SOUVENIR

XXVIII MANIPEDICON, 2024

8th December 2024

Theme :

"Environmental influences on child health : Addressing local challenges"

Venue:

IMA Conference Hall, Lamphelpat
Imphal, Manipur

Organised by:

Pediatric Association of Manipur (PAM)

Published by : **Dr. Longjam Basanta Singh**
Organising Secretary

Edited by : **Dr. Namganglung Golmei**
Dr. Angom Kiran Devi

No. of copies : 150

Printed at : Thoujalheiba Press, Uripok Sinam Leikai

Organising Committee

Organising Chairperson	:	**Dr. Ch. Shyamsunder Singh**
Organising Secretary	:	**Dr. Longjam Basanta Singh**
Organising Treasurer	:	**Dr. Khumanthem John**

Advisors

Dr. L. Immo Singh

Dr. H. Kumar Singh

Dr. L. Braja Mohan Singh

Dr. Ksh. Chourjit Singh

Dr. Th. Nabachandra Singh

Dr. L. Ranbir Singh

Dr. Sh. Raghumani Sharma

Dr. Kh. Ibochouba Singh

Dr. Ch. Mangi Singh

Dr. H. Ibemhal Devi

Dr. S. Memma Devi

Dr. Shyamkumar Laishram

Dr. Kh. Ratankumar Singh

Dr. H. Jashobanta Singh

Dr. N. Kameshore Singh

Dr. S. Amuchou Singh

Registration & Reception	:	*Chairperson*	: *Dr. R.K Rupabati Devi*
		Co - Chairperson	: *Dr. Sunilbala Keithellakpam*
		Convenor	: *Dr. Chabungbam Smilie*
		Convenor	: *Dr. Cindy Laishram*
		Convenor	: *Dr. Th Omita Devi*
		Convenor	: *Dr. Ningshen Themyaola*
Scientific	:	*Chairperson*	: *Dr. Y. Rameshwor Singh*
		Co- Chairperson	: *Dr. Ng. Sonamani*
		Convenor	: *Dr. Kh. Sachikumar*
		Convenor	: *Dr. K. Chitrapriya*
		Convenor	: *Dr. Devika Laishram*
Souvenir	:	*Chairperson*	: *Dr. N. Golmei*
		Co-Chairperson	: *Dr. A. Kiran*
		Convenor	: *Dr. Sareet laxmi Nandeibam*
			Dr.Sareetkumari Nandeibam
			Dr. Vetoni Moirangthem
Ceremonial & Cultural	:	*Chairperson*	: *Dr. H. Apabi Singh*
		Co-Chairperson	: *Dr. T. Gitaranjan*
		Convenor	: *Dr. Anilbala Ningthoujam*
			Dr.M.Meenakshi Devi
			Dr. Sunanda W
Food & Catering	:	*Chairperson*	: *Dr. Narendra Laishram*
		Co- Chairperson	: *Dr.W. Joseph*
		Convenor	: *Dr. Amarjit Moirangthem*
		Convenor	: *Dr. R.K.Sananganba*
Accommodation & Transport	:	*Chairperson*	: *Dr. Yaikhomba Taorem*
		Co- Chairperson	: *Dr. Ksh.Chingthang*
		Convenor	: *Dr. RK Naresh*
		Convenor	: *Dr. T Surjakanta*
		Convenor	: *Dr. Sh Santosh Sharma*
Workshop Co-ordinator	:	*Dr. Manimukta Sanasam*	
		Dr. B. Sarita Devi	

GROUP PHOTO OF P.A.M MEMBERS

Activities of PAM

Activities of PAM

Honoring our retired teachers on Teacher's Day

Office Bearers

PEDIATRIC ASSOCIATION OF MANIPUR (PAM)

IMA COMPLEX, LAMPHEL, IMPHAL WEST, MANIPUR, INDIA-795004
PAM REGISTRATION NO.597/M/SR/2013

Patrons	**Dr. L. Braja Mohan Singh** **Dr. Ksh. Chourjit Singh** **Dr. Th. Nabachandra Singh** **Dr. L. Ranbir Singh**
President	**Dr. Ch. Shyamsunder Singh**
Imm. Past President	**Dr. N. Kameshore Singh**
Imm. Past Secretary	**Dr. Ng. Sonamani**
Vice President	**Dr. R.K. Rupabati Devi**
Secretary	**Dr. L. Basanta Singh**
Treasurer	**Dr. Kh. John**
Editor	**Dr. L. Radhapyari**
Associate Editor	**Dr. Amarjit Moirangthem**
Joint Secretaries	**Dr. N. Golmei** **Dr. N. Johnson**
Executive Members	**Dr. H. Jashobanta Singh** **Dr. Hijam Apabi Nonglen** **Dr. Narendra Laishram** **Dr. Sunilbala Keithellakpam** **Dr. Y. Rameshwor Singh** **Dr. W. Joseph Singh** **Dr. Kh. Sachikumar** **Dr. B. Sarita Devi** **Dr. Th. Omita Devi** **Dr. Meenakshi Moirangthem** **Dr. Chabungbam Smilie**
Advisors	**Dr. H. Ibemhal Devi** **Dr. S. Memma Devi** **Dr. Ch. Mangi Singh** **Dr. Kh. Ibochouba Singh** **Dr. Shyamkumar Laishram** **Dr. Kh. Ratankumar Singh**

Organising Committee

Dr. Ch. Shyamsunder Singh
Organising Chairperson

Dr. Longjam Basanta Singh
Organising Secretary

Dr. Khumanthem John
Organising Treasurer

Dr.R.K Rupabati Devi
Registration & Reception Chairperson

Dr. Sunilbala Keithellakpam
Registration & Reception Co-Chairperson

Dr. Y. Rameshwor Singh
Scientific Chairperson

Dr. Ng. Sonamani
Scientific Co-Chairperson

Dr. N. Golmei
Souvenir Chairperson

Dr. A. Kiran Devi
Souvenir Co-Chairperson

Dr. H. Apabi Singh
Ceremonial & Cultural Chairperson

Dr. T. Gitaranjan
Ceremonial & Cultural Co-Chairperson

Dr. Narendra Laishram
Food & Catering Chairperson

Dr.W. Joseph
Food & Catering Co-Chairperson

Dr. Yaikhomba Taorem
Accommodation & Transport Chairperson

Dr. Ksh. Chingthang
Accommodation & Transport Co-Chairperson

Dr. Manimukta Sanasam
Workshop Co-ordinator

Dr. Kharibam Prabhapati Devi

RIMS

Awardee

Professor. L. Ranbir Singh Meritorious Award for Under Graduate Student winner 2024

Dr. Monisha Chandrasekaran

RIMS

Awardee

Kh. Gourakishore and Ibetombi Memorial Award for PG Student winner 2023

Advisors MANIPEDICON 2024

Dr. L. Immo Singh

Dr. H. Kumar Singh

Dr. L. Braja Mohan Singh

Dr. Ksh. Chourjit Singh

Dr. Th. Nabachandra Singh

Dr. L. Ranbir Singh

Dr. Sh. Raghumani Sharma

Dr. Kh. Ibochouba Singh

Dr. Ch. Mangi Singh

Dr. H. Ibemhal Devi

Dr. S. Memma Devi

Dr. Shyamkumar Laishram

Dr. Kh. Ratankumar Singh

Dr. H. Jashobanta Singh

Dr. N. Kameshore Singh

Dr. S. Amuchou Singh

Memorial ORATION

(Late) Prof. Laishram Ibemtombi Devi
MBBS (Delhi), MD, DCH (Bombay)

Late Professor L. Ibemtombi Devi was born on 1st March, 1939 at Singjamei Chingamathak, Imphal. She had a bright academic career in school and college. She did her MBBS from Lady Harding Medical College, New Delhi and MD (Pediatrics) and DCH from Bombay University. She joined erstwhile Regional Medical College (now RIMS) in 1972 and she was utilized as Demonstrator in basic science subjects. She then became Assistant Professor of Pediatrics Unit in the Medicine Department. Subsequently, Pediatrics was separated from Medicine Department as a separate specialty and a separate Pediatric Department was established and she became the Head of the Pediatrics Department and retired as Professor and Head of Department of Pediatrics in 2002. She was one of the longest serving HOD of Pediatrics in India and contributed to the growth of RIMS and the Department of Pediatrics, RIMS. She underwent WHO fellowship in Child Health and Nutrition in London and worked in various capacities in the implementation of National Child Health Programs like Nutrition and Immunization. She served as Senior Consultant, National ICDS Scheme, New Delhi. She was the President of IAP, Manipur State Branch for 7 Years from 1989 to 1996. She also served RMC as Vice-Principal, and Principal in Charge. During her tenure Post graduate course was opened in RIMS and her students are now serving in different Medical colleges all over the North - Eastern states as Professor and Head of Departments of Medical Colleges and many of them are also renowned practicing Pediatricians. She passed away after a brief illness at her residence on 21st April, 2019 at the age of 80 year.

Nandeibam Kameshore Singh

ORATOR

DOB 11th February 1963 at Nilakuthi.
2nd son among 3 brothers & 2 sisters
Father: (Late) Nadeibam Anganghal Singh
Mother: (Late) Nandeibam (O) Sanajaobi Devi

Schooling: L.P & High School, respectively at Nilakuthi & Awang Potsangbam High School (Class III to X topper in the class)

HSLC : 1978 (4th Position)

Pre-University Examination 1981 MU (6th Position).

Topper Special Competitive Test (MBBS Entrance Examination 1981)

MBBS (RMC 1981–87)

Manipur Health Services. (1989 February – 2010 November)

M.D. (PGIMER, Chandigarh 1993 – 96)

Research Methodology and Biostatistics course (PGIMER, Chandigarh 1996)

C.C.T. (Ped. Onco. TMH, Mumbai 2004 – 05)

D.M. Fellow (Clinical Haematology, AIIMS, New Delhi, 2010)

JNIMS (02.12.2010 – till date)

Prof. & HoD (03.05.2019 – till date)

Programme Director, PCoE-JNIMS (01.04.2019 – till date)

Addl. Medical Superintendant (29.05.2021 – till date)

Member cum Faculty of MEU, JNIMS, Imphal (till October 2024)

External Examiner:

MBBS & MD since December 2015

(Including PGIMER, Chandigarh)

Regular Assessor of MCI then NMC for UG & PG in Pediatrics

Already attended:

10 – International

64 – National

33 – Zonal and Numerous State level CMEs / Conferences and delivered 59 oral presentations as on 31.12.2023 in International, National, Zonal and State level CMEs / Conferences (including FIGO World Congress, 4th to 9th Oct. 2015 Vancouver, Canada and AOFOG 25th & 26th May 2022, Bali, Indonesia).

- Regular Speaker on HIV / AIDS in RDLS by I- Tech India held on 2nd Thursday of every month
- Attended numerous workshops / Trainings, National, Zonal & State levels
- Chairperson of Scientific Sessions in National, Zonal & State levels CMEs / Conferences

Publications:

- 5 Original articles as 1st author & 1 ICMR Project.
- Awarded Purbanchal IAP Pioneer Award inember 2005
- Best Instructor Award IAP, NNF, NRP, FGM in 2014
- Honoured Pediatrician of the year 2022 by the Pediatric Association of Manipur (PAM), FPAI on 14th January 2023 at Navi Mumbai; Shishu Vishesagna Shiromoni Award, Purbanchal on 2nd Dec.2023 At Agartala.

Founder Member PAI

Founder Vice – President & Advisor, Manipur Cancer Society.

Life member IMA, IAP, NNF, BPNI, ISHBT etc

State Secy. IAP, Manipur State Branch (2008, 2009, 2014, 2015)

Organising Secy. Manipedicon (XII, XIII, XV, XVIII, XIX)

XXII East Zone Pedicon 2015

Jt. Secy. East Zone Academy of Pediatrics 2015

Vice – President East Zone Academy of Pediatrics 2023

Vice President Pediatric Association of Manipur (State Branch of CIAP)- 2020, 2021

President Pediatric Association of Manipur (State Branch of CIAP)- 2022, 2023

President NNF (Manipur State branch) 2022, 2023.

Executive Board Member cIAP-2024 Manipur/Tripura

MESSAGES

Dr. Sapam Ranjan Singh
Minister
Medical, Health & Family Welfare
Publicity & Information
Manipur

सत्यमेव जयते

Mobile: +91 8414811333
e-mail: rsapam@yahoo.com

MESSAGE

*It gives me immense pleasure to learn that **Pediatric Association of Manipur (PAM)** is bringing out a Souvenir on the occasion of its annual conference **"XXVIII MANIPEDICON 2024"**.*

It is truly commendable to see such a dedicated group of health care professionals who are working tirelessly to ensure the health and wellbeing of our children. The work of pediatricians is indispensable in bringing quality healthcare of the children.

I am confident that the Pediatrict Association of Manipur will continue to play a pivotal role in improving child health outcomes in Manipur. Let us work together to build a healthier and happier future for our youngest citizens.

I also wish the annual conference a grand success.

Dr. Sapam Ranjan Singh

Goodwill Message from the Director, DHS for Souvenir of the "XXVIII MANIPEDICON 2024"

It is with great pleasure that I extend my warmest greetings to all delegates, esteemed guests, attendees, speakers, and healthcare professionals of the annual conference "XXVIII MANIPEDICON 2024" to be held on 8th December, 2024 at IMA Conference Hall, Lamphelpat, Imphal.

As we reflect on this year's theme "**Environmental influences on child health: Addressing local challenges**," it is clear that every aspect of child's environment impacts their health, development, and well-being. Needless to say, let the local challenges that continue to threaten the health of our children, not deter ourselves to create a healthier, safer, and more conducive environment for them.

This conference provides an excellent opportunity for all stakeholders who share a common goal; to address the environmental factors that impact child's health and take action, through awareness, education and investing in sustainable solutions that can help break down barriers and build a brighter future for our children.

Let us take a stand today, to work together, to provide every child with the opportunity to grow, learn and live in a healthy environment, and commit to a better tomorrow for generations to come.

Lastly, I would like to express my deepest gratitude to the Pediatric Association of Manipur (PAM) for organizing this important conference, and I am sure at the end of this event; the insights gained here will help shape the future of our children.

I wish you all a fruitful and productive conference.

Dr. Chambo Gonmei
Director, Health Services
Government of Manipur

Dr. L. Tomcha Khuman
Director,
Family Welfare Services,
Government of Manipur

MESSAGE

I am happy to learn that the Paediatric Association of Manipur is going to organize the Annual Conference "XXVIII MANIPEDICON 2024" on 8th December, 2024 at IMA Conference Hall, Lamphelpat under the theme "Environmental influences on Child Health: Addressing local challenges". On this occasion a Souvenir is also being published.

