presence of systemic vascular risk factors were recorded. ABI findings were analyzed in relation to clinical foot risk. Results: out of 100 multibacillary patients (mean age 39.8 ± 14.6 years; 67%

male), diabetes and hypertension were present in 6% and 9%, respectively; 32% reported smoking. Mean ABI was 0.897 (right) and 0.893 (left). PAD (ABI < 0.90 in either limb) was identified in 48% (32% bilateral; 16% unilateral). Severity (worst limb): mild 26%, moderate 24%, severe/incompressible 0%. Among PAD cases, 54% were male and 31% reported smoking ABI evaluation identified previously unrecognized arterial compromise in nearly half of the participants (48%), despite the absence of classical ischemic symptoms. The coexistence of neuropathy and PAD suggests a compounded risk for foot breakdown. Patients with abnormal ABI values represent a subgroup requiring intensified preventive and rehabilitative interventions. Discussion: This study demonstrates that neuropathy alone does not fully explain foot morbidity in leprosy. ABI-based vascular assessment adds a critical dimension to foot care planning, enabling clinicians to tailor interventions such as customized footwear, offloading strategies, physiotherapy, and timely vascular referral. **CONCLUSION:** Integrating ABI measurement into routine leprosy foot care enables a more holistic risk assessment by addressing both neural and vascular factors. This dual pathway approach has the potential to improve ulcer prevention, enhance healing outcomes, and reduce amputations. Recommendations: Tertiary care Leprosy programs should adopt ABI screening as part of standard foot evaluation and strengthen interdisciplinary care involving physiotherapy and vascular health education. Acknowledgement: The authors acknowledge financial support from the Royal Society of Tropical Medicine and Hygiene (RSTMH) for this research. Key words: Leprosy, Peripheral Neuropathy, Peripheral Arterial Disease, Foot Ulcer, Risk Assessment.

EP:07

Biologics in Erythema Nodosum Leprosum: Experience with Etanercept in Recalcitrant Cases

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INTRODUCTION Erythema nodosum leprosum(ENL) is an immune-complex mediated lepra reaction associated with multibacillary leprosy, characterized by painful nodules, neuritis, and systemic inflammation. Conventional therapy relies on Oral Corticosteroids, Thalidomide, and high-dose Clofazimine, but many patients develop chronic or refractory disease with relapses and drug-related morbidity. TNF-α plays a pivotal role in ENL pathogenesis, and anti-TNF agents have emerged as potential alternatives in management of refractory cases. **CASE SYNOPSIS** Five patients with multibacillary leprosy and recurrent, severe ENL(ENLIST ENL Severity scale>8) despite prolonged Thalidomide and Corticosteroid use were included. Patients were administered Etanercept 300 mg subcutaneously twice weekly for 3 months, followed by 300 mg once weekly. Patients were followed for 6-24 months. Primary outcomes were reduction in frequency/severity of ENL episodes, systemic symptoms, and hospitalizations; secondary outcomes included tapering of immunosuppressants and safety profile. **DISCUSSION** All 05 patients demonstrated substantial clinical improvement, with nodular lesions and systemic symptoms subsiding within 1–2 weeks. ENL recurrence declined markedly, and all patients achieved ≥50% reduction in Corticosteroid and Thalidomide requirements. Hospitalization burden decreased dramatically, with 03 patients attaining complete remission of admissions. Quality of life improved consistently across the cohort. No major adverse events, opportunistic infections, or Tuberculosis reactivation were noted during follow-up. These findings parallel published data where etanercept reduced ENL flares and facilitated steroid-sparing regimens. It offers rapid disease control,

minimizes immunosuppressant dependence, and reduces hospitalization burden. While encouraging, these results highlight the need for larger, controlled studies to confirm efficacy, determine optimal dosing, and establish long-term safety.

EP:08

A clinical outcome-based evaluation of conventionally available materials vs polymer filament in the fabrication of finger gutter splints

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Leprosy is commonly associated with peripheral neuropathy, intrinsic muscle imbalance, finger deformities, and joint instability, requiring prolonged splint use for protection and functional alignment. Due to sensory loss and susceptibility to pressure-related injuries, the material properties of finger gutter splints play a critical role in determining safety, comfort, and clinical effectiveness. **OBJECTIVE:** To compare the clinical and biomechanical effects of finger gutter splints fabricated from polyvinyl chloride (PVC), polypropylene (PP), low-temperature thermoplastic (LTTP), and 3D-printed polymer Filament materials in individuals affected by leprosy, using defined clinical outcome measures. **METHODS:** Finger gutter splints were fabricated using three different materials using conventional fabrication methods and the polymer filaments for the 3D fabrication of splints. Clinical evaluation was carried out focussing on: Pressure tolerance, assessed by localized skin response and patient-reported comfort during prolonged wearing period of 24hrs Skin integrity, including incidence of redness, pressure marks, or ulceration Compliance, measured by daily wearing period of 8hrs per day and user acceptance Functional tolerance, evaluated by ease of performing basic Functional hand activities, fine motor tasks, ADL, Functional Movement Checks while splinted. Structural stability, assessed by maintenance of finger alignment over period of 8hrs per day. **RESULTS:** PVC splints demonstrated high structural stability but showed reduced pressure tolerance, with increased risk of localized pressure in insensate areas, leading to lower compliance. PP splints exhibited improved pressure tolerance and reduced skin irritation compared to PVC, resulting in moderate compliance and functional acceptance. LTTP thermoplastic splints provided superior anatomical conformity and pressure distribution, significantly improving pressure tolerance, preserving skin integrity, and enhancing patient compliance; however, reduced rigidity limited long-term structural stability in some cases. 3D-printed splints achieved optimal outcomes across most clinical measures, including high pressure tolerance, improved skin safety, superior compliance, and maintained alignment, attributed to patient-specific design, controlled material stiffness, and lightweight structure. **CONCLUSION:** Clinical outcomes in leprosy-related finger gutter splinting are strongly influenced by material selection. While PVC and PP offer acceptable structural support, LTTP thermoplastics and 3D-printed materials demonstrate superior performance in pressure tolerance, skin safety, and compliance- key considerations in neuropathic hands. Personalized splint fabrication using thermoformable and additive manufacturing technologies may significantly improve rehabilitation outcomes and reduce secondary complications in leprosy patients. **KEYWORDS:** Leprosy, Finger gutter splint, 3D printing, Neuropathy, Orthosis

EP:09

A WOLF IN SHEEP'S CLOTHING: THE HIDDEN FACE OF DE NOVO ENL

Dr. MUSTHAQUE ALI

BACKGROUND: Erythema nodosum (EN) is a common inflammatory panniculitis associated with infections and systemic conditions. Erythema nodosum leprosum (ENL), a type 2 lepra reaction, typically occurs in patients with multibacillary leprosy after initiation of therapy. De novo ENL presenting prior to the diagnosis of leprosy is rare and may closely mimic classical EN, leading to delayed diagnosis and inappropriate management. **CASE SYNOPSIS** A 20-year-old female presented with a 6-month history of recurrent, painful, erythematous raised lesions associated with intermittent fever. Lesions began over the lower limbs and later involved the upper limbs, trunk, abdomen, face, ears, and gluteal region. She was treated as EN secondary to presumed latent tuberculosis based on a positive Mantoux test and received intravenous corticosteroids and antitubercular therapy (ATT) at an external facility. There was transient improvement followed by exacerbation following which patient presented to us. Examination revealed multiple erythematous, palpable, tender nodules. Investigations showed neutrophilic leucocytosis, elevated ESR, and positive CRP. Initial histopathology suggested EN. Despite antibiotics and ATT, lesions recurred with steroid dependence and relapse on tapering. Healing lesions showed post-inflammatory hyperpigmentation with desquamation. Chest X-ray and HRCT were normal. Considering the recurrent steroid-dependent course, exacerbating with ATT, and characteristic healing changes, de novo ENL was suspected. Slit-skin smear from bilateral earlobes revealed acid-fast bacilli (2+). Repeat deep skin biopsy with special stains confirmed ENL. The patient was started on multibacillary MDT, colchicine, and corticosteroids, with significant clinical improvement. **DISCUSSION:** This case highlights the need to consider ENL in recurrent EN-like lesions, especially in endemic regions. Early slit-skin smear and repeat biopsy are crucial to prevent misdiagnosis and delayed therapy.

EP:10

A CROSS-SECTIONAL OBSERVATIONAL STUDY OF THE CLINICAL AND DEMOGRAPHIC PROFILE OF HANSENS DISEASE PATIENTS ATTENDING A TERTIARY CARE OUTPATIENT DEPARTMENT.