Air pollution is one of the leading environmental concerns which cancause human health problems both in urban and rural areas. These affectcomparatively more on the health of the children, women, elderly and marginalizedpeople.

Further, climate change is one of the greatest global challenges that is affecting the health and well-being of populations worldwide. The impacts of climate change, including rising temperatures, increased frequency and intensity of natural disasters, and other environmental hazards, are taking a toll on the mental health and psychological well-being of people, particularly in communities that are already vulnerable.Recent reports signal escalating climate change indicators and their worsening impacts on health.

I believe the Conference will give due focus on the prevention and mitigation of childhood diseases due to air pollution, climate sensitive illnesses with incorporation of environment friendly practices into healthcare sector which will contribute significantly to achieve Sustainable Development Goals by 2030.

I wish the Conference and the Souvenir a grand success.

Imphal, the 8th November, 2024

OFFICE OF THE
STATE HEALTH SOCIETY, MANIPUR

MESSAGE

Children are vulnerable to the environmental health risks including air pollution, hazardous chemicals, climate change, inadequate water, sanitation and hygiene.

I am extremely pleased that Pediatric Association of Manipur is organizing the annual **XXVIII MANIPEDICON 2024** under the theme **Environmental influences on child health: addressing local challenges** and a souvenir is releasing on the occasion.

I wish PEDIATRIC ASSOCIATION OF MANIPUR a grand success and hope will bring out actionable strategies and solutions to mitigate the environmental challenges and commit to nurture a safer and healthier future for our children.

(Dr. M. Dinesh Singh)
State Mission Director,
State Health Society
National Health Mission, Manipur

डॉ० गुरुअरिबम सुनिल कुमार शर्मा
Dr. Guruaribam Sunil Kumar Sharma
निदेशक / **Director**
आर.आई.एम.एस., इम्फाल, मणिपुर
RIMS, Imphal, Manipur

E-mail:director@rims.edu.in
eigasunil@gmail.com
Regional Institute of Medical Sciences
Imphal-795004, Manipur, India
Phone: 2414629, 2414750, 2414720 (O)

MESSAGE

I am, indeed, very happy to learn that the Pediatric Association of Manipur (PAM) is organizing its "**XXVIII MANIPEDICON 2024**" at the IMA Conference hall, Lamphelpat, Imphal on 8th December, 2024 under the theme "**Environmental influences on Child Health: Addressing local challenges**" in which eminent resource persons will be attending and that a souvenir is being brought out to commemorate the occasion.

I am glad the resource persons in the specialized areas will enlighten on the local challenges imposed by Environmental influences on Child Health care services in the region and focus on ways to mitigate their impact.

I extend my sincere wishes for a grand success of this conference and welcome all the esteemed resource persons and delegates to the conference.

Imphal,
The 6th November, 2024

(Prof. G. Sunil Kumar Sharma)
DIRECTOR

Jawaharlal Nehru Institute of Medical Sciences

POROMPAT, IMPHAL - 795 005

Phones : 0385-2443144 (Dir), 0385-2443142 (Office), Fax : 0385-2443142

Email : jnims.2009@gmail.com

Website : www.jnims.nic.in

Ref. No. ..... *Date* .....

Prof. L. Usharani Devi
Director, JNiMS
Porompat, Imphal- East

MESSAGE

It feels good to learn that the ***"Pediatric Association of Manipur (PAM)"*** is organizing the annual conference ***"XXVIII MANIPEDICON- 2024"*** on the 8th December, 2024 at IMA Conference Hall, Lamphelpat, Imphal on the theme ***"Environmental influences on Child Health: Addressing local challenges".***

I am sure that promoting a healthy environment is essential to ensure the well-being and development of children. The impacts of adverse environmental conditions on child health are profound, multifaceted, as numerous challenges, including pollution significantly influencing various aspects of children's growth and development, nutrition, inadequate housing, and climate change, significantly affect the well-being and development of our young ones. Addressing these challenges requires a concerted effort from local governments and communities to create healthier living conditions.

I express my heartfelt gratitude to all members of the organizing committee and sub-committee for their invaluable contribution on this annual conference.

I wish the conference a grand Success!

(Prof. L. Usharani Devi)
Director,
J.N. Institute of Medical Sciences

National President
Indian Academy of Paediatric (IAP)

Warm greetings to all participants of XXVIII MANIPEDICON 2024!

It is my privilege to convey my heartfelt wishes for the success of this esteemed conference organized by the Pediatric Association of Manipur. Under the theme "Environmental Influences on Child Health: Addressing Local Challenges," this gathering truly underscores the collective commitment of pediatricians to tackling pressing issues affecting child health in today's rapidly evolving world.

Despite the challenges faced, including curfews and disruptions in Manipur, I deeply admire the resilience and dedication of the team led by Dr. Shyamsunder Singh and Dr. L. Basanta Singh. Your efforts to promote child health amidst adversity exemplify the unwavering spirit of our pediatric fraternity. It is this spirit that inspires us to continue working together for a brighter, healthier future for children.

As the National President of IAP, I am proud of the strides we've made in advancing child healthcare initiatives this year, thanks to the invaluable guidance of our dynamic Vice President of the East Zone, Dr. Santanu, and the blessings and support of each one of you.

May this conference be a grand success, leaving a lasting impact on pediatric healthcare in the region.

Wishing you all fruitful deliberations and an enriching experience at this wonderful event.

Long Live IAP,
Long Live PAM!

Warm regards,
Dr. G V Basavaraja
National President, IAP 2024

Respected Seniors and Dear friends,

Season's Greetings!

It is with immense pleasure that I extend a warm welcome to you all for the upcoming annual conference "XXVIII MANIPEDICON 2024", scheduled for 8th December, 2024 at IMA Conference Hall, Lamphelpat, Imphal. This event is being hosted by the Pediatric Association of Manipur (PAM) under the theme 'Environmental Influences on Child Health: Addressing Local Challenges', and a special souvenir will be released to mark the occasion.

Imphal, the capital city of Manipur, is one of the most ancient cities in India. Situated in the north-eastern part of the country, Imphal is not only the state capital but also its cultural heart. The city is renowned for its traditional festivals and cultural shows, making it one of the most visited parts of Manipur.

I extend my heartfelt thanks to CIAP Vice President (2024) East Zone Dr. Santanu Deb, CIAP Executive Board Member Dr. N. S. Kameshore, IAP PAM President Dr. Ch. Shaymasunder Singh, Secretary Dr. L. Basanta Singh, Treasurer Dr. Khumanthem John, and all state working committee members for their unwavering support and dedication in making this conference a success. I also express sincere gratitude to Patrons Dr. L. Braja Mohan Singh, Dr. Ksh. Chourjit Singh, Dr. Th. Nabachandra Singh, Dr. L. Ranbir Singh, Vice President Dr. R. K. Rupabati Devi, Joint Secretaries Dr. N. Golmel and Dr. N. Johnson, all State EB members, Immediate Past President Dr. N. Kameshore Singh, Immediate Past Secretary Dr. Ngangbam Sonamani, and Advisors for their efforts in making this event memorable.

I am confident that this conference will be a feast of learning for pediatricians nationwide. Let us connect not just physically, but intellectually. Conversations are the stepping stones to knowledge, so please share your research findings, intriguing case studies, and innovative solutions.

To all IAP members, I urge you to register, participate actively, and contribute to this symphony of learning.

With best wishes & warm regards,

Dr. Yogesh N Parikh
Hon. Secretary General 2024 & 2025
Indian Academy of Pediatrics

Message

It is my immense pleasure and privilege to convey my heartfelt wishes for the success of the XXVIII MANIPEDICON 2024 to be held on 8th December 2024 at IMA Hall Lamphel with the appropriately chosen theme " Environmental Influences on Child Health: Addressing Local Challenges" and a Souvenir is being published in relation to this occasion

Our children are facing multiple environmental influences on their health both physical and mental resulting in various challenges required to be faced by the parents, pediatricians and related health care workers particularly during the present crisis of the state. I hope that this scientific event will be beneficial to all the care givers of child health leaving a lasting impact in their knowledge and working

Long Live IAP

Long Live PAM

Nandeibam Kameshore Singh
EB cIAP 2024 Manipur/ Tripura

From the desk of the President, PAM

Dear esteemed colleagues and friends,

It is my great honor to welcome you to the 28th Annual Conference of the Pediatric Association of Manipur (XVIII MANIPEDICON 2024) where advancements in the health and well-being of our children and future generations will be deliberated. Our gathering this year holds special significance as we continue to innovate and tackle emerging challenges in pediatric care, especially with relevance to this year's theme – "Environmental influences on child health : addressing local challenges." Environmental influences on child health are significant, especially in regions where challenges like pollution, water quality, climate, lack of green spaces and social turmoil persist. Children are uniquely vulnerable to environmental hazards due to their developing bodies, smaller size, and higher rates of exposure relative to adults. Each one of us should play a crucial role, from pioneering research to compassionate clinical practice, in shaping the lives of countless children and families.

I am hopeful that the insights, collaborations, and shared expertise from this conference will help us all make a profound impact in our communities and beyond. We look forward to a productive and inspiring conference that will strengthen the foundations of pediatric health.

With warm wishes.

Long live PAM
Long live IAP

Dr. Ch. Shyamsunder Singh
President, PAM

From the desk of the Organizing Secretary

It gives me immense delight and joy to welcome all the distinguished delegates, eminent resource persons, faculties & well-wishers of XXVIII MANIPEDICON 2024.

The theme of this year "Environmental Influences on Child Health: Addressing Local Challenges" is very pertinent & rightly chosen by the organizing committee, considering the local challenges of healthcare providers on the environmental impact induced on our lovely children.

We all know the challenges that we are facing like the influences on Child Health from Global warming, COVID-19, Ongoing war, etc. Children are vulnerable to these influences. Health care providers especially Pediatricians should address the local challenges related to these influences as it is crucial for ensuring a healthier future.

We all know, "Youths are the pillars of the Nation", so to make tomorrow's healthier youths & a strong Nation - Today's healthier Children should be there...

We are also aware that there are Government & Private sector health care providers, The Social Welfare Dept., and other NGOs working in various capacities. But, we as members of the Pediatric Association of Manipur have a huge responsibility. So let's put forth our plans together & share our experiences to achieve our aims by participating actively in this XXVIII MANIPEDICON 24.

The scientific committee has prepared an excellent scientific session including a panel discussion involving stalwarts. My gratitude to all the members of the various sub-committees for your coordinated support & guidance.

Wishing you all "A very happy & prosperous new year 2025."
Long live IAP
Long live PAM

Dr. L. Basanta Singh
Organizing Secretary
XXVIII MANIPEDICON 24

Pediatric Association of Manipur (PAM)

MESSAGE

It gives me immense pleasure to welcome all the academicians , invitees and delegates in the XXVIII MANIPEDICON 2024, the annual conference of Pediatric Association of Manipur to be held at IMA conference hall, Lamphelpat, Imphal on 8th December 2024. This year, our organizing team choose the theme as "Environmental influences on Child Health : Addressing local challenges" for the conference. Children are the pillars of tomorrow, it is high time to understand the environmental effect on child health, taking into account, growth and development, mental and social factors, rather than just treating the symptoms of a disease. All the health professional sand parent/ caretaker of the child has crucial role in preventing environmental hazards on child development as a whole.

I am sure, the conference will give immense benefit to the participants to interact and share Knowledge thereby help in advancement of the child health care in an holistic approach. I on behalf of reception committee MANIPEDICON 2024 ,again welcome all the invitees, speakers, and delegates .

I wish "MANIPEDICON 2024" a grand success.

Long live IAP !

Long live Pediatric Association of Manipur !

(Dr.RajkumariRupabati Devi)
Chairperson,
Reception Committee
MANIPEDICON 2024

Pediatric Association of Manipur (PAM)

MESSAGE

It gives me immense pleasure to be a part of XXVIII MANIPEDICON 2024, the annual conference of of Pediatric Association of Manipur to be held on 08th December 2024 at IMA Conference Hall, Lamphel, Imphal.

The theme of the conference "Environmental influences on child health: Addressing local challenges" has been rightly chosen to address the impacts of environment on child health and development being it biological, physical, familial or psychosocial. Local challenges for the specific area or the region should be addressed and taken care of promptly and jointly by all the stakeholders to ensure all children are healthy both physically and mentally and attain optimum growth and development.

The scientific committee have designed an interesting, enlightening, thought provoking and brain storming scientific agenda. I wish all the resource persons and delegates take the opportunity to interact and discuss and also enjoy the scientific feast.

I wish "XVIII MANIPEDICON 2024" a grand success.

Long live IAP

Long live PAM

(Dr. Rameshwor Yengkhom)
Chairperson
Scientific sub-committee
XVIII MANIPEDICON 2024

Pediatric Association of Manipur (PAM)

MESSAGE

It is indeed an honor to write a goodwill message regarding the upcoming annual event of our Pediatric fraternity of Manipur under the theme "Environmental Influences on Child Health: Addressing Local Challenges" in the XXVIII MANIPEDICON 2024 to be held at IMA Complex, Lamphelpat on 8 th December, 2024.

The ever-declining climate condition of the world has affected all aspects of life including the growing children which is considered as the future pillar of the nation. As the saying goes "If you want to clean the society, clean your home first", thus the onus of addressing the ill effects of environment on children should start from our own locality. So the theme "Environmental Influences on Child Health: Addressing Local Challenges" our Association has chosen this year is very appropriate in identifying this problem and its impact on children. I hope that the upcoming various scientific sessions to be conducted during this conference will be fruitful for the Pediatrician and whole of the medical fraternity.

I wish this year conference a grand success.

Long live PAM.

Long live IAP.

(Dr. Namganglung Golmei)
Chairperson, Souvenir Committee,
XXVIII MANIPEDICON 2024.

SCIENTIFIC PROGRAMME

XXVIII MANIPEDICON 2024

Date: 08th December 2024, Sunday Venue: IMA Conference Hall, Lamphel, Imphal

8:00 AM: **Registration**

8:30 AM – 10:00 AM: **Award paper session** (Dr. A. Naranbabu Hall) (8+2 = 10 mins each)

"Kh. Gourakishore and Ibemtombi Memorial Award for PG Students"

Sl. No.	Topic	Speakers
1	Symptomatology duration of less than 24 hours can successfully predict the outcome of pneumatic reduction in children with intussusception	Dr Shivani
2	Prevalence of timely initiation of complementary feeding in children aged 6 - 24 months with acute malnutrition admitted in Nutritional Rehabilitation Centre in Manipur: A cross sectional study	Dr. Hamna Raphi Puthenveettil
3	Clinical profile of Kawasaki disease among the indigenous population of Manipur: A 6 years observational study in a tertiary hospital	Dr. Amarjit Huidrom
4	A 5 years Experience of Clinical Profile of Scrub Typhus in Children from a Tertiary Care Centre in North-East India: A Cross-Sectional Study	Dr. Leimapokpam Martina Devi
5	Assessment of Neutrophil lymphocyte ratio, Platelet lymphocyte ratio in early diagnosis of Neonatal sepsis in a tertiary care centre in north east of India	Dr. Munirahmed Dodamani
6	An Observational Study on Long Term Survivors of HIV Positive Children in a Tertiary Care Centre in North-East India	Dr. Dinesh Narayanan

9:00 AM – 10:00 AM: **Poster walk** (Poster arena – Ground floor, IMA main conference hall)

10:00 AM – 11:00 AM **Session I/ CME-I (Mixed bag):** 1 hour (15+3= 18 mins each)

Sl. No.	Topic	Speaker	Chairpersons
1	Sepsis and septic shock in children: Revisiting definitions and treatment approaches	Dr. Ch. Smilie	Prof. L. Braja Mohan Singh Prof. L. Ranbir Singh
2	Quality and affordability of generic medicines available in Jan Aushadi kendra	Dr. N. Shugeta Devi	
3	Ethical issues in pediatric practice	Prof. L. Rajesh	

11:00 AM – 12:00 PM **Inauguration**

12:00 PM – 12:30 PM **Lunch**

12:30 – 1:30 PM **Session II/ CME – II:** 1 hour (15+3 = 18 mins each)

Sl. No.	Topic	Speaker	Chairpersons
1	Acute bacterial meningitis in children: An evidence based update	Dr. L. Radhapyari	Dr. S. Raghumani Sharma Dr. Th. Nabachandra
2	Congenital heart diseases: When should we correct it ?	Dr. N. Golmei	

3	What's new in Kawasaki Disease	Dr. N. Johnson	Singh

1:30 – 2:00 PM **Prof. Laishram Ibemtombi Memorial Oration**

Oration topic	Orator	Chairpersons
"NRP – Three decades experience in changing trend"	Prof. N. Kameshore Singh	Prof. Ch. Shyamsunder Singh Dr. L. Basanta Singh

2:00 – 3:00 PM **Session III/ CME – III:** 1 hour (15+3 = 18 mins each)

Sl. No.	Topic	Speaker	Chairpersons
1	Exploring the modern landscape on gut dysbiosis (sponsored topic)	Dr. Kh. John	Prof. Kh. Ibochouba Singh Dr. H. Jashobanta Singh
2	Congenital hypothyroidism - Screening and management	Dr. Amarjit Moirangthem	
3	Addressing enuresis in children: Supporting kids to grow	Dr. Angom Kiran	

3:00 – 3:45 PM **Session IV: Panel discussion:** 45 mins

Topic	Moderator	Panellists	Chairpersons
"Small babies – Big dreams" - Challenges in care of VLBW babies	Dr. Rameshwor Yengkhom	Dr. S. Amuchou Dr. Kh. Sachikumar Dr. Manimukta Sanasam	Dr. Kh. Ratankumar Singh Dr. RK. Rupabati Devi

3:45 – 4:45 PM **Session V/CME-V:** 1 hour (15+3 = 18 mins each)

Sl. No.	Topic	Speaker	Chairpersons
1	Vesicourethral reflux – sting or not to sting "New kids on the block"	Dr. Toijam Soni Lyngdoh	Dr. H. Apabi Nonglen Dr. Narendra Laishram
2	Point of care ultrasound in pediatrics	Dr. S. Amuchou Singh	
3	Rare diseases policy in India – An overview	Prof. Ch. Shyamsunder	

4:45 – 5:05 PM **Session VI/CME-VI: Free paper session** 20 mins (8+2 = 10 min each)

Sl. No.	Topic	Speaker	Chairpersons
1	Pattern of mental and behavioural problems among children and adolescents attending the Psychiatry OPD of a Government Hospital in Imphal East	Dr. Jemila Shoibam	Dr. Sunibala Keithellakpam Dr. Ng. Sonamani
2	Study on bacteriological profile of endotracheal tube tip culture in NICU of paediatrics department in RIMS, Imphal	Dr Laldinpuii	

5: 05 PM – 5: 30 PM **AGM (Annual general body meeting)**

5:30 PM **Cultural programme followed by Dinner**

INDIAN ACADEMY OF PEDIATRICS (IAP)
MANIPUR STATE BRANCH

Year	President	Secretary	Treasurer
1989 - 1992	Dr. L. Ibemtombi Devi	Dr. L. Immo Singh	Dr. L. Ranbir Singh
1992-1996	Dr. L. Ibemtombi Devi	Dr. L. Ranbir Singh	Dr. Shyamkumar Laishram
1996-2001	Dr. Ksh. Chourajit Singh	Dr. Th. Nabachandra	Dr. Shyamkumar Laishram
2001-2003	Dr. H. Kumar Singh	Dr. Th. Nabachandra	Dr. Shyamkumar Laishram
2003-2004	Dr. L. Braja Mohan Singh	Dr. L. Ranbir Singh	Dr. A. Naranbabu Singh
2004 - 2007	Dr. Th. Nabachandra Singh	Dr. Shyamkumar Laishram	Dr. A. Naranbabu Singh
2007 - 2009	Dr. H. Ibemhal Devi	Dr. N. Kameshore Singh	Dr. H. Jasobanta Singh
2009-2012	Dr. A. Naranbabu Singh	Dr. L. Manglem Singh	Dr. Ch. Shyamsunder Singh
2012-2013	Dr. L. Ranbir Singh	Dr. H. Jasobanta Singh	Dr. Ch. Shyamsunder Singh
PEDIATRIC ASSOCIATION OF MANIPUR (PAM)			
2013-2015	Dr. Shyamkumar Laishram	Dr. N. Kameshore Singh	Dr. Ch. Shyamsunder Singh
2015-2016	Dr. Kh. Ibochouba Singh	Dr. Ch. Shyamsunder Singh	Dr. Y. Rameshwar
2016-2017	Dr. Kh. Ibochouba Singh	Dr. Ch. Shyamsunder Singh	Dr. R.K. Rupabati Devi
2017-2018	Dr. Kh. Ratankumar Singh	Dr. R.K. Rupabati Devi	Dr. N. Golmei
2018-2019	Dr. Kh. Ratankumar Singh	Dr. R.K. Rupabati Devi	Dr. N. Golmei
2019-2020	Dr. H. Jasobanta Singh	Dr. Y. Rameshwor Singh	Dr. Ng. Sonamani
2020-2021	Dr. H. Jasobanta Singh	Dr. Y. Rameshwor Singh	Dr. Ng. Sonamani
2021-2022	Dr. N. Kameshore Singh	Dr. Ngangbam Sonamani	Dr. Khumanthem John
2022-2023	Dr. N. Kameshore Singh	Dr. Ngangbam Sonamani	Dr. Khumanthem John
2023-2024	Dr. Ch. Shyamsunder Singh	Dr. Longjam Basanta Singh	Dr. Khumanthem John
2024-2025	Dr. Ch. Shyamsunder Singh	Dr. Longjam Basanta Singh	Dr. Khumanthem John

ABSTRACTS

AWARD PAPER PRESENTATION

A CHILD WITH PERSISTENT PNEUMONIA WITH PERSISTENTLY ELEVATED CHOLESTATIC ENZYMES, HEPATOSPLENOMEGALY AND FAILURE TO THRIVE: BEWARE OF UNDERLYING GENETIC DEFECT

Authors: **Dr Amarjit Huidrom[1],**
Dr Maibam Bisheswor[1],
Dr S. Manimukta[1],
Dr Bidyarani Oinam[2]

1. Mother's care children hospital and research centre, Sagolband Moirang Leirak, Imphal
2. District Hospital, Bishnupur

Abstract:

A 4 months old male child with history of failure to thrive presented to us with fever, cough and difficulty in breathing for 1 day. He was born through a spontaneous conception to a non-consanguinous couple at full term. He had history of persistent pneumonia starting at 3 months of life with requirement of mechanical ventilation and surgical decortication for empyema thoracis with growth of Methicillin Resistant Stapphalococcusaureus(MRSA) in the pleural fluid culture. He had been admitted in our hospital 4 times with the same clinical features. He was found to have persistently elevated cholestatic liver enzymes and mild to moderate hepatosplenomegaly. Work up for primary immunodeficiency reported normal. Liver biopsy was done in view of suspected storage diseases and reported features suggestive of hepatitis. Whole genome exomesequencing identified a homozygous missense variant c.1505T>C in Exon 11 of the *CFTR* gene, thus confirming the diagnosis of cystic fibrosis. He was managed conservatively and was discharged after completion of the course of antibiotics.

The child was examined at 5 and 6 months of age at the OPD and was clinically doing well.

Conclusion:

India is said to have the most number of undiagnosed CF patients in the world, dismissing popular belief that it is extremely rare in India ever since it was first reported. The estimated number of diagnosed cases in India is meagre (600) in sharp contrast to the extrapolated numbers (37,406) based on the analyses of migrant Indians in countries with CF registries.Although numerous diagnostic methods and treatment options are available for CF globally, most of these are unaffordable for developing countries like India. Currently, CF symptoms are managed with mucolytics, antibiotics, anti-inflammatory drugs, and various CFTR modulators based on the type of defect. While a definitive cure for CF remains elusive, advancements in stem cell and gene therapies hold promise for permanent cure in the near future.

Key words:

cystic fibrosis(CF), failure to thrive, persistent pneumonia,Cystic fibrosis transmembrane conductance regulator (CFTR)

CLINICAL PROFILE OF KAWASAKI DISEASE AMONG THE INDIGENOUS POPULATION OF MANIPUR: A 6 YEARS OBSERVATIONAL STUDY IN A TERTIARY HOSPITAL

Author: **Dr. Amarjit Huidrom**
Dr. M Bisheshwor
Dr. Bidyarani Oinam

Abstract

Aim: To study the clinical epidemiological profile of children with Kawasaki disease in the indigenous population of Manipur

Methods: Children diagnosed as Kawasaki disease during the last 6 year period (2018-2024) were enrolled in the retrospective observational study in a tertiary care hospital

Results: 44 cases were diagnosed and treated for Kawasaki Disease(KD). Median age at presentation was 2 years. Complete KD were seen in 20 children. The most common clinical sign was mucositis. 4 children had cardiac involvement ; 3 had coronary artery aneurysms (CAAs) among which 1 had myocarditis, and 1 child had pericardial effusion. There was no mortality.

Conclusion: KD is the most common vasculitis found in children. In our indigenous population, considering the serious cardiac complications, the disease needs to be considered early in children with pyrexia without focus.

Key words: CAA (coronary artery aneurysm),KD(Kawasaki disease)

INTRODUCTION

Discovered in 1967 by Japanese pediatrician – Tomisaku Kawasaki as "Mucocutaneous lymph node syndrome", it is an acute febrile illness of early childhood characterized by systemic vasculitis of the medium-sized arteries with special predilection for coronary arteries[1].It is the leading cause of acquired heart disease both in developing and developed countries [2,3]. Most commonly seen in South East Asia- Japan having the highest incidence followed by South Korea and Taiwan [4–6]. In India, Post Graduate Institute of Medical Education and Research(PGIMER), Chandigarh is contributing most of the studies on KD.

India do not have country wide incidence other than regional incidences till now.No studies have ever done in the entire North East India, it will be the first study in Manipur and the North East India. We frequently encounter cases which many a times are in the late stage of the disease which acted as our motivation for this study.

Research Objectives and Questions

1. Clinical Epidemiology of KD in indigenous population of Manipur
2. Tractable signs and symptoms for early diagnosis and management
3. Incidence of cardiac involvement in our population.

The highest rate globally is reported in Japan with an estimate of 264 per 100,000 children < 5 years. Approximately 1% Japanese children develop KD by 10 years.Recurrence rate of KD was 3.5% of cases, mortality rate was < 0.02%, and resistance to IVIG reported in 17.0% of cases[7]. South Korea reported the second highest incidence rate (134.4 per 100,000 children < 5 years)[5].Taiwan being third highest with an estimated incidence of (82.8 per 100,000 children < 5 years) and reported coronary complications in 5.4% of the cases[6,8]. Seasonal peak in summer and winter noted in these countries. Slightly male predominance noted (male: female= 1.5 to 1 times) with more complications and mortality. In USA, the incidence is estimated to be 17 - 21 per 100,000 children < 5 years old [9].European countries report an incidence rate < 16 per 100,000 children < 5 years old; China reported incidence varies between 7.06 and 55.1 per 100,000 children < 5 years[10,11].In Australia, the incidence rate ranges between 8 and 10 per 100,000 children < 5 years[12].No proper study in middle east and African countries.

Around 1977 first case reporting was seen in India[13–15], two case series were published in 1997 from Chandigarh and Trivendum[16,17]since then there has been immense raised in the cases as well as in works and studies on KD. PGIMER-Chandigarh being notedly doing significant work in India.

In Chandigarh studies showed increasing incidence of KD from 1994 (0.51/100,000) to 2008 (4.54/100,000) in children aged <15 years[18].The second epidemiological study covered the period from **2009 to 2014,** and reported incidence rate of 5.35/100,000 children under the age of 5 years, out of which 54 children (43 boys, 11 girls) were resident of Chandigarh, 6 children had coronary abnormality[19].

During **2015–2019**(5years)- Chandigarh had 83 cases (15.4%; 66 males, 17 females), the incidence rate of KD in Chandigarh was 5.64–9.87 per 100,000 children under 5 years old, and 2.65–5.07 per 100,000 children under 15 years old[20].

Till now no study has been published in the entire North East India or Manipur. In this retrospective observational study, we have studied the age wise distribution, gender and topographic predominance, clinical presentation, seasonal variation and the treatment given among the cases of KD in our hospital.