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INTRODUCTION: Leprosy (Hansen's disease) is a chronic infectious disease affecting the skin and peripheral nerves, leading to deformities and disability if diagnosis is delayed. Although multidrug therapy has reduced prevalence, leprosy remains endemic in India. Evaluating the clinical spectrum and demographic characteristics of affected patients is essential for early detection, prevention of disability, and effective disease control. **MATERIALS AND METHODS**: This hospital-based cross-sectional observational study was conducted in the Department of Dermatology, Calcutta National Medical College and Hospital, Kolkata, from July 2023 to December 2024. Thirty-five confirmed cases of leprosy were included. Diagnosis was established by clinical evaluation supported by slit-skin smear and/or histopathology. Patients were classified according to the Ridley–Jopling system. Demographic details, nerve involvement, leprosy reactions, WHO disability

grading, and bacteriological index were recorded and analysed statistically. **RESULTS:** The mean age was 39.77 ± 11.78 years, with most patients aged 35–44 years. Multibacillary leprosy constituted 74.3% of cases. Borderline tuberculoid leprosy was the most common clinical type (40%). Nerve involvement was observed in 82.9% and deformities in 45.7% of patients, both significantly associated with disease type. Most patients belonged to rural areas (68.6%) and were below the poverty line (68.6%). **CONCLUSION**: A high burden of multi-bacillary disease with significant nerve involvement and deformities indicates delayed diagnosis, emphasizing the need for early detection and focused interventions in socioeconomically vulnerable populations.

EP:11

PURE NEURITIC LEPROSY WITH CONCURRENT PULMONARY TUBERCULOSIS: A RARE COEXISTENCE

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BACKGROUND: Coinfection with Mycobacterium leprae and Mycobacterium tuberculosis is uncommon despite overlapping endemicity. Most reported cases involve multibacillary leprosy with skin lesions, while pure neuritic leprosy (PNL) without cutaneous manifestations is rarely described in association with tuberculosis. Tuberculosis may remain clinically silent and can be detected during evaluation, particularly in patients receiving corticosteroids. **CASESYNOPSIS:** A 38-year-old serving soldier presented with progressive left foot drop of three months' duration with sensory impairment over the dorsolateral foot. Examination revealed high-stepping gait and thickened, non-tender left common peroneal, bilateral posterior tibial, and ulnar nerves without skin lesions. Slit-skin smears were repeatedly negative. High-resolution sonography showed thickening of the left common peroneal nerve. Sural nerve biopsy demonstrated marked loss of myelinated fibres with endoneuria fibrosis and lymphocytic infiltrate without granulomas; Ziehl–Neelsen staining was negative. A diagnosis of pure neuritic leprosy was made, and three-drug multidrug therapy with tapering prednisolone was initiated. During treatment, the patient developed haemoptysis. Despite a normal chest radiograph, bronchoalveolar lavage GeneXpert detected Mycobacterium tuberculosis, confirming pulmonary tuberculosis. **DISCUSSION:** This case highlights the rare coexistence of PNL and pulmonary tuberculosis, detected despite normal radiography. It underscores the need for tuberculosis screening in Hansen's disease patients, particularly during corticosteroid therapy. Early recognition and integrated management resulted in neurological improvement and resolution of haemoptysis, preventing long-term disability. **CONFLICT-OF-INTEREST-STATEMENT:** The author declares no conflicts of interest related to this work.

EP:12

HANSENS DISEASE MASQUERADING AS SWEET SYNDROME: WHEN EARS TELL THE TALE

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INTRODUCTION • ENL is a type III hypersensitivity reaction characterized by tender, erythematous, evanescent nodules with constitutional symptoms 1 • Atypical presentations of ENL (pustular, bullous, ulceration, livedo reticularis,EM-like, sweet syndrome like lesions) reported but rare 2 • Sweet's Syndrome (SS)/Acute Febrile Neutrophilic Dermatosis presents with similar lesions with leukocytosis and a dense dermal neutrophilic infiltrate without vasculitis3 • We report a rare case of undiagnosed lepromatous leprosy whose initial presentation posed a diagnostic challenge **CASE REPORT** Fig 3 : Histopathology image (H & E X40) shows neutrophilic predominant perivascular infiltrates with abundant histiocytes. • A 35-yr old male with no previous known comorbidities presented with disseminated painful red raised skin lesions of 20 days duration associated with moderate grade fever and myalgia. • Systemic and ophthalmological examination were normal. Dermatological examination revealed lesions as described in Fig 1. Multiple peripheral nerves were asymmetrically thickened but non tender. There was no sensory or motor deficit • Laboratory evaluation revealed a high ESR of 110 mm in the first hour, leukocytosis of 14,800/mm3 (neutrophils at 90.4%) with no other abnormalities. • Slit skin smear demonstrated acid fast bacilli with a high Bacterial Index (BI) of 6+ and Morphological Index (MI) of 60% (Fig 4) •Histopathological analysis revealed papillary dermal oedema, along with dense neutrophilic perivascular and peri adnexal infiltrates. Subcutaneous adipose tissue showed features of neutrophilic panniculitis.(Fig 2 & 3) • Patient had clinical, laboratory and histopathological features mimicking Sweet's syndrome4. Thickened peripheral nerves and presence of lepra bacilli clinched the diagnosis of borderline lepromatous leprosy with Sweet's syndrome like Erythema nodosum leprosum(ENL) 4 • Patient showed good response to systemic corticosteroid and MB MDT. **DISCUSSION** • The overlapping cytokine networks may account for the morphological and clinical similarities between Sweet's syndrome and ENL in such unusual presentations5-8 • Recognising this overlap underscores benefit from therapies targeted at the cytokine axis (eg –TNF α, IL-6 or IL-1β) in addition to standard treatments of ENL. **CONCLUSION** • This case highlights the clinical, laboratory and histological overlap between ENL and classic Sweet's Syndrome. • ENL lesions have occasionally been reported to simulate Sweet's syndrome, posing diagnostic challenge9 • This case is unique as it demonstrates Sweet syndrome like presentation of ENL as the initial manifestation of leprosy.

EP:13

DAPSONE HYPERSENSITIVITY SYNDROME WITH MULTISYSTEM INVOLVEMENT IN BORDERLINE TUBERCULOID HANSEN'S DISEASE

Rabia Alam

BACKGROUND Dapsone is a key component of multidrug therapy (MDT) for Hansen's disease but may rarely cause Dapsone Hypersensitivity Syndrome (DHS), a potentially life-threatening idiosyncratic reaction characterized by cutaneous and systemic involvement. DHS may clinically mimic lepra reactions, leading to diagnostic delay. **CASE SYNOPSIS** A 67-year-old male diagnosed with borderline tuberculoid Hansen's disease was started on MDT. Three weeks later, he developed fever, intense pruritus, generalized exfoliative dermatitis, dyspnea, and lymphadenopathy. Cutaneous examination revealed diffuse exfoliation sparing pre-

existing leprosy plaques. Laboratory investigations showed leukocytosis with eosinophilia and deranged liver enzymes. Imaging revealed bilateral ground-glass opacities consistent with hypersensitivity pneumonitis. Based on the temporal association with dapsone initiation, multisystem involvement, and laboratory findings, a diagnosis of DHS was made. MDT was withheld, and the patient was managed with systemic corticosteroids and supportive care, resulting in marked clinical and biochemical improvement. MDT was later reintroduced without dapsone under steroid cover. **DISCUSSION** This case highlights the diagnostic challenge of differentiating DHS from Type 1 lepra reaction and other severe cutaneous adverse drug reactions. Recognition of systemic involvement, eosinophilia, and sparing of existing leprosy lesions is crucial for early diagnosis. Prompt withdrawal of dapsone and initiation of systemic corticosteroids are essential to prevent morbidity and mortality. **CONFLICT OF INTEREST** None

EP:14

FORGOTTEN AND NEGLECTED CASE OF HANSEN'S DISEASE

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BACKGROUND Hansen's disease remains a significant public health concern in developing countries despite achieving elimination targets. Caused by Mycobacterium leprae, it primarily affects the skin and peripheral nerves. Delayed diagnosis due to varied and atypical presentations often results in deformities and reactional states. We report a neglected case of advanced lepromatous Hansen's disease presenting with deformities and necrotic erythema nodosum leprosum (ENL). **CASE REPORT** A 65-year-old male presented with red raised lesions over the thighs, buttocks, and face for one month, associated with fever and pus-filled lesions. He reported progressive swelling of the face, hands, and feet, hoarseness of voice, difficulty rising from a sitting position, and nasal deformity for one year. The chronicity and systemic features suggested advanced multibacillary disease with a superadded reaction. **CLINICAL EXAMINATION** Examination revealed supraciliary and left-sided ciliary madarosis, saddle nose deformity, and pitting edema of bilateral hands and feet. Multiple infiltrated erythematous papules and ulcerative plaques were noted over the lower limbs and buttocks. The scrotum and penile shaft were swollen and tender. Sensory examination demonstrated glove and stocking anaesthesia, while motor examination showed bilateral ulnar nerve weakness. Peripheral nerves were enlarged without active neuritis. Deformity grading revealed Grade 0 deformity of eyes and Grade 2 deformity of hands and feet. **INVESTIGATIONS** Slit skin smear showed a bacteriological index of 6+ with morphological index 0. Ultrasonography revealed epididymo-orchitis. Skin biopsy demonstrated dense inflammatory infiltrate with neutrophils, histiocytes, and macrophages, consistent with necrotic ENL. **CONCLUSION** This case highlights the persistence of neglected Hansen's disease leading to advanced deformities and severe reactional states. Early recognition, prompt multidrug therapy, and awareness are crucial to prevent disability and reduce stigma associated with this "forgotten" disease.

EP:15

Title- Umbilicated Papules in Lepromatous Leprosy: An Unusual Clinical Presentation

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INTRODUCTION Lepromatous leprosy is a chronic, multisystem infection caused by M. leprae; it is characterized by symmetric lesions with a very high bacillary load. While the classical lesions are diffuse infiltrations, nodules, and papules on cooler areas of the body, umbilicated papules are an uncommon manifestation, often mimicking molluscum contagiosum or histoid variants. Reporting such atypical presentations is crucial to enhance clinical recognition. **CASE REPORT** A 56-year-old male patient presented with multiple, asymptomatic, skin-colored to erythematous umbilicated papules on trunk both the upper and lower extremities for duration of 1 years. Lesions were distributed bilaterally but asymmetrically. Madarosis and earlobes infiltration was absent. Gloves and stocking anaesthesia was present without any nerve thickening. Motor examinations were in normal limits. Skin biopsy from an umbilicated papule revealed epidermal atrophy, flattened rete ridges & clear subepidermal grenz zone. The dermis showed diffuse sheets of foamy macrophages packed with numerous acid-fast bacilli, confirming the diagnosis of lepromatous leprosy. There were no epithelioid granulomas, spindle shaped cells or necrosis. Slit-skin smear revealed a bacteriological index of 5+ with abundant solid-staining acid-fast bacilli. The patient was started on WHO-recommended multibacillary multidrug therapy. **CONCLUSION** This case highlights an unusual presentation of lepromatous leprosy with umbilicated papules, a morphology more typically seen in histoid or molluscum contagiosum-like lesions. Awareness of such atypical manifestations is essential to avoid misdiagnosis and ensure timely initiation of therapy.

EP:16

THE GREAT MIMICKER IN DISGUISE: LEPROMATOUS LEPROSY PRESENTING AS ERYTHRODERMA WITH RHEUMATOID ONSET.

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Erythroderma is a severe dermatological condition characterized by generalized erythema and scaling involving more than 90% of the body surface area. It may be idiopathic or secondary to drug reactions, inflammatory dermatoses, infections, or systemic diseases. Leprosy (Hansen's disease), caused by Mycobacterium leprae, is known as the "great mimicker" due to its diverse cutaneous and neurological manifestations. Despite its varied presentations, leprosy is rarely considered in the differential diagnosis of exfoliative erythroderma. We report a rare case of erythrodermic lepromatous leprosy with type 2 lepra reaction. **CASE REPORT:** A 41-year-old male presented with generalized erythema and desquamation of 10 days duration, accompanied by fever, joint pain and swelling, and generalized weakness. There was no history of drug intake prior to symptom onset. Cutaneous examination revealed diffuse erythema, induration, tenderness, and coarse whitish scaling involving more than 90% of the body surface area, with sparing of the abdominal folds (positive deck-chair sign). Additional findings included bilateral ear lobe infiltration, lagophthalmos, sausage-shaped swelling of fingers, pitting pedal edema, glove-and-stocking anesthesia, and tender, thickened peripheral nerves suggestive of grade 2 neuritis. Histopathology showed dense mononuclear infiltrates with granulomas and perineural involvement. Fite-Faraco stain demonstrated numerous acid-fast bacilli in globi. Slit-skin smear revealed a bacillary index of 5 and morphological index of

70%. A diagnosis of erythrodermic lepromatous leprosy with type 2 lepra reaction and grade 2 disability was made, and the patient was started on WHO-recommended multibacillary multidrug therapy along with systemic corticosteroids. **DISCUSSION:** Erythrodermic leprosy is rare and often leads to delayed diagnosis and irreversible neurological damage. In endemic areas, leprosy should be considered in the differential diagnosis of erythroderma to ensure early detection and prevent disability.

EP:17

An unusual presentation of histoid leprosy mimicking generalized eruptive histiocytosis

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INTRODUCTION Histoid leprosy is a rare variant of lepromatous leprosy characterized by papulonodular lesions, high bacillary load, and distinctive histopathological features. Due to its atypical morphology, it may clinically mimic other papulonodular dermatoses, including histiocytic disorders, leading to diagnostic dilemmas. **CASE REPORT** A 41-year-old male presented with 1.5-year history of asymptomatic, multiple discrete skin-coloured to brownish, shiny, flat-topped papules measuring 0.5–1 cm over bilateral flanks of the abdomen. Based on the clinical morphology, a provisional diagnosis of generalized eruptive histiocytosis was considered. Histopathological examination showed features suggestive of histoid leprosy. Further evaluation revealed complete sensory loss over bilateral dorsum of the feet and partial sensory loss over bilateral dorsum of the hands, along with thickening of bilateral ulnar nerve and right radial cutaneous nerve. Slit skin smear demonstrated a bacteriological index of +1.75 and morphological index of 25%. The patient was diagnosed with histoid leprosy and started on multibacillary multidrug therapy. At 2-month follow-up, he developed few painful erythematous plaques and nodules over the limbs with fever and arthralgia, consistent with erythema nodosum leprosum. As the lesions were few, moderate-dose oral prednisolone was initiated with clinical improvement. **CONCLUSION** This case highlights histoid leprosy as an important differential diagnosis in chronic papulonodular dermatoses. Clinicopathological correlation and slit skin smear examination are crucial for diagnosis, and a high morphological index may predict lepra reactions following therapy.

EP:18

Features of Childhood Leprosy at diagnosis in a High-Endemic Setting: Implications for Early Detection and Awareness

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Childhood leprosy is a key epidemiological indicator of ongoing transmission of Mycobacterium leprae in the community. The occurrence of leprosy with disability among children reflects delayed diagnosis, prolonged exposure to infectious contacts, and gaps in awareness and early detection. Despite achieving national-level elimination, India continues to report a substantial burden of childhood leprosy, particularly from high-endemic states such as Bihar. **OBJECTIVES:** To describe the presenting clinical features of childhood leprosy in a high-endemic setting in the state of Bihar and to examine their implications for early detection and awareness strategies. A retrospective record-based study was conducted among children aged <15 years

diagnosed with leprosy between January 2023 and December 2025 at the leprosy mission hospital in Muzaffarpur, Bihar. Demographic characteristics, contact history, duration of symptoms, clinical presentation, operational classification, reactions, and disabilities were analysed. **RESULTS:** Of 2,462 newly diagnosed leprosy cases, 156 (6.33%) were children. The mean age was 11.3 years (range: 4–14), with a male-to-female ratio of 3:2. A history of household contact was present in 56 (35.9%) children, and the mean duration of symptoms prior to diagnosis was 18.1 months. Multibacillary disease was observed in 92 (59%) children. The most common presenting feature was anaesthetic skin lesions, including single lesions (32.7%), 2–5 lesions (22.4%), and more than five lesions (29.5%). Nerve-related symptoms such as sensory loss over palms and soles (8.3%) and hand weakness (1.9%) were less commonly reported as presenting complaints. Lepra reactions occurred in 27.6% of children, neuritis in 19.9%, and disability (Grade 1 or 2) in 23.1%. **DISCUSSION:** Childhood leprosy in this high-endemic setting frequently presents with subtle, painless skin lesions that are easily overlooked, resulting in delayed diagnosis and a high burden of nerve involvement and disability. These findings inform us that there is a need to reorient awareness messages towards early, child-specific clinical features and to strengthen active surveillance among household contacts to enable timely diagnosis and prevent disability. Health care providers should be trained to diagnose nerve impairment through child friendly tools in order to initiate early treatment to mitigate nerve damage.