3. Methodology

Study Design

This is a retrospective observational study in a tertiary hospital – Mother's Care Children Hospital and Research Centre, Imphal. Records were reviewed for 6 years(2018 – 2024) from the children diagnosed with KD as per the AHA criteria for diagnosis of KD and admitted in

general wards and Pediatric Intensive Care Unit(PICU).Data regarding age, gender distribution, topographic-valley and hills, seasonal variations, concurrent infections, stages of illness, investigations- Total leucocyte count(TLC),Hemoglobin(Hb), Erythrocyte Sedimentation Rate(ESR),CRP(C-Reactive Protein),platelet count,urine analysis, blood and urine cultures, 2D-Echochadiography findings, treatment given and responses were collected depending on data availability. Z-score was used for calculating coronary artery size as given by Dallaire and colleagues based on body-surface area.

Children presenting with features of Kawasaki disease following Covid-19 infection fitting to KD-phenotype of Multisystem Inflammatory Syndrome in Children(MIS-C) were excluded.

Diagnosis criteria are given according to American Heart Association(AHA)[1,21], divided into Classical KDand Incomplete KD. It is purely clinical diagnosis and doesn't have specific investigation methods.

Classical KD/Complete KD: Fever for 5 days together with 4 out 5 principal clinical features in absence of other disease.

1. Conjunctivitis; non exudative, bilateral
2. Rashes; maculopapular, diffuse erythema, erythema multiforme like
3. Erythema and edema of limbs (acute stage)/periungual desquamation (subacute stage)
4. Cervical lymphadenopathy (> 1.5 cm) usually unilateral
5. Mucosal involvement; lips cracking, strawberry tongue, erythema of oropharynx.

In presence of fever and coronary artery involvement on 2D-Echocardiography, less than 4 out of 5 criteria is sufficient for diagnosis of KD.

Incomplete KD: Presence of fever with less than four out of the five principal clinical criteria with compatible laboratory or echocardiography findings suggest incomplete KD. Often seen in infants less than 6 months and children more than 6 years of age, the incomplete clinical picture often delays the diagnosis. Be aware of KD in young children with unexplained fever for >5 days[21].

All the patients were treated according to standard guidelines given by AHA and IAP.

Ethical Considerations

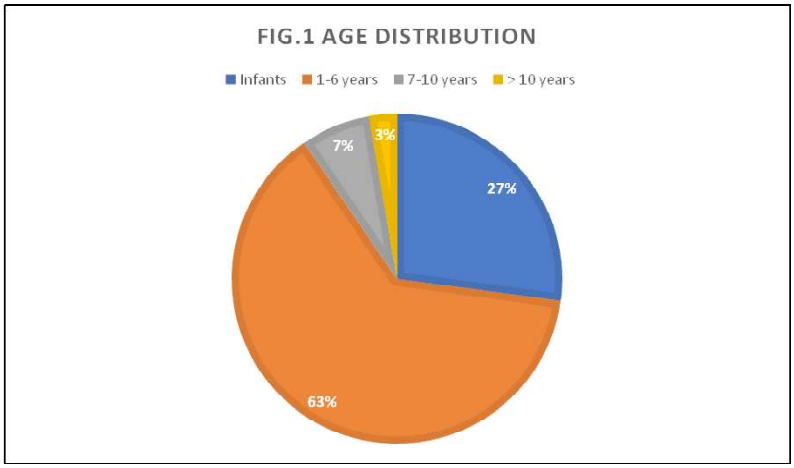
As this was a retrospective study, no consent was taken however confidentially was maintained.

Results

- **Epidemiology and demographics in Manipur**

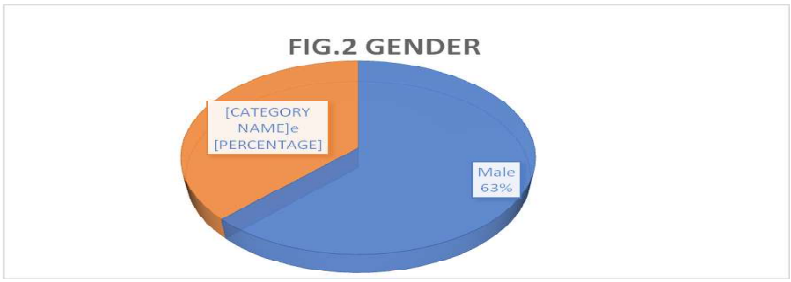
Age distribution:

In our study of last 6 years (2018 – 2024) we got total of 44 patients out of which 12(27%) were infants, 28(64%) were from 1-6 years,3 (7%)were between 7-10 years and one (2%)was adolescent, Fig:1. Median age on presentation was 2years.



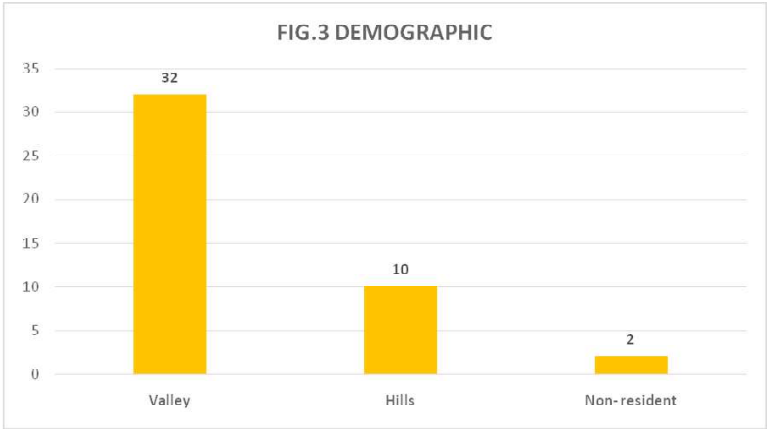
Gender:

Slight male predominance was noted, 28 (63%) were male, 16 (37%)were female with the ratio of 1.75,[fig-2].



Demographically:

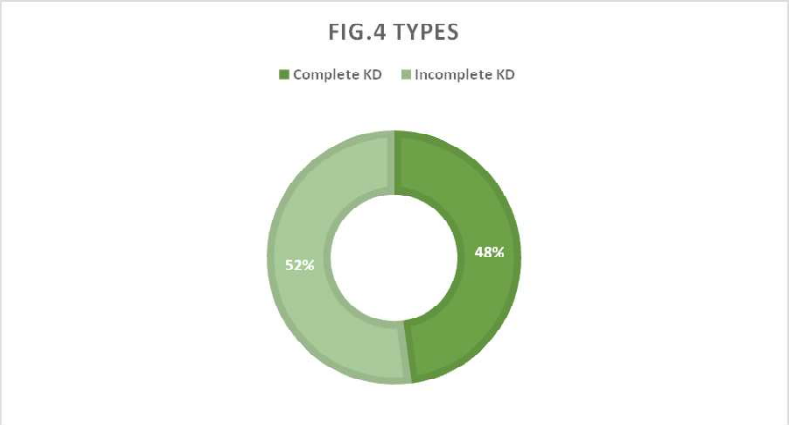
Reported more children from valley districts (72%) as compared to those fromthe hill districts(22%). 2(4%) were non local residents**.**

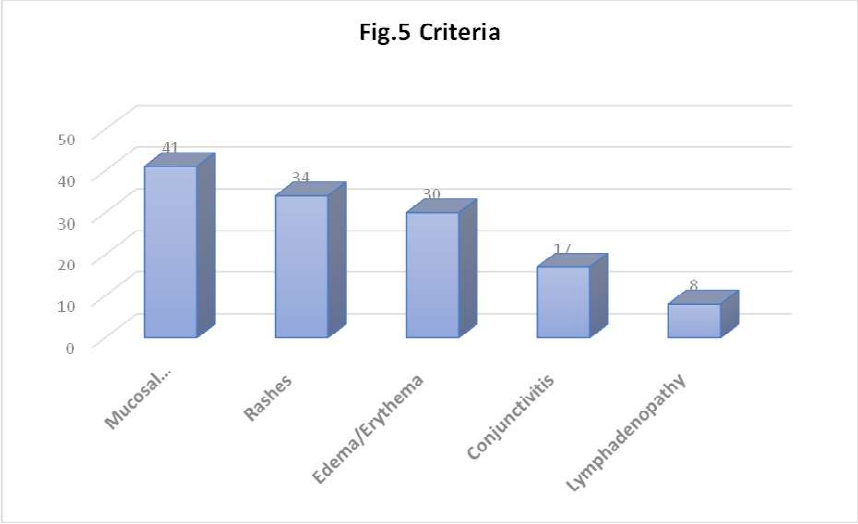


Clinical Presentation and Diagnosis

Out of 44 children, 22 had Complete KD(48 %) and 24 (52%)had Incomplete KD as defined by AHA and IAP [Fig:4]. According to the criteria,4 out of 5 and less than4 out of 5 along with 5

days of fever for Complete and Incomplete respectively- only(1%) one had 5 out of 5 criteria, 18(40%) had 4 out of 5,17(38%) had 3 out of 5 and 8 (18%)had 2 out of the 5 criteria.
Using 4 out of 5 criteria of AHA/IAP for diagnosis:
Conjunctivitis was seen in 17(38%) children,
Rashes in 34(77%),
Edema/erythema/desquamation in 30(68%),
Lymphadenopathy in 8(18%) and
Mucosal involvement- lips,tongue, oropharyngeal in 41(93%).
Thereby giving clear inference that mucosal involvement was the commonest signs and symptoms followed by rashes, edema/erythema/desquamation, and conjunctivitis with least common presentation of lymphadenopathy[Fig:5].





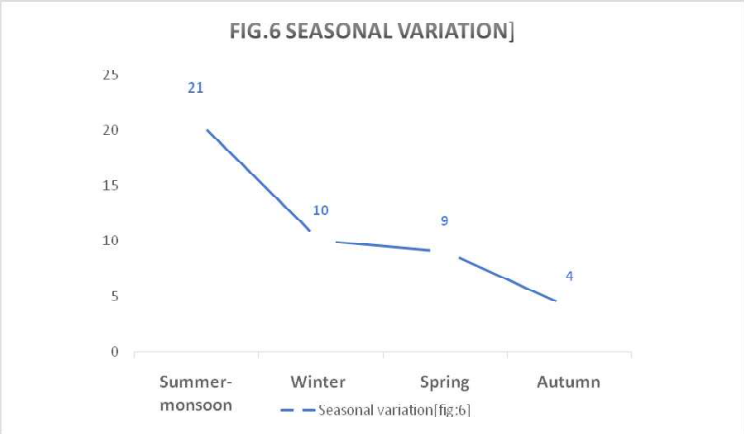
Cardiac: Cardiac involvement was seen in 4 patients;3 had CAAs, among which 1 had myocarditis, and 1 child had pericardial effusion.

Investigations: As this wasa retrospective study, we could not collect all the necessary investigationhowever mean CRP,TLC,ESR,Hb and platelet counts were calculated from the available data:118mg/dl,16000cumm,67.5mm/1st hour,10 and 3.6 Lakhs respectively.

Urine: Pus cells more than> 10 cells/hpf was seen in 3 children among with 2 were culture positive.

Associated infection/Concurrent infections: 21out of 44 children had concurrent infections, AGE(15) was seen as most commonly associated illness, ARI in 3, AGE with ARI in 4, UTI in 3.

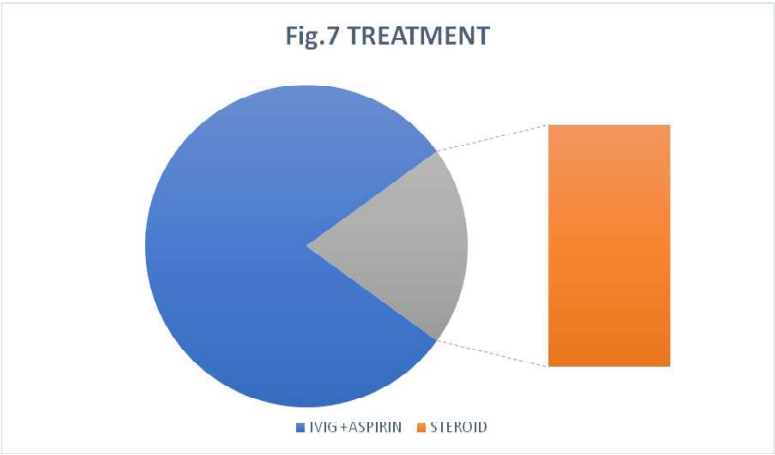
Seasonal variation: Most of the cases of KD were seen in summer and monsoon followed by winter, spring and autumn being least[Fig.6].



Yearly distribution: No significant variation in early distribution was noted however after COVID-19, we noted a surge in KD phenotype of MIS-C which we excluded in our study.

Treatment and Outcome:

All the children received IVIG and aspirin, and 11 were given steroid as there was persistent fever spikes after IVIG or with cardiac involvement. KD associated shock was noted in 3 children. All the children improved following treatment with zero mortality, few are under follow up till date (Fig.7)



4. Discussion

Since our study is not representative of the population,incidence of KD in the state of Manipur was not calculated.

Japan, South Korea and Taiwan have the highest records with low incidence in America, Europe and Africa.

As of India, we do not have any annual incidence report till now. Only PGIMER, Chandigarh has phases of study going on; 1 phase from 1994 (0.51/100,000) to 2008 (4.54/100,000) in children aged <15 years. In the 2nd phasefrom 2009- 2014, they got 54 children (43 boys, 11 girls) with incidence of 5.35/100,000 children under 5 years with 6 children showing CAAs[19].In the 3nd phase of 2015- 2019 where they had 83 (15.4%; 66 males, 17 females), incidence of 5.35/100,000 children under 5 yearsand 2.65–5.07 per 100,000 children under 15 years old[20].

Chandigarh showed similar male predominance, median age of presentation were 7 years, 3.4 years, 4 years respectively in 1994-2008, 2009-2014 and 2009-2015 respectively.

In 3rd phase of Chandigarh study, seasonal variation was seen which was not very clear but noted more in 2ndquarter (April - June) and 4th quarter(October -December).The median age at diagnosis was 48 months. The median age at diagnosis for males and females were 4 and 5 years respectively. A peak incidence was seen in the fourth year of life.Clinically- Complete KD was more, 48 out of 83 was noted, shock was seen in 6, coronary abnormality in 14. In 10, concurrent infection was seen but particularly specified. Treated with IVIG, aspirin were given in all the patients,adjunctive therapy with Infliximab(in 4), steroid (in 2) and one received combination of cyclosporine A+ Infliximab +steroid. No mortality noted[20].

In this study we got 44 children(28 male, 16 female) in last 6 years 2018-2024, of which 12 were infants with minimum age being 4 months,1-6 years were 28,7-10 years were 3 and one was adolescent. Median age of presentation was 2 years. Most cases were reported from valley-based districts, Complete type KD was seen in 20, Coronary artery aneurysm (CAA) in 3 children, more seasonal variation in summer- monsoon, all received IVIG and aspirin and adjuvant steroid was given in 11 children. Most common concurrent infection was AGE.No mortality noted.

Limitations of the Study:

Sample size was small and not representative of our state population.

Future Directions for Research

Registry for KD in our hospital for further study of future cases and long term follow up will shed light on this disease.

Conclusion

- The study highlights a unique epidemiological pattern of KD in Manipur, noting the regional absence of comprehensive KD studies and the need for increased awareness and diagnostic capabilities in North-East India.
- It underscores the importance of early diagnosis and adherence to treatment protocols to reduce complications, especially cardiac issues, among paediatric populations.

References

1. McCrindle BW, Rowley AH, Newburger JW, Burns JC, Bolger AF, Gewitz M, et al. Diagnosis, Treatment, and Long-Term Management of Kawasaki Disease: A Scientific Statement for Health Professionals From the American Heart Association. Circulation. 2017;135:e927–99.
2. Saguil A, Fargo M, Grogan S. Diagnosis and management of kawasaki disease. Am Fam Physician. 2015;91:365–71.
3. Vervoort D, Donné M, Van Gysel D. Pitfalls in the diagnosis and management of Kawasaki disease: An update for the pediatric dermatologist. Pediatr Dermatol. 2018;35:743–7.
4. Elakabawi K, Lin J, Jiao F, Guo N, Yuan Z. Kawasaki Disease: Global Burden and Genetic Background. Cardiol Res. 2020;11:9.
5. Kim GB, Han JW, Park YW, Song MS, Hong YM, Cha SH, et al. Epidemiologic features of Kawasaki disease in South Korea: data from nationwide survey, 2009-2011. Pediatr Infect Dis J. 2014;33:24–7.
6. Huang WC, Huang LM, Chang IS, Chang LY, Chiang BL, Chen PJ, et al. Epidemiologic features of Kawasaki disease in Taiwan, 2003-2006. Pediatrics. 2009;123:e401-405.
7. Makino N, Nakamura Y, Yashiro M, Ae R, Tsuboi S, Aoyama Y, et al. Descriptive Epidemiology of Kawasaki Disease in Japan, 2011–2012: From the Results of the 22nd Nationwide Survey. J Epidemiol. 2015;25:239.
8. Wu MH, Chen HC, Yeh SJ, Lin MT, Huang SC, Huang SK. Prevalence and the long-term coronary risks of patients with Kawasaki disease in a general population <40 years: a national database study. Circ Cardiovasc Qual Outcomes. 2012;5:566–70.
9. Uehara R, Belay ED. Epidemiology of Kawasaki disease in Asia, Europe, and the United States. J Epidemiol. 2012;22:79–85.
10. Jiao F, Jindal AK, Pandiarajan V, Khubchandani R, Kamath N, Sabui T, et al. The emergence of Kawasaki disease in India and China. Glob Cardiol Sci Pract. 2017;2017:e201721.
11. Du ZD, Zhao D, Du J, Zhang YL, Lin Y, Liu C, et al. Epidemiologic study on Kawasaki disease in Beijing from 2000 through 2004. Pediatr Infect Dis J. 2007;26:449–51.
12. Saundankar J, Yim D, Itotoh B, Payne R, Maslin K, Jape G, et al. The epidemiology and clinical features of Kawasaki disease in Australia. Pediatrics. 2014;133:e1009-1014.
13. Nitsure MY, Hiremath MS, Grant PK, Gulati MR, Wadia RS. Kawasaki syndrome with multiple arterial aneurysms. Indian Pediatr. 1988;25:881–8.
14. Taneja A, Saxena U. Muco cutaneous lymph node syndrome: (case report). Indian Pediatr. 1977;14:927–31.
15. Kawasaki syndrome - PubMed [Internet]. [cited 2024 Nov 14]. Available from: https://pubmed.ncbi.nlm.nih.gov/2613623/
16. Narayanan SN, Krishnaveni null, Sabarinathan K. Kawasaki disease. Indian Pediatr. 1997;34:139–43.
17. Singh S, Kumar L, Trehan A, Marwaha RK. Kawasaki Disease at Chandigarh. INDIAN Pediatr. 1997;34.
18. Singh S, Aulakh R, Bhalla AK, Suri D, Manojkumar R, Narula N, et al. Is Kawasaki disease incidence rising in Chandigarh, North India? Arch Dis Child. 2011;96:137–40.
19. Singh S, Bhattad S. Kawasaki disease incidence at Chandigarh, North India, during 2009-2014. Rheumatol Int. 2016;36:1391–7.
20. Pilania RK, Basu S, Dixit J, Kumrah R, Jindal AK, Thangaraj A, et al. Incidence of Kawasaki disease among children in Chandigarh, India during 2015–2019: a trend analysis. Lancet Reg Health - Southeast Asia [Internet]. 2024 [cited 2024 Nov 11];29.
21. Ch-042-kawasaki-disease.pdf [Internet]. [cited 2024 Nov 11]. Available from: https://iapindia.org/pdf/Ch-042-kawasaki-disease.pdf

PREVALENCE OF TIMELY INITIATION OF COMPLEMENTARY FEEDING IN CHILDREN AGED 6-24 MONTHS WITH ACUTE MALNUTRITION ADMITTED IN NUTRITIONAL REHABILITATION CENTRE IN MANIPUR: A CROSS SECTIONAL STUDY.

Authors: **Dr. Hamna Raphi Puthenveettil[1,]**
Dr. Rajkumari Rupabati Devi[2]

1. Post graduate trainee, Department of paediatrics, Jawaharlal Nehru Institute of Medical Science, Imphal
2. Associate professor, Department of paediatrics, Jawaharlal Nehru Institute of Medical Sciences, Imphal

Abstract:

Objective: To study the prevalence of timely initiation of complementary feeding at 6 months in children of Severe acute malnutrition and Moderate acute malnutrition in Nutritional Rehabilitation Centre of Jawaharlal Nehru Institute of Medical Sciences, Imphal. To Evaluate the minimum dietary diversity, minimum meal frequency and appropriate complementary feeding being initiated in children with acute malnutrition.

Methods: A cross sectional study was conducted in Nutritional rehabilitation centre, Department of Paediatrics, Jawaharlal Nehru Institute of Medical Sciences, Imphal over a period of 2 years from November 2022 to October 2024 among patients. The inclusion criteria of the study were children of 6 months to 24 months admitted with moderate acute malnutrition and Severe acute malnutrition admitted in Paediatrics ward during the study period.

Results: A total of 107 patients were analysed, out of which 79 (73%) children were of Severe Acute Malnutrition and 28 (26%) children were of Moderate Acute Malnutrition. Among children of Moderate acute malnutrition, 39.3% (11) children started complementary feeding at correct age of 6 months and among children of Severe acute malnutrition, 46.8% (37) children started complementary feeding at correct age of 6 months. 14.3% (4)of children with Severe acute malnutrition received a diet rich in carbohydrate protein fats with vitamin A and iron. Among children with Moderate acute malnutrition, 21.5% (17) children received diet rich in carbohydrate protein fat vitamin A and iron. Among children of Severe Acute Malnutrition of 6 months to 8 months age group, most of them received feeds in 12 hourly frequencies (n=6), and of 9 -24 months age group most of them received 8 hourly feeds (n= 29). Among children of Moderate acute malnutrition of 6 months to 8 months, most of them received 8 hourly feeds (n= 2) and of 9- 24 months 8 hourly feeding and 12 hourly feeding was equally common (n= 7). Majority of children with Severe acute Malnutrition and Moderate acute malnutrition started complementary feeding with feeds of Semisolid consistency (60.7% in Moderate acute malnutrition and 65.8% in Severe acute Malnutrition).Majority of the children were breastfed during the period of complementary feeding, 42.9% (n= 12) in Moderate Acute Malnutrition and 57% (n= 45) in Severe Acute Malnutrition. 54% (n=58) of children with Acute Malnutrition

had Anaemia. Statistical analysis showed a significant association between lack of minimum dietary diversity in feeds and development of acute malnutrition.

Conclusion: Complementary feeding practices in children of Severe acute malnutrition and moderate acute malnutrition was described. Improving maternal awareness about child feeding practices with respect to Diversity of feeds and initiation of complementary feeding are preventable risk factors for reducing the burden of Malnutrition.

Key words: Severe Acute Malnutrition, Moderate Acute Malnutrition, Complementary feeding

A 5 YEARS EXPERIENCE OF CLINICAL PROFILE OF SCRUB TYPHUS IN CHILDREN FROM A TERTIARY CARE CENTRE IN NORTH-EAST INDIA: A CROSS-SECTIONAL STUDY

Authors: **Dr. Leimapokpam Martina Devi[1],**
Dr. Irish Ashoni Shangne[1],
Dr. Nandeibam Kameshore Singh[2],
Dr. Laishram Narendra Singh[3],
Dr. Yengkhom Rameshor Singh[4],
Dr. Nameirakpam Johnson[4]

1. Post Graduate Trainee,Department of Paediatrics,JNIMS,Imphal
2. Professor and Head of Department, Department of Paediatrics,JNIMS,Imphal
3. Associate Professor, Department of Paediatrics,JNIMS,Imphal
4. Consultant Paediatric Rheumatologist, Department of Paediatrics, JNIMS, Imphal

Abstract:

Objective: To study the clinical profile,laboratory parameters,complications and out come of Scrub Typhus in children in a tertiary care centre in North-east India.

Methodology: Retrospective observational study was conducted in the Department of Paediatrics, Jawaharlal Nehru Institute of Medical Sciences (JNIMS),Imphal reviewing case files of children (1month- 12 years) diagnosed as Scrub Typhus over a period of 5 years (Jan, 2019 to Dec,2023).

Results: A total of 33 patients were included in the study.Average age of patients is 7.7 (IQR 4-11) years with male female ratio of 1.3:1. All of them had fever as their presentation while eschar was present only in 13 (39%) of patients. Two third of them had anemia, leucocytosis and raised liver enzymes (SGPT, SGOT). Eleven (33%) children had complications. Most (82%) received doxycycline while 18% received azithromycin.Two (6%) children died. There is no significant association of fever duration with occurrence of complication and mortality.

Conclusion: This is the largest study of Pediatric Scrub typhus from North-East India. Scrub typhus has varied clinical manifestations.Eschar, though pathognomonic, is present in less than half of the patients. It shows prompt response to appropriate antibiotic therapy.

Keywords: Scrub Typhus,Ricketssial infection,Fever,Altered Sensorium, Eschar

Correspondence Address: **Dr.Nameirakpam Johnson,**
Consultant Pediatric Rheumatologist,
Department of Paediatrics,JNIMS,Imphal

ASSESSMENT OF NEUTROPHIL LYMPHOCYTE RATIO, PLATELET LYMPHOCYTE RATIO IN EARLY DIAGNOSIS OF NEONATAL SEPSIS IN A TERTIARY CARE CENTRE IN NORTH EAST OF INDIA

Authors: **Dr. MUNIRAHMED DODAMANI[1],**
Dr. KH. RATANKUMAR SINGH[2],
Dr. SANASAM MANIMUKTA[3]

1. DNB Pediatric trainee (II), Department of Pediatrics,
2. Head of Institute and Senior Consultant, Department of Pediatrics,
3. Consultant, Department of Pediatrics,Mother's Care Children Hospital & Research Centre, Imphal, Manipur.

Abstract

Background: Neonatal sepsis is a life-threatening clinical syndrome ranging from being asymptomatic to features of severe infection. Neonatal sepsis is still one of the leading causes of neonatal morbidity and mortality despite recent advances in diagnostic modalities.

Objectives: To assess how significantly higher values of Neutrophil Lymphocyte Ratio (NLR), Platelet Lymphocyte Ratio (PLR) will correlate with neonatal sepsis compared to non-sepsis neonates

Methods: It was a retrospective observational study conducted in a tertiary care neonatal intensive care unit (NICU). The medical records were analysed from January 2021 to August 2024, hematological variables (NLR, PLR) of neonates with blood culture proven sepsis and non-sepsis neonates were assessed, compared with procalcitonin (PCT) in these groups. Receiver operating characteristics (ROC) curve analysis was done for variables.

Results: A total of 204 neonates were included in study, 102 in each group, in the sepsis group, 17.24% cases were early onset neonatal sepsis, 82.76% were late onset neonatal sepsis, Gram negative bacteria were most commonly found.There was a significant difference in the NLR, PLR and PCT between the septic neonates and non-sepsis neonates. PCT has the highest discriminatory ability (AUC= 0.929), with a cut off value of 0.065 providing a sensitivity of 95.1% and specificity of 76.5%. NLR also demonstrated good diagnostic potential (AUC= 0.726), with a cut off of 0.505 yielding sensitivity (94.1%) and specificity (76.5%). PLR showed limited value in diagnosing neonatal sepsis (AUC =0.201)

Conclusion: NLR may be useful as biomarker for predictor and adjunct diagnostic test for neonatal sepsis work-ups along with PCT. These CBC parameters are easy and relatively inexpensive. NLR with good discriminatory ability can be used as a predictive of neonatal sepsis in resource limited setting.

Keywords- NLR, PLR, PCT, Neonatal sepsis

INTRODUCTION

Neonatal sepsis is a life-threatening clinical syndrome from asymptomatic to features of severe infection with or without bacteremia in the 1st month of life. Globally, 3 million sepsis cases are recorded every year. Of these, a greater proportion belongs to developing countries like India. Mortality of 1-5% is seen with sepsis and 9-20% with severe sepsis.[1] Neonatal sepsis includes two types based on the onset of clinical features: Early-onset neonatal sepsis (EONS)- sepsis developing within 72 hrs of life and Late-onset neonatal sepsis (LONS)- sepsis developing at or after 72 hrs of life. The gold standard for diagnosis of neonatal sepsis is blood culture. However, with delayed availability of results after 24-36 hrs,possibility of culture negative sepsis,low colony counts bacteremia, insufficient samples, and probability of contamination mandate the need for biomarkers.[2, 3]Many biomarkers have been tested for accuracy in EONS diagnosis. C-reactive protein (CRP) is the most frequently studied inflammatory marker, which is also used in the follow-up of therapy. CRP is a sensitive but not a specific marker to diagnose sepsis, because of the increase in multiple non-infectious inflammatory events, other than sepsis, and the delay in the increase (10-12 hours). Another inflammatory marker, Procalcitonin (PCT), increases in the first 3 to 4 hours from the beginning of symptoms and decreases to a normal level in 24 hours.[4] As all known biomarkers have some limitation, to find reliable biomarker, focus of research has been towards effect of inflammation on blood cells such as neutrophils, lymphocytes and platelets in diagnosing neonatal sepsis.[5]A Complete blood count (CBC) is one such affordable and readily available investigation.In this study, evaluation of Neutrophil Lymphocyte Ratio (NLR), Platelet lymphocyte ratio (PLR) was done along with Procalcitonin (PCT) in diagnosing neonatal sepsis, later comparing all parameters for assessment of better predictability.