EP:19

Title: Rare variant of borderline tuberculoid leprosy with Type 1 lepra reaction with Psoriasiform like skin lesions

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INTRODUCTION Borderline tuberculoid (BT) Hansen's disease is a common presentation along the leprosy spectrum and is frequently complicated by lepra reactions. Type 1 (reversal) reactions, particularly downgrading reactions can mimic other skin conditions like psoriasis, granuloma annulare, sarcoidosis etc, hence early diagnosis along with appropriate treatment is essential to prevent disability and other complications. **CASE REPORT** An 18-year-old male presented with recurrent episodes of multiple erythematous scaly plaque and scaly lesions over the face, trunk, bi lateral upper and lower limbs, and genitalia for five months, the patient initially treated as a case of chronic plaque psoriasis by local practioners. He achieved minimal relief with topical steroids and emollients. Episodes were accompanied by mild fever, generalized weakness, and pedal edema. Cutaneous examination revealed multiple well-defined erythematous edematous plaques with scaling and significant loss of sensation. The auspitz sign is negative. Peripheral nerve examination showed bilateral thickening of supraorbital, infraorbital, ulnar, radial cutaneous, and common peroneal nerves with grade 1 neuritis and left thenar atrophy. Slit skin smear for acid-fast bacilli was negative, and nerve conduction study was within normal limits. Skin biopsy from right thigh demonstrated well to ill formed epithelioid cell granulomas admixed with foamy macrophages seen in dermis as well as peri adnexal and peri vascular structures. A diagnosis of borderline tuberculoid Hansen's disease with downgrading Type 1 reaction and grade 1 neuritis was made. The patient was treated with multibacillary multidrug therapy along with systemic corticosteroids, resulting in clinical improvement as well as decrease in scaling and thickness of plaque resolution of neuritis. **CONCLUSION** This case highlights the varied and recurrent clinical presentation of BT Hansen's disease with downgrading Type 1 reaction. Early

diagnosis and prompt initiation of multidrug therapy and corticosteroids are essential to prevent progressive nerve damage and long-term disability.

EP:20

Lucio Phenomenon in Lepromatous Leprosy: A Case Series of Two Patients from a Tertiary Care Center in Bihar , AIIMS Patna

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INTRODUCTION: Lucio phenomenon (LP) is a rare, life-threatening necrotizing variant of Type 2 lepra reaction seen in untreated non-nodular lepromatous leprosy, first described by Rafael Lucio. It presents with irregular purpura rapidly progressing to necrotic eschars due to bacillary-induced vasculopathy and high bacillary load. If not diagnosed early can lead to morbidity and mortality. We are describing 2 cases of Lucio phenomenon. **CASE DETAILS:** Case 1: A 40-year-old male with five years of nasal stuffiness and epistaxis developed sudden ascending purpura progressing to necrosis. Examination revealed leonine facies, madarosis, diffuse infiltration, nearly complete glove-and-stocking sensory loss, and thickened peripheral nerves. Hemoglobin was 6.6 g/dL with hypoalbuminemia; slit-skin smear showed a bacteriological index of 6+ with globi. Secondary Pseudomonas infection found from necrotic areas. He was managed with MB-MDT, intravenous antibiotics, blood transfusions, and surgical debridement, resulting in resolution of purpura. Case 2: 55-year-old male presented with abrupt reticulate purpura evolving into deep necrotic ulcers. He had leonine facies, madarosis, 80% distal sensory loss, and thickened nerves. Hemoglobin was 7.8 g/dL; lupus anticoagulant was positive. Biopsy confirmed lepromatous leprosy with lucio phenomenon. MB-MDT and intensive wound care, lead to complete improvement. **DISCUSSION AND CONCLUSION:** Both cases reflect long-standing untreated disease with heavy bacillary load causing endothelial invasion and necrotizing vasculopathy. Severe anemia and secondary infections increased morbidity. Hence early recognition, prompt institution of MB-MDT along with aggressive infection control are essential to prevent septicemia and mortality in lucio phenomenon.

EP:21

Clinical and Demographical Profile of Persons Affected by Leprosy who underwent Reconstructive Surgeries in a Tertiary Hospital at Eastern Uttar Pradesh.

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INTRODUCTION : Leprosy being a neglected tropical Disease, still occurs in about 120 Countries. About 200000 new leprosy cases are being newly identified every year. Late detection of leprosy still prevails leading to disability as a complication. This leads to intervention of disability management through Reconstructive Surgeries and related rehabilitation. An effort is made to study this scenario at a tertiary hospital for leprosy at Eastern Uttar Pradesh in the District of Ayodhya. **OBJECTIVES :** To study the demographic and clinical profile of persons affected by leprosy who underwent reconstructive surgeries at TLM Hospital Faizabad. **MATERIALS AND METHODS :** This is a hospital based, retrospective descriptive study. The data is collected from the Hospital Management System of those who are admitted and intervened for disability care by Reconstructive surgeries and physical rehabilitation connected with. The data of 3 years were collected for the years 2023, 2024 and 2025 and analyzed. **RESULTS :** A total of 272 reconstructive surgeries took place in this stipulated time for persons from 29 Districts of Uttar Pradesh, 4 from Bihar State and 1 from Chhattisgarh. 212 surgeries

were performed on male while 60 on female. Among them, there is a total of 9 children with disabilities – 3 male and 6 female. In the age group of 15 – 30 years, the highest number of 131 surgeries were done. Among the age group of 31 – 45 years, 65 surgeries were performed (male- 55, female -10). While the age group of 46 to 60 had 51 surgeries, the senior citizens underwent 16 surgeries. Among Districts, Sitapur had the maximum (49), followed by Deoria (33) and Shrawasti (22). Among types of deformities that are corrected, 148 ulnar claw hands, 56 total claw hands, 42 median claw hands, 18-foot drops and 8 lagophthalmos were corrected. The duration of deformities are in less than 1 year 49, 2-5 yrs are 98, 6-10 years are 73, 11-15 years are 35 and 16-20 years are 17. The types and number of surgeries done are ½ FDS Lasso – 41, Zancolli Lasso – 47, Ring Finger Lasso – 103, Palmaris Longus – 10, Tibialis Posterior Transfer, ECRL+ Fascia lata – 1, Temporalis Muscle Transfer- 6, Eye wedge resection -2, Thumb Opponens transfer – 29, Extensor Indicis proprius transfer- 15. **CONCLUSION :** This study ensures the necessity of early identification of disease before the deformities are established. Moreover, the female ratio is very less when compared to male where there is no evidence that the disease affects male more than female. Another concerning factor is the duration between development of deformity and the intervention which need to be addressed. The higher number of interventions for persons from specific locations indicates the collaborative efforts of both implementing partners from the tertiary care centre and the local Government authorities.

EP:22

BEYOND ELIMINATION: A RURAL–URBAN DICHOTOMY IN THE CLINICAL SPECTRUM AND DISABILITY BURDEN OF LEPROSY IN CENTRAL INDIA — AN OBSERVATIONAL STUDY FROM A TERTIARY CARE CENTRE

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INTRODUCTION: Despite achieving elimination at the national level, India continues to shoulder the largest global burden of leprosy. Behind epidemiological statistics lie delayed diagnoses, preventable deformities, and persistent rural–urban inequities. Madhya Pradesh, with its mixed demographic landscape, offers a crucial lens to examine whether elimination has translated into equitable disease control. This study explores the rural–urban differences in clinical spectrum and disability among patients presenting to a tertiary care hospital in Indore. **MATERIALS AND METHODS:** A prospective observational study was conducted at MY Hospital, Indore, from April 2025 to January 2026. All newly diagnosed leprosy patients were enrolled. Demographic details (rural vs urban residence), Ridley–Jopling classification (PB vs MB), and WHO disability grading were recorded. **RESULTS:** Among 92 patients diagnosed during the study period, 59 (64%) belonged to rural areas and 33 (36%) to urban settings. A striking 41 of 59 rural patients (69%) presented with multibacillary (MB) disease within the BB–BL spectrum, whereas only 8 of 33 urban patients (24%) had MB disease; the remainder were paucibacillary (PB). Disability was noted in 17 patients, with 13 exhibiting Grade 1 deformity and 4 presenting with Grade 2 deformity. Advanced spectrum disease and deformities were disproportionately observed among rural patients, suggesting delayed detection and limited access to early care. **CONCLUSION:** Our findings reveal that while leprosy may be “eliminated” statistically, its burden remains socially and geographically stratified. Rural patients continue to present with more advanced disease

and higher disability, underscoring the urgent need for strengthened peripheral surveillance, early detection strategies, and targeted rural outreach in central India.