MATERIALS AND METHODS

A retrospective observational study was done aiming to determine how significantly, higher values of Neutrophil to Lymphocyte Ratio, Platelet to Lymphocyte Ratio will correlate with neonatal sepsis. Study was conducted in Neonatal Intensive Care Unit (NICU) of Mother's Care Children Hospital and Research Centre Imphal West, Manipur. Medical records were analysed from January 2021 to August 2024 (43 months) and the following data were obtained: Gestational age, Birth weight, Sex, Early or Late onset sepsis, clinical features and laboratory parameters. The subjects were divided into 2 groups based on blood culture positivity, i.e.,Group A -Neonates admitted in NICU with blood culture proven sepsis- including EONS & LONS (Case group) and Group B - Neonates admitted in NICU without sepsis (Control group). Data of 102 neonates with culture positive sepsis matched with equal number of neonates without sepsis. Neonates with congenital anomalies, bleeding disorders, underwent surgical intervention, received blood transfusion were excluded from the study in both the groups.

The NLR and PLR were calculated based on complete blood count obtained at the time of culture proven sepsis. The Neutrophil to Lymphocyte Ratio, Platelet to Lymphocyte Ratiolevels

of two groups are compared.Accuracy of PCT can be elucidated in the sepsis group and compared with NLR and PLR.

The study was approved by the Institutional Ethics Committee of Mother's Care Children Hospital and Research Centre. The subjects' requirement for informed consent was not needed because of the retrospective nature of the study.

Statistical Analysis

Data were analyzed using SPSS version 26.0. Descriptive statistics were used to summarize demographic and clinical characteristics. Independent samples t-tests were conducted to compare NLR, PLR, and PCT levels between neonates with and without sepsis. Receiver operating characteristic (ROC) curves were generated to assess the diagnostic performance of each biomarker, and the area under the curve (AUC) was calculated. Optimal cut-off values for each biomarker were determined by considering both Youden's Index and clinical relevance. Sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) were calculated at the chosen cut-off values. A p-value < 0.05 was considered statistically significant.

RESULTS

Table 1: Demographic characteristics of the groups

CHARACTERISTICS	SEPSIS GROUP(n=102) EONS—no(%) 20 (19.60) LONS —no(%) 82 (80.39)	CONTROL GROUP(n=102)	TOTAL(n=204)
SEX			
Male—no(%)	69 (67.64)	66 (64.70)	135 (66.17)
Female—no(%)	33 (32.35)	36 (35.29)	69 (33.82)
MODE OF DELIVERY			
NVD—no(%)	40 (39.21)	73 (71.56)	135 (66.17)
LSCS—no (%)	62 (60.78)	29 (28.43)	69(33.82)
GESTATIONAL AGE			
Extreme Preterm-no(%)	4 (3.92)	0 (0)	4 (1.96)
Early Preterm—no(%)	20 (19.6)	11 (10.78)	31 (15.19)
Late Preterm—no(%)	36 (35.29)	8 (7.84)	44 (21.56)
Term—no(%)	42 (41.17)	81 (79.41)	123 (60.29)
BIRTH WEIGHT			
<1000g—no(%)	4 (3.92)	0 (0)	4 (1.96)
1001-1500g—no(%)	21 (20.58)	2 (1.96)	23(11.27)
1501-2500g—no(%)	34(33.33)	22 (21.56)	56 (27.45)
>2500g—no(%)	43 (42.15)	78 (76.47)	121 (59.31)
OUTCOME			
Discharge—no(%)	80 (78.43)	102 (100)	182 (89.21)
DOR—no(%)	5 (4.90)	0 (0)	5 (2.45)
LAMA—no(%)	9 (8.82)	0 (0)	9 (4.41)
Died—no(%)	8 (7.84)	0 (0)	8 (3.92)

EONS- Early onset neonatalsepsis, LONS- Late onset neonatal sepsis, NVD- Normal vaginal delivery, LSCS- Lower segment ceaserean section, DOR – Discharged on request, LAMA- Leaving against medical advice.

As shown in the Table 1, in our study, comprising of 102 neonatal sepsis, 19.60 % were EONS and 80.39% were LONS.There was no difference between groups regarding sex ratio.With respect to gestational age and birth weight, preterm and low birth weight were more common in the sepsis group (58.81% and 57.83%) than the control group (18.62% and 23.52%).Regarding the outcome of neonatal sepsis, there was a mortality of 8 neonates (7.84%) out of 102 neonatal sepsis in the last 4 years.

As shown in the table 2, among the culture positive neonates, Gram negative organisms were the most commonly isolated pathogens over four years, while gram positive bacteria and fungi accounted for remaining. *Klebsiella pneumoniae* was the most commonly isolated pathogen (26.47%), followed by *Enterobacter cloacae complex* (6.86%), *Klebsiella* MDRO (multi drug resistance organism) (5.82%), *Candida parapsilosis* (5.82%), *Burkholderia cepacia* (5.82%), *Acinetobater baumani* (5.82%).

Table 2:Bacteriological profile in Sepsis group

Organism	**Frequency(n)**	**Percentage (%)**
Achromobacterxyloxidans	3	2.94
Acinetobacter baumanii	6	5.82
Burkholderiacepacia	6	5.82
Candida albicans	5	4.90
Candida parapsilosis	6	5.82
Candida others	2	1.96
Enterobacter cloacae complex	7	6.86
Enterococcus faecium	3	2.94
Escherichia coli	4	3.92
Klebsiella oxytoca	4	3.92
Klebsiella pneumoniae	27	26.47
Klebsiella pneumoniae MDRO	6	5.82
Pseudomonas aeruginosa	3	2.94
Seratia marcescens	4	3.92
Sphingomonaspaucimobilis	2	1.96
Staphylococcus aureus	1	0.98
Staphylococcus aureus MRSA(Methicillin resistant staphylococcus aureus)	4	3.92
Staphylococcus hemolyticus	2	1.96
Staphylococcus hominis	5	4.90
Stenotrophomonas maltophilia	2	1.96

Table 3 – Comparison of Haematological Parameters between Neonates with and without Sepsis

Marker	Group	N	Mean	Std. Deviation	t	p-value
Absolute Neutrophil Count (ANC)	Sepsis	102	7233.2	4340.28	3.234	0.002
	No Sepsis	102	4983.45	3141.93		
Absolute Lymphocyte Count (ALC)	Sepsis	102	4017.21	1973.50	-3.461	0.001
	No Sepsis	102	5126.16	1518.55		
Total Platelet Count	Sepsis	102	158750	101327.88	-6.983	0.001
	No Sepsis	102	284224.49	106471.29		

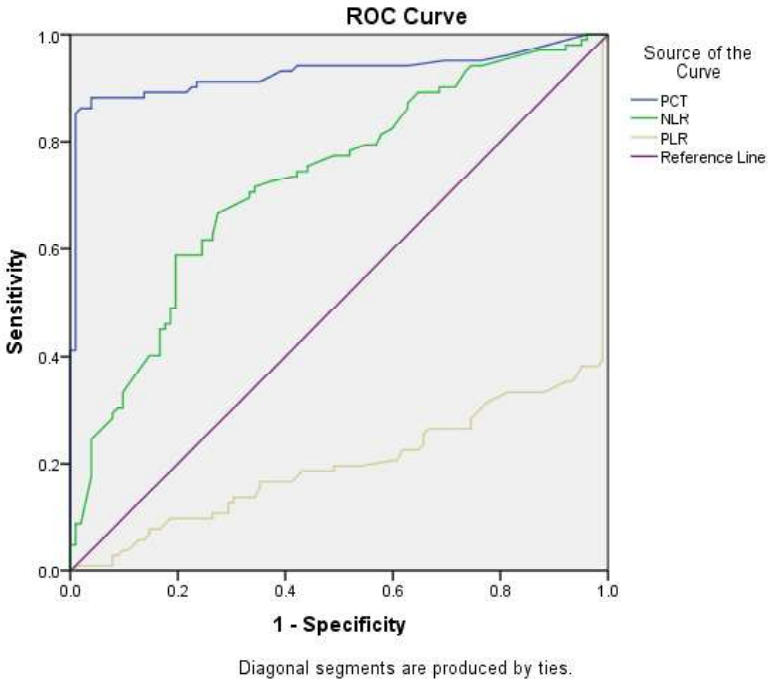
In our study, as shown in the table 3, neonates with sepsis had a significantly higher ANC ($t = 3.234$, $p = .002$) and a significantly lower ALC ($t = -3.461$, $p = .001$) compared to those without sepsis. Additionally, platelet counts were significantly lower in the sepsis group ($t = -6.983$, $p < .000$).

Table 4 – Comparison of NLR, PLR, and PCT Levels in Neonates with and without Sepsis

Marker	Group	N	Mean	Std. Deviation	t	p-value
PCT	Sepsis	102	32.21	45.26	7.07	<0.001
	No Sepsis	102	0.47	2.89		
NLR	Sepsis	102	2.03	1.54	5.15	<0.001
	No Sepsis	102	1.14	0.83		
PLR	Sepsis	102	42.5	28.68	-7.26	<0.001
	No Sepsis	102	69.7	24.7		

From the table 4, it is shown that neonates with sepsis exhibit significantly higher PCT ($t = 7.07$, $p < 0.001$) and NLR ($t = 5.15$, $p < 0.001$) levels compared to those without sepsis. Conversely, PLR levels were significantly lower in the sepsis group ($t = -7.26$, $p < 0.001$). These findings suggest that PCT and NLR may be positively associated with neonatal sepsis, while PLR may have an inverse relationship.

Figure 1 – Diagnostic Accuracy of NLR, PLR, and PCT in Neonatal Sepsis: A ROC Analysis



From the results of the Receiver operating characteristic (ROC) curves as shown in the figure1, PCT demonstrated the highest AUC (0.929), indicating excellent discriminatory ability, followed by NLR (0.726) and PLR (0.201). A PCT cut-off of 0.065 yielded a sensitivity of 95.1% and a specificity of 76.5%. For NLR, a cut-off of 0.505 resulted in a sensitivity of 94.1% and a specificity of 76.5%. PLR, with its low AUC, showed limited diagnostic value.

Table 5 - Discriminatory Ability of NLR, PLR, and PCT in Neonatal Sepsis: Area Under the Receiver Operating Characteristic Curve (AUC)

Test Result Variable(s)	Area	Asymptotic 95% Confidence Interval
PCT	0.929	.887 - .970
NLR	0.726	.657 - .796
PLR	0.201	.137 - .266

As shown in the table 5,the AUC for PCT is .929, with a confidence interval ranging from .887 to .970. This suggests that PCT has excellent discriminatory ability in differentiating between neonates with and without sepsis. NLR also shows good discriminatory ability with an AUC of .726 and a confidence interval of .657 to .796. PLR, on the other hand, has an AUC of .201, with a confidence interval ranging from .137 to .266, indicating poor discriminatory ability.

Table 6 – Evaluation of Neutrophil-Lymphocyte Ratio, Platelet-Lymphocyte Ratio, and Procalcitonin in the Early Diagnosis of Neonatal Sepsis

Marker	Cut-off	Sensitivity	Specificity	PPV	NPV
PCT	0.065	95.10%	76.50%	64.30%	97.50%
NLR	0.505	94.10%	76.50%	63.60%	97.30%
PLR	44.0	38.20%	98.00%	88.90%	71.90%

Our findings indicate that PCT has the highest discriminatory ability (AUC = 0.929), with a cut-off value of 0.065 providing a sensitivity of 95.1% and specificity of 76.5%. NLR also demonstrated good diagnostic potential (AUC = 0.726), with a cut-off of 0.505 yielding similar sensitivity (94.1%) and specificity (76.5%). However, PLR showed limited value in diagnosing neonatal sepsis (AUC = 0.201), suggesting that PCT and NLR may be useful adjunctive markers for the early diagnosis of neonatal sepsis, while PLR is less likely to be clinically useful.

DISCUSSION

In neonatal sepsis, early diagnosis and therapy are crucial to prevent morbidity and mortality. However, there is no excellent biomarker to use in predicting the diagnosis of neonatal sepsis. Many studies have been evaluating the sensitivity and specificity of the neonatal sepsis diagnostic markers (e.g., CRP, PCT, immature to total neutrophil ratio, CBC parameters) and results vary extensively among studies[4].

Preterm and low birth weight infants were the highest subjects to have neonatal sepsis in this study (58.81% preterm and 57.83% low birth weight in the sepsis group), these results were similar to the previous studies, reported in Khadija et al[7]where they had 88% preterm in the sepsis group. Incidence of neonatal sepsis is inversely related to birth weight and gestational age, prematurity with sepsis as complication is a leading cause of mortality, immature responses and high invasive life supports such indwelling catheters and tubes, total parenteral nutritional support make preterm neonates more susceptible to infection than term neonates.[7]

The domination of gram-negative bacteria was also reported in a previous study, and it was found that intrapartum antibiotics, Total parenteral nutrition (TPN) duration, Central venous catheter (CVC) duration, and mechanical ventilation duration were potential maternal and neonatal risk factors for late-onset gram-negative sepsis.We did not evaluate the use of CVC, endotracheal tubes, and TPN in this study. Low humoral immune system in preterm neonates occurs because the transfer of transplacental immunoglobulin G from mother to fetus begins in the second trimester and peaks in the third trimester of pregnancy.[6]

The study of inflammatory biomarkers is an important aspect of sepsis research. In particular, the effect of inflammation on blood cells such as neutrophils, lymphocytes and platelets. Neutrophils quickly responds to infection and migrate to inflammation site. This

enhances the body to produce more neutrophils, half-life of neutrophils also prolonged due to delayed apoptosis as a result of activation of nuclear factor (NF) kappa beta and reduction of caspase 3 levels. More number of neutrophils with prolonged half-life, kills microorganisms by phagocytosis, which in turn releases a lot of inflammatory cytokines and activates T cells.[5]

These pro inflammatory cytokines cause tissue injury and organ damage, on the other side release of anti-inflammatory cytokines as result of compensation by body, which causes immune suppression and lymphocyte apoptosis leading to lymphopenia. Hence this lymphopenia can be used as predictor of mortality in neonatal sepsis.[5] In the same way, platelet apoptosis happens and platelets play a crucial role in inflammation and host defence and many researchers have shown that thrombocytopenia is a common finding during neonatal sepsis[8]

In our findings, neonates with neonatal sepsis had a significantly higher neutrophil count and lower platelet count and lower lymphocytes compared to controls, which was co-related with thrombocytopenia and neonatal death as a major consequence of neonatal sepsis.[8]

In our study, there is statistically significant difference noted in NLR between two groups. High mean NLR was found in proven sepsis group (2.03 ± 1.54) compared to control group(1.14 ± 0.83), which is similar to the studies by Mahmoud NMS[6] et al(0.8 ± 1.1). and (0.08 ± 0.3), Khadija et al[7], with (3.69±3.0) and (1.56±1.83), Zhu et al[8] (4.6±2.7) and (1.6±0.8) respectively. The high NLR value in the sepsis group is due to imbalance between the neutrophils and lymphocytes.