EP:23

A case of necroticans ENL: a rare and severe variant

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INTRODUCTION:- ENL is a part of type 2 lepra reaction seen in Multibacillary leprosy characterized by painful nodules and systemic inflammation. Necroticans ENL is a rare fulminant variant associated with high morbidity, secondary infection and therapeutic difficulty. **CASE REPORT:-** A 38-year-old female, diagnosed case of multibacillary leprosy on WHO MDT for 8 months had recurrent episodes of painful erythematous nodules associated with high fever, malaise and neuritic pain. The lesions initially appeared as tender subcutaneous nodules over face, trunk and upper extremities rapidly progressed to form vesiculation, ulceration, black necrotic lesions, few lesions show crusting and secondary infection. Past history revealed irregular intake of MDT and multiple prior episodes of ENL. **TREATMENT:-** The patient was hospitalized and managed aggressively with oral prednisolone initiated at 1 mg/kg/day along with MDT. Due to severity and recurrent nature, Thalidomide 300mg/day in divided doses was added, resulting in significant reduction in inflammation and progression of necrosis within 3-4 weeks. **DISCUSSION:-** Necroticans ENL represent an immune complex mediated severe reaction with vascular compromise leading to cutaneous necrosis. Risk factors include high bacillary load, irregular therapy and recurrent ENL episodes. Early recognition is crucial to prevent deformities, sepsis and scarring. Thalidomide remains highly effective, while corticosteroids are vital for acute control. Multidisciplinary care improve outcomes. **CONCLUSION:-** Necroticans ENL is a dermatological emergency requiring prompt diagnosis and aggressive immunomodulatory therapy. Awareness of this rare variant facilitates early intervention ,reduces complications and improves quality of life in affected patients.

EP:24

Lazarine leprosy:- A rare ulcerative variant of lepra reaction- A case report

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INTRODUCTION:- Lazarine leprosy is a rare and severe ulcerative manifestation of lepra reaction, most commonly associated with type 1 reaction in borderline forms of leprosy, commonly occurs in BT, BL forms and rarely in lepromatous forms. It is characterized by sudden necrosis and ulceration of pre-existing lesions. Early recognition is essential to prevent deformity and morbidity. **CASE PRESENTATION:-** A 45-year-old female presented with sudden onset painful ulceration over pre-existing erythematous plaques on face and extremities, associated with edema and neuritis. Examination revealed sharply demarcated necrotic ulcers within surrounding erythema and sensory impairment in affected lesions. Peripheral nerves were thickened and tender. A diagnosis of lazarine leprosy was made. **MANAGEMENT AND OUTCOME:-** The patient was treated with systemic corticosteroids along with continuation of MDT as per WHO guidelines. Significant clinical improvement was noted within 4 weeks with healing of ulcers and reduction in neuritis. **DISCUSSION:-**

Lazarine leprosy is considered a hyperacute form of reversal reaction characterized by intense CMI leading to tissue necrosis. Prompt immunosuppression therapy is critical to prevent permanent nerve damage. **CONCLUSION:-** Lazarine leprosy though rare, should be suspected in ulcerating borderline leprosy lesions during reactional states. Early diagnosis and aggressive management significantly improve outcomes.

EP:25

Tuberculoid Leprosy Mimicking Lupus Vulgaris : A Case Report

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INTRODUCTION: Tuberculoid leprosy and Lupus vulgaris both are chronic granulomatous disease with overlapping clinical and histopathological features. Differentiating them is essential due to differences in treatment and public health implication. Tuberculoid leprosy represents the paucibacillary pole of Hansen's disease and is characterized by well-defined hypopigmented or erythematous plaque with sensory impairment. In contrast lupus vulgaris most common form of cutaneous tuberculosis typically presents as slowly progressive erythematous plaque with an "apple jelly" appearance on diascopy. **CASE FINDINGS :** An 18-year-old female presented with a slowly progressive diffuse violaceous hyperpigmented indurated plaque over proximal aspect of the ring finger for 8 months with subtle hypoesthesia over the lesion and mild thickening of ipsilateral ulnar nerve. **MANAGEMENT AND OUTCOME:** WHO recommended paucibacillary multidrug therapy (MDT) was initiated. Significant clinical improvement with reduction in erythema and induration at 2 month follow up. **DISCUSSION:** Digit involvement is rare in tuberculoid leprosy, leading to diagnostic confusion. Careful clinical examination with sensory testing is crucial in endemic regions.

EP:26

Demographic Pattern and Delay in Diagnosis of Pure Neural Leprosy: A Retrospective Analysis of 171 Patients

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INTRODUCTION: Pure neural leprosy (PNL) is a distinct and under-recognised form of leprosy characterised by peripheral nerve involvement in the absence of skin lesions and with negative skin smears. Because classical dermatological signs are absent, diagnosis is frequently delayed, increasing the risk of irreversible nerve damage and disability. This study analyses the age/sex distribution and duration of symptoms before presentation among patients clinically diagnosed as PNL to identify epidemiological patterns and diagnostic gaps. **METHODS:** A retrospective analysis was conducted on clinical data from 171 patients clinically diagnosed as pure neural leprosy. Variables analysed included age/sex, presenting signs/symptoms, and patient-reported duration of symptoms (in months). Age was categorised into 10-year intervals, and duration of disease was grouped into clinically meaningful categories. Sex-specific analyses were performed for age distribution and diagnostic delay. Nerve ultrasound was carried out on four pairs of peripheral nerves (Ulnar, Median, Lateral popliteal, and Posterior tibial) to detect nerve involvement. **RESULTS:** Of the 171 patients, 70% were male and 30% female, demonstrating a marked male predominance. Male patients predominantly

presented between 20 and 50 years of age, while female patients were more frequently diagnosed at older ages, particularly between 40 and 60 years. The presenting features included sensory or sensorimotor signs and symptoms. Duration of symptoms prior to diagnosis varied widely, with a significant proportion of patients reporting delays exceeding 12 months, and some presenting after more than five years of symptoms. Females showed a tendency toward longer diagnostic delays compared to males. Nerve ultrasound showed nerve enlargement in 113 (66.0%) patients, confirming a diagnosis of PNL. **DISCUSSION:** The observed male predominance in PNL likely reflects a combination of biological susceptibility, occupational exposure, and differential health-seeking behaviour, compounded by diagnostic bias. Later age at diagnosis and longer symptom duration among females suggest significant barriers to early detection, delayed health-seeking behaviour, particularly in the absence of visible skin lesions. The prolonged diagnostic delay seen in many patients highlights systemic challenges in recognising neuropathic presentations of leprosy within routine clinical settings. Nerve ultrasound is a useful tool to objectively detect nerve enlargement in PNL. **IMPORTANCE OF EARLY DIAGNOSIS:** Early diagnosis of PNL is critical, as nerve damage is often progressive and irreversible. Heightened clinical suspicion, improved neurological examination skills, use of nerve ultrasound, and greater awareness of PNL among primary care and neurology services are essential to reduce disability and improve long-term outcomes.

Acknowledgement: The study was supported by Hope Rises International (Formerly the American Leprosy Missions).

EP:27

PRURIGO NODULARIS OVER ANESTHETIC HAND IN CHILDHOOD HANSENS DISEASE: A RARE PRESENTATION.

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INTRODUCTION: Childhood Hansen's disease remains an important epidemiological indicator of ongoing community transmission despite the overall decline in prevalence. Recent national data from India show that children constitute approximately 4.7–6% of newly detected cases, while globally about 5.4% of new cases occur in children, underscoring persistent transmission in endemic regions. Clinically, pediatric leprosy usually presents with hypopigmented or erythematous anaesthetic patches with nerve involvement; however, atypical morphologies mimicking other dermatoses have been reported, often delaying diagnosis. We report a rare presentation of childhood Hansen's disease manifesting as a prurigo-nodularis-like lesion over an anesthetic hand. **CASE SYNOPSIS:** An 11-year-old girl presented with multiple pigmented, elevated, pruritic nodules localized over the dorsum of the left hand for three months. She was a previously treated case of borderline tuberculoid Hansen's disease with Grade-2 deformity (complete left claw hand) and trophic ulcer, for which she had completed 12 months of multibacillary multidrug therapy (MB-MDT-C) and had been on release from treatment for 11 months. Subsequently, she developed a new ichthyotic patch over the bilateral lower limbs, following which MB-MDT was re-initiated at a tertiary care centre and continued for four months prior to presentation to us. Cutaneous examination revealed multiple hyperpigmented, excoriated plaques and nodules confined to the anaesthetic dorsum of the left hand. Neurological examination showed complete left claw hand with intrinsic muscle weakness (lumbricals and

interossei power 3/5). Bilateral asymmetric ulnar nerve thickening was present without clinical neuritis, and there was no evidence of lepra reaction. Slit-skin smear was negative. Histopathology from the newly developed ichthyotic patch showed no evidence of active Hansen's disease, and special stains were negative for acid-fast bacilli. After detailed evaluation, the patient was initiated on oral prednisolone (5 mg/kg/day) with gradual tapering along with oral tofacitinib syrup (4 mL twice daily), and she continues to be under regular follow-up. **CONCLUSION:** This case highlights that chronic pruritic nodular lesions arising over an anaesthetic limb in treated Hansen's disease may represent secondary dermatoses rather than active disease or relapse, necessitating careful clinicopathological correlation. Early recognition of such atypical post-treatment manifestations can prevent unnecessary escalation of anti-leprosy therapy and guide appropriate immunomodulatory management.

EP:28

Lepromatous Hansen's Disease Mimicking Cutaneous Sarcoidosis: A Clinicopathological Correlation

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BACKGROUND: Hansen's disease is a chronic granulomatous infection caused by Mycobacterium leprae, presenting along an immunological spectrum as described by the Ridley–Jopling classification. Lepromatous leprosy represents the multibacillary pole and typically manifests with multiple lesions, diffuse infiltration, and a high bacillary load. Although sensory impairment is a classical feature of Hansen's disease, atypical multibacillary presentations without sensory loss have been documented. Sarcoid-like cutaneous morphology in lepromatous Hansen's disease is uncommon and may pose significant diagnostic challenges due to clinical and histopathological overlap with sarcoidosis and other granulomatous dermatoses. **CASE SYNOPSIS:** A 47-year-old male presented with a 2-year history of multiple asymptomatic red-orange elevated plaques over the face, right forearm, back, and buttocks. The lesions were erythematous to orange in hue with surface scaling and were non-tender. Multiple hypopigmented patches were noted over the back without sensory impairment. Peripheral nerve examination revealed thickening of the right ulnar nerve, right radial cutaneous nerve, and bilateral common peroneal nerves, without features of neuritis. There was no glove-and-stocking anaesthesia or symmetrical sensory loss, and no history suggestive of lepra reaction. Histopathological examination of a 4-mm punch biopsy showed epidermal atrophy with basket-weave hyperkeratosis and a thickened basement membrane. The superficial dermis demonstrated diffuse band-like infiltration predominantly composed of foamy macrophages. The mid and deep dermis revealed dense perivascular and peri-adnexal inflammatory infiltrate. Epithelioid granulomas were present within the histiocytic infiltrate. The Fite-Faraco stain was positive for lepra bacilli with a bacillary index of 4+. These findings were consistent with lepromatous Hansen's disease. **DISCUSSION:** This case highlights an unusual presentation of lepromatous Hansen's disease with sarcoid-like cutaneous morphology and preserved sensation, closely mimicking cutaneous sarcoidosis. The presence of peripheral nerve thickening and a high bacillary index on Fite staining was pivotal in establishing the diagnosis. Careful clinicopathological correlation is essential in differentiating granulomatous dermatoses, particularly in endemic settings. **CONCLUSION:** Lepromatous Hansen's disease may rarely present with sarcoid-like lesions and intact sensation, leading to potential diagnostic confusion. Thorough peripheral nerve examination and

histopathological evaluation with special staining are crucial to avoid misdiagnosis and ensure timely initiation of appropriate therapy.

EP:29

Dapsone- Induced Hypersensitivity Pneumonitis in Borderline Tuberculoid Leprosy - A case report

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INTRODUCTION- Dapsone can cause several adverse effects, Dapsone hypersensitivity syndrome (DHS) is one of the most serious life-threatening adverse effects of dapsone, which classically presents with the triad of fever, rash, and lymphadenopathy, isolated pulmonary manifestations are rarely reported. We present a case of borderline tuberculoid leprosy with dapsone- induced hypersensitivity Pneumonitis. **CASE –** A 30-year-old female presented to us with three erythematous partially anesthetic plaques on face, left forearm and left foot. On examination thickening of bilateral ulnar, lateral popliteal and left median nerves was present. The bacteriological examination of slit skin smear was negative. Patient was started on MDT MB. Twelve weeks later while on 3 rd. MDT kit, she developed fever, cough, difficulty in breathing, loss of appetite, generalised body aches. Bronchoscopy was done and bronchoalveolar lavage was negative for mycobacteria, fungi. Transbronchial lung biopsy was done which revealed hypersensitivity pneumonitis. Dapsone was discontinued and prednisolone 30mg was started, resulting in symptomatic improvement within two weeks. MDT was continued with rifampicin and clofazimine alone. **CONCLUSION-** Dapsone- induced hypersensitivity pneumonitis should be considered in any MDT recipient presenting with new pulmonary symptoms. Transbronchial lung biopsy is valuable for diagnosis and prompt discontinuation of dapsone with corticosteroid therapy is helpful in rapid recovery. Key words - hypersensitivity pneumonitis, Transbronchial lung biopsy, borderline tuberculoid leprosy

EP:30

Novel tool for detection of hidden leprosy cases in the community

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BACKGROUND Active case finding campaigns, such as the Leprosy Case Detection Campaign (LCDC), are crucial for identifying "hidden" leprosy cases in endemic areas following the national elimination target achievement. This study evaluates the performance of the LCDC in Erode District by comparing expected case numbers with actual detection rates across different geographic blocks. **METHODS** A cross-sectional analysis was conducted on data from nine specific blocks/urban areas within the Erode District. The study period focused on expected cases during a recent LCDC phase (e.g., in 2025-26) compared to the 'Last 5 yrs Total Cases' baseline. The performance was assessed by comparing the 'Expected Cases in LCDC' with actual cases detected through 'Regular surveillance' and 'Active + Passive cases'. Efficacy metrics were analyzed across locations like Chithode, Sivagiri, and Sathy urban to identify variations in program success. **RESULTS** Across the district, the last five-year total cases amounted to 423 cases, with 122 expected cases identified for the

subsequent LCDC round. Preliminary data for 2025-26 showed 53 actual cases detected within a specific phase of the LCDC. Individual block performance varied significantly. For example, Jambai had the highest number of expected cases (18) and a significant number of recent active/passive cases (32), suggesting high endemicity and successful detection. Sivagiri also showed high expected cases (14) and strong recent case finding (13 active/passive). Sathy urban presented a lower overall burden (8 total cases). The total current active/passive cases detected across all areas was 104. **CONCLUSION** The study analyzes LCDC performance in Erode District, highlighting that while 423 cases were identified over the last five years, active campaigns continue to detect numerous new cases (104 recent active/passive), LCDC is a Novel tool for detection of hidden leprosy cases in the community. Continued investment in such active detection strategies is crucial for sustaining elimination efforts at the district level.

EP:31

Clinical and Demographical Profile of Persons Affected by Leprosy who underwent Treatment for Ulcer Care in a Tertiary Hospital at Eastern Uttar Pradesh.

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INTRODUCTION : Leprosy being a neglected tropical Disease, still occurs in about 120 Countries. One of the major challenges faced by persons affected by leprosy are plantar ulcers. Loss of sensation and inadequate self-care practice leads to complicated ulcers. This leads to situation of hospitalization , debridement , loss of earnings etc. An effort is made to study about the persons admitted for ulcer care at a tertiary hospital for leprosy at Eastern Uttar Pradesh in the District of Ayodhya. **OBJECTIVES :** To study the demographic and clinical profile of persons affected by leprosy who were admitted at TLM Hospital Faizabad for ulcer care. **MATERIALS AND METHODS :** This is a hospital based, retrospective descriptive study. The data is collected from the Hospital Management System of those who are admitted and intervened for ulcer care. The data of 3 years were collected for the years 2023, 2024 and 2025 and analyzed. **RESULTS :** 506 persons underwent ulcer care during this stipulated period among which 419 are male and 87 are female. 1 male child is among them. The highest number of ulcer care was provided to the age group of 46 to 60 yrs which is 163, followed by 140 persons of age group 31- 45 years, 111 persons among above 60 age group , 90 among 15- 30 yrs. About their duration of stay, 16 to 30 days duration were the highest followed by above 30 days of stay. Other factors such as location of the persons, employment status, site of lesions etc are analyzed. **CONCLUSION :** The ulcer burden in complicated ulcers are high among the persons with leprosy as it affects the mobility, livelihood and social life. It is concerning to note that female ratio is very less when compared to male. The difficulties in travelling to the service providers prompts that long distance can be a barrier for ulcer care. More efforts are recommended to improvise the care after cure program in collaboration with tertiary care providers and local service providers and policy makers, especially in hard-to-reach areas.