Studies evaluating diagnostic values of NLR in sepsis have indicated variable results, Karabulat et al[4] reported a sensitivity of 88%, specificity of 84%, at cut off value of 1.42, while Omran et al[9] reported sensitivity of 80%, specificity of 57.1% at the cut off value of 2.7. In our study, NLR at the cut off value of 0.505, we found sensitivity of 94.10%, specificity of 76.50%, PPV of 63.60% and NPV of 97.30%, demonstrating good diagnostic potential with AUC 0.726.

In our study, we observed that the platelet count was significantly lower in the sepsis group compared with control group. This is similar to results obtained by Zhu et al in their study, where they found mean platelet was less in sepsis group than the control group[8]. The probable pathophysiology is neonatal sepsis induced endothelial damage and the formation of microthrombi, which lead to the consumption of platelets. The imbalance between the consumption and production from the bone marrow leads to low platelet counts in neonatal sepsis.[10]

In consistence with this, platelet counts were significantly lower in the sepsis group. This is similar to study by Panda et al[10], where they reported low total platelet count as a sensitive marker of neonatal sepsis.In our study, PLR obtained was lower in the sepsis group (42.5 ± 28.68), thanthe control group (69.7 ± 24.7),contrast to other studies by Mahmoud NMS et al[6], Arcagok b c et al[4] where they reported high PLR in sepsis group.

In accordance to this effect of thrombocytopenia in sepsis group, PLR cut off of 44.0, resulted in sensitivity of 38.20% and specificity of 98.00%, with the inverse relationship of PLR

in neonatal sepsis, AUC obtained in ROC analysiswas 0.201, showing that PLR has limited value in diagnosing neonatal sepsis.

In the present study, gram negative bacilli such as *Klebsiella pneumoniae* accounted for 26.47 % of organisms identified, where as gram positive organisms all together accounted for 11.76% of culture proven sepsis, this is in line with the study by Mahmoud NMS et al[6], who found that the gram-negative organisms were most common organisms mainly *Klebsiella*, however other studies stated that gram positive bacteria mainly *Staphylococci* accounted for majority of culture group. This difference in isolated organism shows that every neonatal unit has its own pattern of organisms, which changes from time to time, and antimicrobial combination should alter according to culture results[6]

CONCLUSION

Neonatal sepsis is an important health problem. Neonatal sepsis needs early diagnosis and early initiation of treatment to have a better outcome. A CBC is an easily available investigation and relatively inexpensive. Along with clinical symptoms and signs, varying parameters of CBC can prove to be an invaluable tool in diagnosing neonatal sepsis, especially to the primary care physician.NLR may be useful as a biomarker for predictor and as an adjunct diagnostic test for neonatal sepsis work-ups along with PCT. NLR with good discriminatory ability can be used as a predictive of neonatal sepsis in resource limited setting.

REFERENCES

1. Fleischmann-Struzek C, Goldfarb DM, Schlattmann P, Schlapbach LJ, Reinhart K, Kissoon N. The Global Burden of Pediatric and Neonatal Sepsis: a systematic review. Lancet Respir Med. 2018;6(3):223-30.

2. Zea-vera A, Ochoa TJ. Challenges in the diagnosis and management of the neonatal sepsis. J Trop Pediatr. 2015;61(1):1-13.

3. H. Tolga C, Oytun P, Sule Y, Gulsen H, Ayse K and Murat Y. Efficacy of new leucocyte parameters versus serum c reactive protein, procalcitonin and interleukin-6 in the diagnosis of neonatal sepsis. Pediatrics International. 2015;58:119-25.

4. Arcagok BC, Karabulut B. Platelet to Lymphocyte Ratio in Neonates: A Predictor of Early onset Neonatal Sepsis. Mediterr J Hematol Infect Dis. 2019;11(1):1.

5. Karabulut B, Alatas SO. Diagnostic Value of Neutrophil to Lymphocyte Ratio and Mean Platelet Volume on Early Onset Neonatal Sepsis on Term Neonate. J Pediatr Intensive Care. 2021;10(2):143-47.

6. Mahmoud N M S, AbdelhakeemM , Mohamed H H A, Baheeg G . Validity of Platelet to Lymphocyte Ratio and Neutrophil to Lymphocyte Ratio in Diagnosing Early-onset Neonatal Sepsis in Full-term Newborns. J Compr Ped. 2022;13(1):e115378. https://doi.org/10.5812/compreped.115378.

7. Sumitro KR, Utomo MT, Widodo ADW. Neutrophil-to-Lymphocyte Ratio as an Alternative Marker of Neonatal Sepsis in Developing Countries. Oman Med J. 2021;36(1):214.

8. Zhu S, Zhou Q, Hu Z, Jiang J. Assessment of neutrophil to lymphocyte ratio, platelet to lymphocyte ratio and systemic immune-inflammatory index, as diagnostic markers for neonatal sepsis. J Int Med Res. 2024 Aug;52(8):3000605241270696. doi: 10.1177/03000605241270696. PMID: 39180295; PMCID: PMC11344890.

9. Omran A, Maaroof A, Mohammad MHS, Abdelwahab A. Salivary C-reactive protein, mean platelet volume and neutrophil lymphocyte ratio as diagnostic markers for neonatal sepsis. J Pediatr (Rio J). 2018 Jan-Feb;94(1):82-87. doi: 10.1016/j.jped.2017.03.006. Epub 2017 Jul 20. PMID: 28734690.

10.Panda SK, Nayak MK, Thangaraj J, Das P, Pugalia R. Platelet parameters as a diagnostic marker in early diagnosis of neonatal sepsis- Seeking newer answers for older problems. J Family Med Prim Care. 2022;11(5):1748-1754

SYMPTOMATOLOGY DURATION OF LESS THAN 24 HOURS CAN SUCCESSFULLY PREDICT THE OUTCOME OF PNEUMATIC REDUCTION IN CHILDREN WITH INTUSSUSCEPTION

Authur: **Dr Shivani,** Mother's Care Children's Hospital And Research Centre Manipur
Dr Toijam Soni Lyngdoh, Mother's Care Children's Hospital And Research Centre Manipur
Dr Kh Ratan kumar, Mother's Care Children's Hospital And Research Centre Manipur

ABSTRACT:

Aim- To studythe clinical profile, demographic variables and treatment modalities in predicting the success rate of pneumatic reduction in pediatric intussusception.

Method: A retrospective observational analysis was conducted on 98 pediatric intussusception cases treated at a tertiary care center between 2015 and 2024.

Results: Pneumatic reduction was successful in 90.4% of cases, while 15.3% required surgical intervention. The mean age of the patient was 16.2 months, with the majority of cases 75.5% occurring in children under 2 years of age, and a higher incidence in males 63.3%. Common presenting symptoms included abdominal pain/ excessive crying 90.8%, vomiting 77.6%, andbleeding per rectum 50%. Ultrasound was the primary diagnostic tool, with 58.2% of cases diagnosed within 24 hours of the onset of symptoms. Pneumatic reduction was successful in most patients diagnosed within 24hrs of symptoms.

Conclusion: Pneumatic reduction is an effective first-line treatment for pediatric intussusception, with a high success rate and a low recurrence rate. Early diagnosis and intervention are critical to reducing the need for surgical intervention and achieving favorable outcomes. This study highlights the importance of timely referral, early diagnosis and the role of ultrasound in early diagnosis, particularly in young children

INTRODUCTION

Intussusception is one of the most common causes of acute intestinal obstruction in infants and young children, typically presenting between 6 months and 3 years of age. [1]

It occurs when a segment of the intestine -the "intussusceptum" invaginates or telescopes into an adjacent portion of the bowel the "intussuscipiens", leading to bowel obstruction, compromised blood flow, and potential intestinal necrosis if untreated.[1]

This pathophysiological process can result in a wide range of clinical manifestations, from mild abdominal discomfort to severe, life-threatening complications, such as bowel perforation, peritonitis, and sepsis.[2]

Historically, surgical intervention was the mainstay of treatment for pediatric intussusception. However, advances in diagnostic imaging and therapeutic modalities have led to a shift toward non-surgical approaches in many cases. Among these, pneumatic reduction has emerged as an effective, minimally invasive treatment option. [3]

Pneumatic reduction involves the use of air pressure, often under fluoroscopic guidance, to apply controlled force to the affected bowel, thereby reducing the intussusception without the need for surgical incisions.[4] This procedure has become the gold standard for treatment in stable, non-complicated cases, achieving high success rates and significantly reducing the need for surgical intervention.[4]

The timely diagnosis and early intervention in pediatric intussusception are critical for optimizing outcomes. Diagnostic imaging, particularly abdominal ultrasound, plays a pivotal role in confirming the diagnosis and guiding treatment decisions. [5]

The early identification of intussusception allows for prompt non-surgical reduction, which can prevent complications such as bowel necrosis or perforation. Conversely, delayed diagnosis or failure to reduce the intussusception non-surgically may result in an increased risk of requiring emergent surgery, prolonged hospital stays, and worse long-term outcomes.[5]

The success of pneumatic reduction is influenced by several factors, including the age of the patient, the duration of symptoms, the clinical presentation, and the presence of any complicating factors such as bowel perforation or ischemia. [6]

Given the clinical significance of early diagnosis and timely intervention, this study aims to evaluate the success rates of pneumatic reduction in a cohort of 98 pediatric patients diagnosed with intussusception at a tertiary care center between 2015 and 2024. In particular, we seek to assess how demographic variables (age, sex, etc.) and clinical characteristics (duration of symptoms, presenting symptoms) affect treatment outcomes, and to analyze how these factors influence the success of pneumatic reduction. Furthermore, this study explores the importance of timely diagnosis in improving the chances of non-surgical resolution and preventing the need for surgical intervention.

By evaluating these factors, this study provides insights into the practical aspects of managing pediatric intussusception, contributing to the broader understanding of which patient groups may benefit most from pneumatic reduction and highlighting the critical role of early diagnosis and intervention in achieving favorable outcomes.

MATERIALS AND METHODS

Aim: To study the clinical profile, demographic variables and treatment modalities in predicting the success rate of pneumatic reduction in pediatric intussusception

Study Design

This is a retrospective, observational study conducted over a 9-year period 2015-2024 involving 98 pediatric patients diagnosed with intussusception at Mother's Care Children Hospital And Research Centre Manipur.

Data were collected from hospital records and diagnostic imaging reports, focusing on demographic variables, clinical presentation, diagnostic modalities, treatment outcomes, including the need for laparotomy and complications.

Inclusion Criteria

- Pediatric patients aged 0-12 years
- Confirmed diagnosis of intussusception through imaging studies

Exclusion Criteria

- Patients with contraindications for pneumatic reduction e.g., bowel perforation, peritonitis, presenting with shock.
- Patients with incomplete data .

Data Collection

Data for this study were retrospectively extracted from the electronic medical records of 98 pediatric patients diagnosed with intussusception at Mother's Care Children Hospital And Research Centre Manipur between 2015 and 2024. Key variables collected included:

1. Demographic Information: Age, sex.
2. Clinical Presentation: Duration of symptoms at presentation, primary symptoms e.g., abdominal pain/excessive cry, vomiting, blood-stained stools, and physical examination findings e.g.,abdominal distension, bleeding per rectum on rectal examination, palpable mass.
3. Diagnostic Methods: Type of imaging used -ultrasound, contrast enema, Computed Tomography
4. Treatment Modalities: Whether the patient underwent pneumatic reduction or required laparotomy. Pneumatic reduction details success/failure and recurrence were recorded.
5. Treatment Outcomes: Success of pneumatic reduction, complications e.g., perforation, and need for further surgical procedures.

Data were collected for all patients treated with pneumatic reduction and laparotomy to monitor for complications or recurrence.