EP:32

Orf-like manifestation of ulceronecrotic ENL: A report of a rare case

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BACKGROUND: Erythema nodosum leprosum (ENL), an immune complex–mediated type 2 lepra reaction classically presents with tender transient subcutaneous nodules and systemic symptoms. Marked clinical polymorphism, particularly ulceronecrotic variants, may closely mimic infectious dermatoses and delay diagnosis. **CASE SUMMARY:** A 65-year-old goat herder presented with a 10-day history of fever and painful crops of lesions over trunk and extremities following abrupt corticosteroid withdrawal. Examination revealed multiple dome-shaped erythematous papulo-nodules, a few tense Vesiculo-bullae, and exposed-site hand lesions showed pustule-topped nodules with umbilicated and necrotic centers, closely resembling parapoxvirus (orf) infection. Concurrent ulceronecrotic plaques and nodules with thick hemorrhagic crusting and varioliform scarring were observed over the groin, thighs, and legs. A similar steroid-responsive episode had occurred one month earlier. Further evaluation demonstrated established disability (upper limb grade 2; lower limb grade 1), patchy sensory loss, and motor weakness without active neuritis; bilateral ulnar nerves were thickened. Slit-skin smear showed a bacillary index of 5+. Histopathology from dorsum of hand revealed ulceration with diffuse foamy macrophage infiltrate involving adnexa, nerves, and vessels, dense neutrophilic infiltrate, and medium-vessel vasculitis. Fite–Faraco stain demonstrated numerous acid-fast bacilli, confirming multibacillary disease with a type 2 reaction. The patient showed rapid clinical improvement with thalidomide 100 mg thrice daily in combination with MDT-MB, achieving 60–70% lesion flattening and cessation of new crops. **CONCLUSION:** This case highlights an orf-like ulceronecrotic presentation of ENL in a goat herder, posing a diagnostic pitfall due to occupational exposure. A high bacillary index, AFB-rich lepromatous histology with neutrophilic vasculitis, and rapid thalidomide response confirmed the diagnosis. In endemic regions, ENL should be considered in “orf-like” ulceronecrotic eruptions with systemic symptoms and polymorphic lesions to prevent misdiagnosis and treatment delay.

EP:33

Hidden Ischemia in Insensate Feet: Prevalence of Peripheral Arterial Disease in Multibacillary Leprosy Using Ankle-Brachial Index

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BACKGROUND: Peripheral neuropathy in leprosy results in loss of protective sensation, often masking early symptoms of Peripheral Arterial Disease (PAD). While neuropathic complications of leprosy are well recognized, the vascular status of affected limbs remains underexplored. This oversight may contribute to delayed identification of ischemia, increasing the risk of chronic ulcers and limb loss. **OBJECTIVE:** To determine the prevalence of Peripheral Arterial Disease among multibacillary leprosy patients with foot sensory loss using the Ankle-Brachial Index (ABI) as a screening tool. **METHODS:** A cross-sectional study was conducted over six months (August 2023–January 2024) at a tertiary care leprosy hospital after Institutional Ethics Committee approval. One hundred multibacillary leprosy patients with documented loss of foot sensation were enrolled following informed consent. All participants were receiving multidrug therapy. ABI measurements were obtained using Doppler ultrasound, and PAD was classified according to standard ABI thresholds. Relevant comorbidities such as diabetes and hypertension were documented. **RESULTS:** The

study population (N = 100) ranged from 11 to 81 years (mean 39.8 ± 14.6 years). Six participants had diabetes mellitus (6%), and nine had hypertension/recorded antihypertensive therapy (9%). A history of smoking was documented in 32 participants (32%). ABI assessment revealed evidence of mild Peripheral Arterial Disease in 45% of participants, indicating a substantial burden of subclinical vascular compromise. Notably, most affected individuals did not report ischemic symptoms, underscoring the masking effect of sensory neuropathy. **DISCUSSION AND CONCLUSION:** Peripheral Arterial Disease is highly prevalent among multibacillary leprosy patients with sensory loss and frequently remains clinically silent. ABI serves as a practical, non-invasive screening tool capable of identifying hidden ischemia in this vulnerable population. Routine ABI screening may facilitate early detection of PAD and help stratify risk for foot complications. Incorporating ABI assessment into standard leprosy care protocols could strengthen preventive strategies and reduce long-term disability. Acknowledgement – The authors acknowledge financial support from the Royal Society of Tropical Medicine and Hygiene (RSTMH) for this research. Keywords : Peripheral Arterial Disease, Leprosy, Neuropathy, Ankle Brachial Index, Ischemia.

EP:34

Secondary Syphilis–Like Exanthem Unmasking Lepromatous Leprosy with Type 2 Reaction: A Clinicopathologic Diagnostic Challenge

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BACKGROUND: Secondary syphilis is classically described as the “great mimicker,” characterized by generalized papulosquamous eruptions with palm involvement. However, Hansen disease reactions—particularly type 2 reaction (erythema nodosum leprosum) may present with striking morphologic overlap, leading to diagnostic confusion. Smear and stain negativity may further obscure recognition. **CASE:** A 26-year-old man presented with a 5-day history of sudden-onset, generalized erythematous-to-dusky papules and plaques involving the face, trunk, and extremities, accompanied by fever, chills, and arthralgia. Few vesicles were noted over the upper trunk and proximal arms. Bilateral palms showed multiple hyperpigmented macules, closely simulating secondary syphilis. On detailed history, he reported a 3-year progression of distal sensory loss beginning in the lower limbs and later involving the hands, associated with slipper slippage and toe deformities, along with recurrent self-limited febrile crops of erythematous lesions (3–4 episodes/year) healing with hyperpigmentation. Serology for HIV, VDRL, and TPHA was non-reactive. Multiple slit-skin smears were negative. Peripheral nerve examination revealed bilateral posterior tibial nerve thickening and tenderness, with grade 2 lower limb disability. Nerve conduction study demonstrated generalized sensorimotor axonal polyneuropathy. Histopathology from facial and truncal lesions showed a preserved Grenz zone with dense dermal and peri appendageal granulomatous infiltrates comprising epithelioid histiocytes, foamy macrophages, lymphocytes, plasma cells, occasional Langhans-type giant cells, and scattered neutrophils. PAS, ZN, and Fite-Faraco stains were negative. Clinicopathologic correlation established a diagnosis of lepromatous leprosy with type 2 reaction. **CONCLUSION:** Hansen disease with type 2 reaction can masquerade as secondary syphilis, even with smear and stain negativity. Careful neurologic

assessment, disability grading, and clinicopathologic correlation are essential to avoid misdiagnosis and prevent irreversible morbidity.

EP:35

Who Will Quit? A Three-Year Retrospective & Survey-Based Study Reveals Predictors of Leprosy Treatment Non-Completion in Delhi

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BACKGROUND: Sustained adherence to multidrug therapy is essential to interrupt transmission, prevent disability, and achieve the WHO 2030 "Zero Leprosy" goal. While India's National Leprosy Eradication Programme (NLEP) reports near-universal coverage, treatment non-completion threatens progress, particularly among vulnerable groups. Scalable, frontline tools to identify patients at risk of default are urgently needed. **OBJECTIVES:** To identify early demographic, clinical, and psychosocial predictors of treatment non-completion in Delhi and to develop a practical risk score that can guide proactive, patient-centred interventions within NLEP and beyond. **METHODS:** A retrospective cohort and survey-based study compared 600 treatment dropouts with 600 matched adherent patients from 3,193 registered cases (April 2022–March 2025). Variables included demographics, socioeconomic status, disease classification, disability, lepra reactions, stigma indices, travel distance, and psychological distress. Significant predictors ($p<0.05$) were incorporated into a weighted risk score. **RESULTS:** Median time-to-dropout was 4.5 months, with 63% defaulting during the intensive phase. Dropouts were more likely to have multibacillary disease, lepra reactions, Grade 2 disability, psychological distress, and travel >5 km. Women and urban poor were disproportionately affected, reflecting inequities in care access. A five-item risk score (MB disease, lepra reaction, Grade 2 disability, psychological distress, travel >5 km) classified 72% of dropouts at baseline (AUROC 0.78). Patients with ≥3 predictors were 3.1 times more likely to default. **CONCLUSIONS:** This first validated city-wide risk score provides a simple, low-cost tool for early identification of patients at high risk of default. Embedding it into NLEP registers and adapting it to other endemic regions can enable frontline health workers to deliver targeted counselling, decentralised drug delivery, and mental health support. By addressing equity gaps and accelerating durable cure, this model offers a scalable pathway towards WHO 2030 elimination targets across South Asia and beyond.

EP:36

Isolated Lip Swelling as the Sole Manifestation of Hansen's Disease: A Case Series

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INTRODUCTION: Leprosy confined exclusively to the lips is extremely uncommon and often misdiagnosed as granulomatous cheilitis, cheilitis glandularis, or angioedema. Recognition is challenging when lip swelling occurs in isolation, leading to delayed diagnosis and treatment. **OBJECTIVE:** To describe the clinical profile, diagnostic features, and early therapeutic outcomes of patients presenting with isolated lip swelling ultimately diagnosed as Hansen's disease. **METHODS:** Thirteen patients presenting with lip swelling persisting

for more than six weeks, without cutaneous patches or peripheral nerve thickening elsewhere, were evaluated at a tertiary dermatology center in Eastern India. All underwent detailed examination, slit-skin smear from the affected lip, and deep incisional biopsy with Fite-Faraco staining. Other causes of granulomatous cheilitis were excluded. Patients were treated with WHO-recommended multidrug therapy and followed up for six months. **RESULTS:** Six patients had upper-lip, four lower-lip, and three bilateral involvements. The mean duration of swelling before diagnosis was seven months. Initial misdiagnoses included cheilitis granulomatosa, cheilitis glandularis, and idiopathic angioedema. Slit-skin smears were positive in seven patients, while Fite-Faraco staining revealed acid-fast bacilli in ten. Histopathology showed epithelioid granulomas with perineural inflammation in borderline cases and foamy macrophages in lepromatous cases. Eleven patients (85%) showed significant reduction in swelling within six months of therapy. **CONCLUSIONS:** Isolated lip swelling can represent the earliest and sole sign of Hansen's disease. A high index of suspicion and combined use of slit-skin smear and biopsy are essential for accurate diagnosis and timely treatment.

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Erythema Nodosum Leprosum: Atypical Variants A Case Series

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INTRODUCTION Leprosy is a chronic infectious disease caused by Mycobacterium leprae. Erythema Nodosum Leprosum (ENL), also referred to as Type 2 Lepra Reaction, represents an immune complex–mediated inflammatory complication occurring predominantly in patients with multibacillary forms of Hansen's disease, particularly lepromatous and borderline lepromatous leprosy. It is clinically characterized by the abrupt onset of crops of bilaterally symmetrical, erythematous, tender, and transient nodules or plaques. Systemic manifestations such as fever, neuritis, lymphadenopathy, iridocyclitis, orchitis, and arthritis frequently accompany the cutaneous lesions. Various morphological variants of ENL have been described, including nodular, vesicular, pustular, bullous, and necrotic forms—the nodular type being the most prevalent. The bullous variant, however, is rare and generally denotes a severe reactional state with extensive inflammatory damage. We report a case series of three patients with atypical rare presentation of erythema nodosum leprosum who were managed with multidrug therapy (MDT), systemic corticosteroid and other immunosuppressants. **CASE 1: LUCIO PHENOMENON LIKE ENL** A 65-year-old male, a known case of lepromatous leprosy, presented with extensive cutaneous ulcerations over the upper and lower extremities of two weeks' duration. The lesions initially appeared as purpuric macules over the legs. Over the next few days, similar lesions developed over the buttocks, arms, trunk, and ears. Within one week, the lesions coalesced to form irregular geographic patterns and evolved into dusky erythematous patches. Subsequently, these areas underwent necrosis and ulceration, resulting in multiple extensive ulcers involving the extremities and trunk. **CASE 2: BULLOUS ENL** A 59-year-old female, a known case of lepromatous leprosy on WHO multidrug therapy for the past 6 months, presented with fever, malaise, and body ache of 10 days duration. She developed multiple painful erythematous swellings along with fluid-filled lesions over both upper arm and trunk with constitutional symptoms. She had a history of recurrent Type 2 lepra reactions

(ENL), previously managed with moderate to high doses of corticosteroids. However, steroid tapering had consistently resulted in relapse. During this episode, she developed fluid-filled lesions for the first time. There was no identifiable precipitating factor for the reaction. **CASE 3: PUSTULAR ENL** A 45-year-old male, diagnosed with lepromatous leprosy based on multiple skin-coloured to erythematous nodules with surface wrinkling over the ear lobules, trunk, and extremities, along with bilaterally thickened and tender ulnar and common peroneal nerves, had been on WHO multibacillary multidrug therapy for the past 3 months. He had a history of recurrent episodes of painful erythematous skin lesions with joint pain, suggestive of Type 2 lepra reaction, for which he received intermittent oral prednisolone but discontinued it on his own after symptomatic relief. He subsequently presented on two occasions with multiple pustular lesions predominantly over the extensor aspects of the limbs and trunk. Older lesions showed central ulceration with crusting. There were no associated comorbidities or relevant family history. A diagnosis of lepromatous leprosy with pustular erythema nodosum leprosum was made.

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Role of Apremilast in Chronic Recurrent Type 2 Lepra Reaction

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BACKGROUND: Type 2 lepra reaction (erythema nodosum leprosum, ENL) is an immune complex–mediated inflammatory complication of multibacillary leprosy characterized by recurrent painful nodules, fever, neuritis, and systemic involvement. Chronic recurrent ENL often requires prolonged corticosteroids and/or thalidomide, leading to significant adverse effects. Apremilast, a phosphodiesterase-4 inhibitor, downregulates pro-inflammatory cytokines including TNF-α, IL-6, and IFN-γ, and may offer a steroid-sparing therapeutic alternative. **OBJECTIVE:** To evaluate the efficacy and safety of apremilast in patients with chronic recurrent Type 2 lepra reaction. **METHODS:** This prospective observational study included eight patients with chronic recurrent ENL attending a tertiary dermatology center. All patients had frequent relapses or steroid dependence. Apremilast was initiated at a standard titrated dose up to 30 mg twice daily and continued for 12 weeks. Clinical response was assessed using reduction in number of ENL nodules, severity of systemic symptoms, corticosteroid requirement, and physician global assessment. Adverse effects were monitored throughout the study period. **RESULTS:** Six of eight patients demonstrated significant reduction in the frequency and severity of ENL episodes within 4–6 weeks of therapy. Corticosteroid dose was successfully tapered in five patients, with two achieving complete steroid discontinuation. Systemic symptoms improved notably. Two patients had partial response. Adverse effects were mild and included transient gastrointestinal discomfort in two patients. **CONCLUSION:** Apremilast appears to be a promising, well-tolerated steroid-sparing agent in chronic recurrent Type 2 lepra reaction. Larger controlled studies are warranted to validate these findings.

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Revisiting Phenytoin: A Cost-Effective Solution for Chronic Trophic Ulcer – A Case-Based approach

Dr Varsha Ranina

BACKGROUND Chronic trophic ulcers are a common complication of Hansen disease. These ulcers are resistant to conventional wound care and impose significant financial burden, especially in resource-limited settings. Phenytoin, traditionally used as an antiepileptic agent, has been observed to promote wound healing due to its stimulatory effects on fibroblast proliferation, collagen deposition, angiogenesis, and granulation tissue formation. **CASE PRESENTATION** A 46-year-old male with treated lepromatous leprosy presented with a non-healing plantar ulcer over foot of 9 months' duration. The ulcer measured 5 × 4 cm with punched-out edges, pale granulation tissue, and minimal seropurulent discharge. Sensory loss was noted over the sole. Peripheral pulses were palpable, and radiography ruled out osteomyelitis. Previous management with regular saline dressings and antibiotics showed minimal improvement. **INTERVENTION** After surgical debridement and consent, topical phenytoin therapy was initiated. Tab phenytoin sodium 100 mg was diluted in 5 ml of normal saline and applied daily as a dressing. Off-loading with customized footwear and routine wound care were continued. **OUTCOME** By the end of 6 weeks, healthy granulation tissue was observed. At 4 weeks, ulcer size reduced by approximately 50%. Complete epithelialization occurred by 8 weeks without local or systemic adverse effects. **CONCLUSION** Topical phenytoin demonstrated significant improvement in healing of a chronic trophic ulcer secondary to leprosy. It appears to be a safe, cost-effective adjunct in managing neuropathic ulcers in endemic and low-resource settings. Further controlled studies are warranted to establish standardized protocols.

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