Statistical Analysis

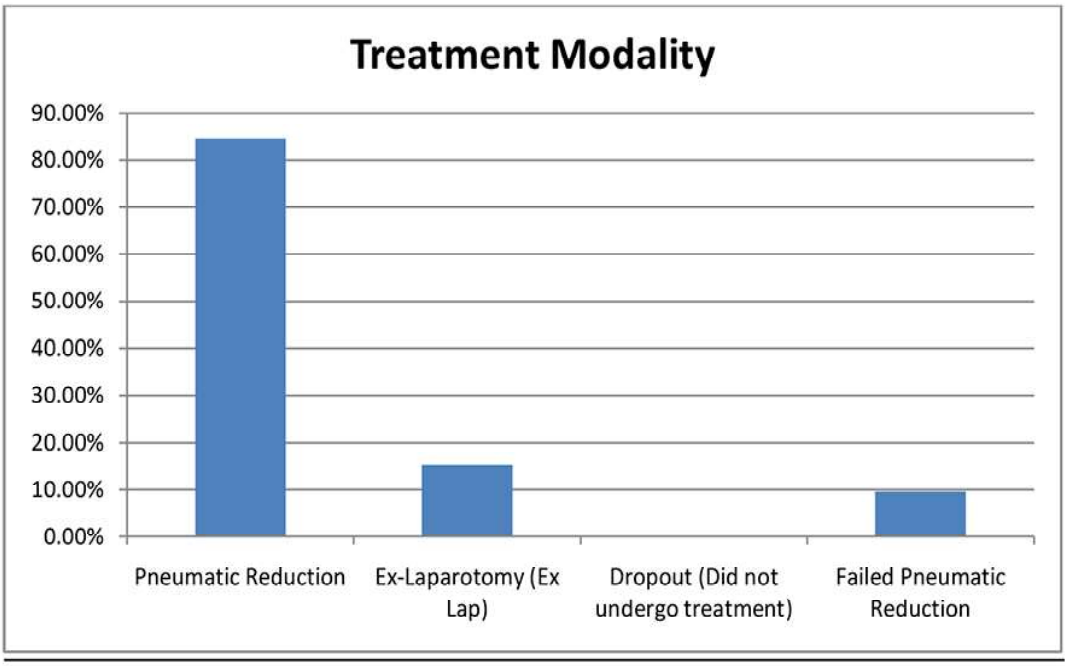
Data were analyzed using descriptive statistics, and comparisons between subgroups age, symptom duration, etc. were made using chi-square or Fisher's exact test, where appropriate. A p-value of <0.05 was considered statistically significant

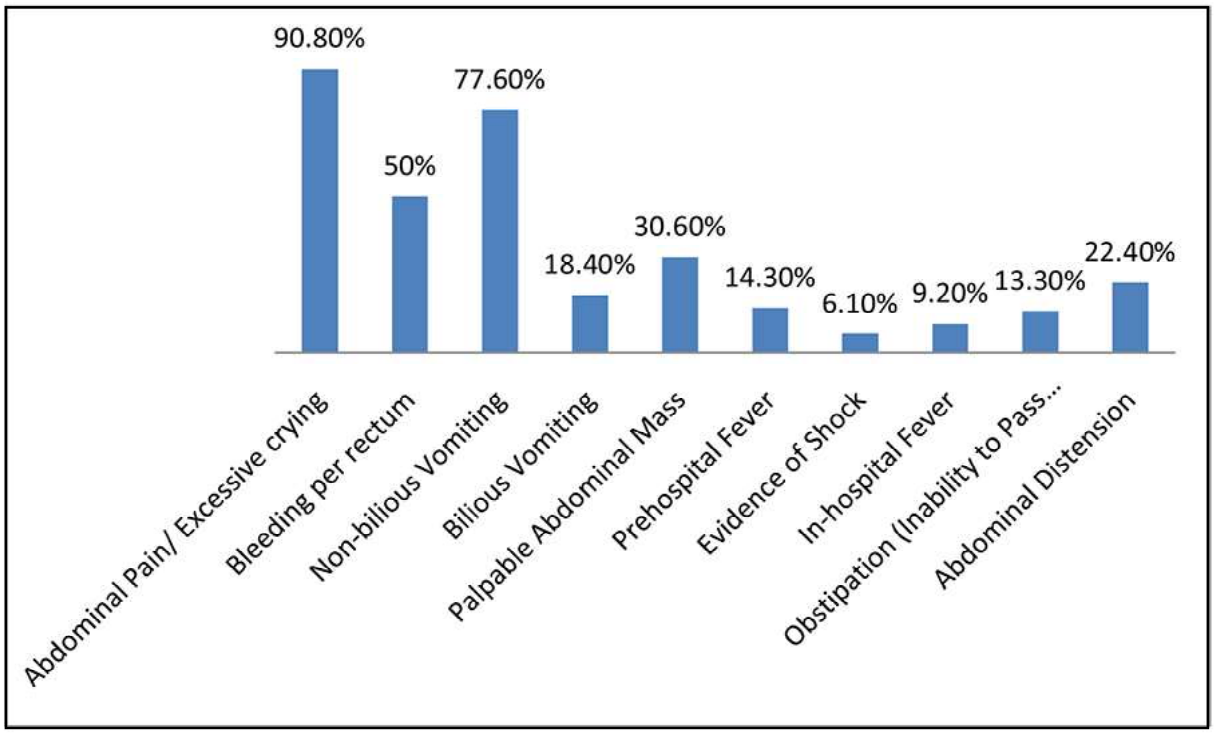
Table 3: Diagnostic Modalities and Pre-Intervention Management

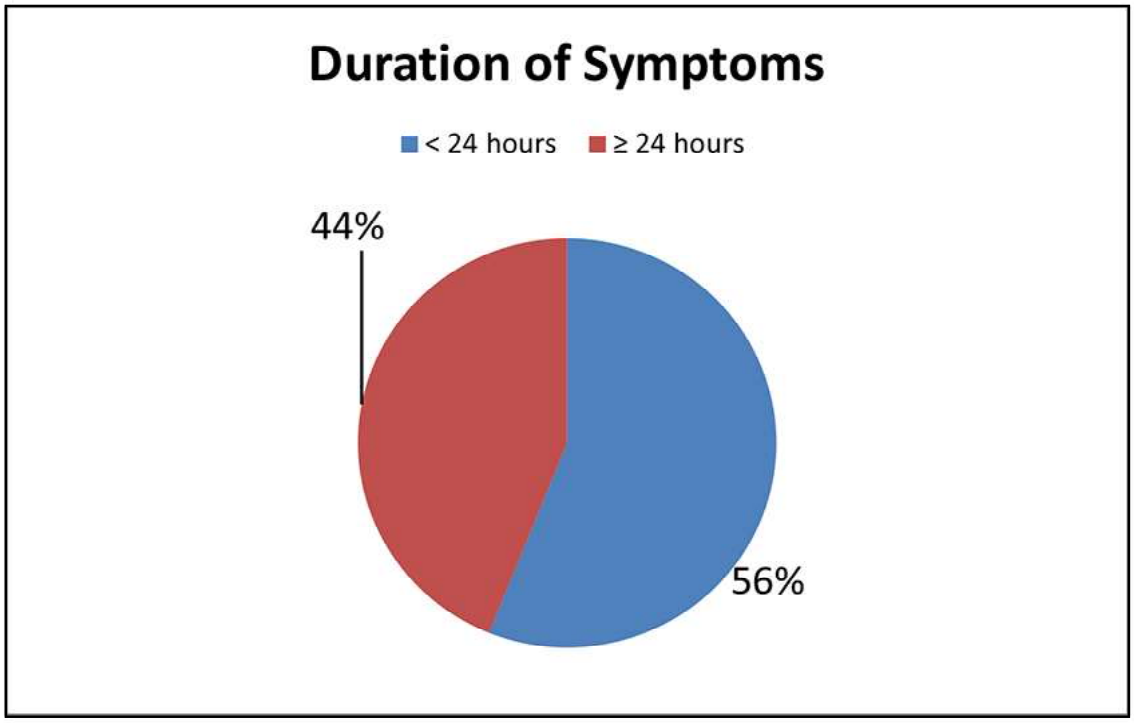
Diagnostic/Pre-Intervention Modality	Total (n = 98)	n (%)
Primary Diagnostic Modality		
Abdominal Ultrasound	91 (93.9%)	
Abdominal Plain Film	25 (25.5%)	
Computer Tomography (CT)	6 (6.1%)	
Radiologic Signs of Bowel Obstruction	10 (10.2%)	
Pre-Intervention Management		
Received Pre-intervention IV Fluids	72 (73.5%)	
Received Pre-intervention Antibiotics	58 (59.2%)	
Time to Diagnosis		
< 24 hours	57 (58.2%)	
≥ 24 hours	41 (41.8%)	

Table 4: Treatment Modality and Pneumatic Reduction Success

Treatment Modality	Total (n = 98)	n (%)	Pneumatic Reduction Success (n = 83)	n (%)
Pneumatic Reduction	83	84.7%	75	90.4%
Ex-Laparotomy (Ex Lap)	15	15.3%	-	-
Dropout (Did not undergo treatment)	0	0%	-	-
Failed Pneumatic Reduction	8	9.6%	-	-




90.80%
50%
77.60%
18.40%
30.60%
14.30%
6.10%
9.20%
13.30%
22.40%
Abdominal Pain/ Excessive crying
Bleeding per rectum
Non-bilious Vomiting
Bilious Vomiting
Palpable Abdominal Mass
Prehospital Fever
Evidence of Shock
In-hospital Fever
Obstipation (Inability to Pass...
Abdominal Distension


Duration of Symptoms
< 24 hours
≥ 24 hours
44%
56%

RESULTS

Table 1: Demographic Characteristics of the Study Cohort

Variable	Total (n = 98)	Male (n = 62)	Female (n = 36)
Age (mean, months)	16.2 ± 8.7	16.5 ± 8.8	15.7 ± 8.6
Age Group			
0-2 years	74 (75.5%)	47 (75.8%)	27 (75.0%)
2-12 years	24 (24.5%)	15 (24.2%)	9 (25%)

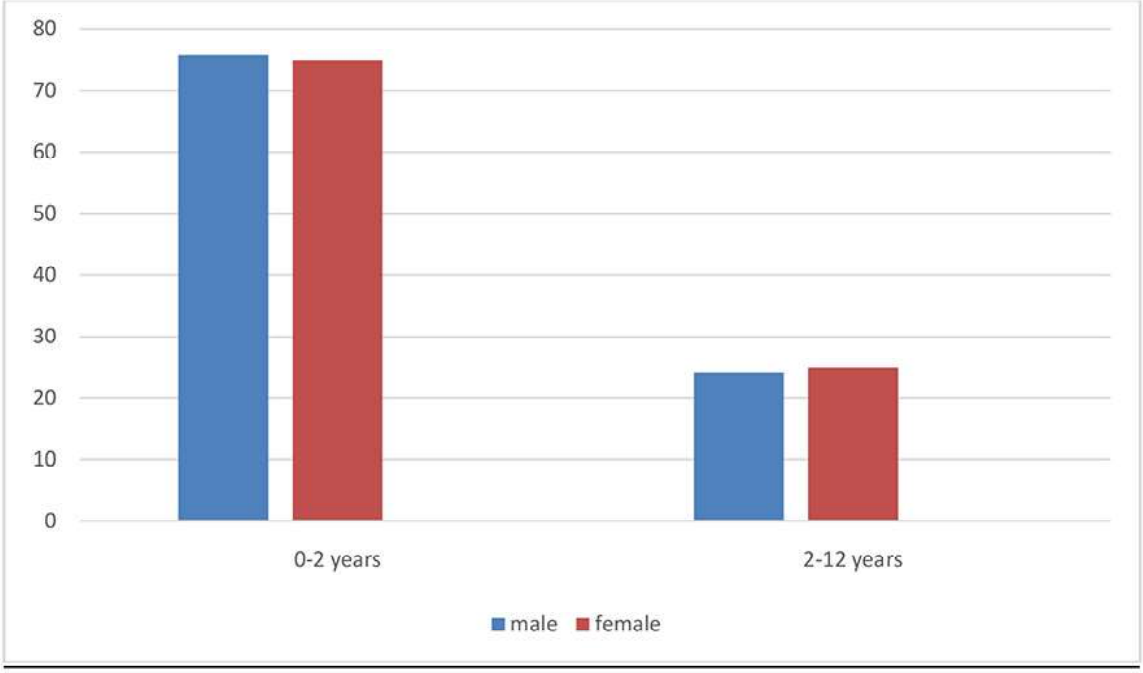


Table 2: Clinical Presentation of Intussusception

Symptom	Total (n = 98)
Abdominal Pain/Excessive crying	89 (90.8%)
Bleeding per rectum	49 (50%)
Non-bilious Vomiting	76 (77.6%)
Bilious Vomiting	18 (18.4%)
Palpable Abdominal Mass	30 (30.6%)
Prehospital Fever	14 (14.3%)
Evidence of Shock	6 (6.1%)
In-hospital Fever	9 (9.2%)
Obstipation	13 (13.3%)
Abdominal Distension	22 (22.4%)
Duration of Symptoms	
< 24 hours	55 (56.1%)
≥ 24 hours	43 (43.9%)

Table 5: Recurrence and Time to Recurrence After Pneumatic Reduction

Variable	Total (n = 98)	n (%)	Pneumatic Reduction Success (n = 83)	n (%)
Recurrence of Intussusception				
Yes (Recurrence after Pneumatic Reduction)	3	3.6%	3	100%
No (No Recurrence)	75	90.4%	72	96%
Time to Recurrence (hours post-reduction)				
≤ 24 hours	1	33.3%	1	33.3%
> 24 hours	2	66.7%	2	66.7%

TABLE SUMMERY

- The majority of pediatric intussusception cases occurred in **children under 2 years** of age, with a slightly higher proportion of **males** than females.
- The most common presenting symptoms were **abdominal pain**, **vomiting**, and **rectal bleeding**, with over half of the patients presenting within **24 hours** of symptom onset.
- **Abdominal ultrasound** was the primary diagnostic tool, and most patients received **IV fluids** and **antibiotics** before treatment.
- **Pneumatic reduction** was successful in **90.4%** of cases, with a **15.3%** requirement for surgical intervention (ex-laparotomy) due to failure of pneumatic reduction or other complications.
- **Recurrence** of intussusception occurred in **3.6%** of patients, with the majority of recurrences happening **after 24 hours** of initial successful reduction

CONCLUSION

This study highlights the importance of **timely diagnosis** and **pneumatic reduction** as a first-line treatment for **pediatric intussusception**, a condition that requires prompt intervention to prevent complications such as bowel ischemia and perforation. With a sample size of 98 pediatric patients treated between 2015 and 2024, the findings underscore the overall high success rate of **pneumatic reduction (90.4%)**, making it an effective, minimally invasive procedure for most cases of intussusception, especially when diagnosed within 24 hours of symptoms.

Ex-laparotomy was required in 15.3% of cases, typically following **failure of pneumatic reduction** or when complications arose, highlighting the importance of having surgical backup when conservative management fails. Despite the relatively low failure rate of pneumatic reduction (9.6%), it is essential that clinicians remain vigilant for potential complications, especially when clinical symptoms persist or worsen after the procedure.

Recurrence of intussusception was observed in 3.6% of cases, with most recurrences occurring beyond **24 hours** post-reduction. This finding emphasizes the need for **close monitoring** in the first 48 hours after pneumatic reduction, as delayed recurrence may require additional interventions, either through repeat pneumatic reduction or surgical exploration.

Furthermore, **early diagnosis** plays a crucial role in treatment success. The majority of patients (58.2%) were diagnosed within **24 hours** of symptom onset, suggesting that timely referral to specialist care can significantly improve outcomes. Delayed diagnosis, on the other hand, is associated with increased risk of bowel compromise and may affect treatment success rates.

REFERENCES

1. Jain S, Haydel MJ. Child Intussusception. [Updated 2023 Apr 10]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK431078/

2. Hafner J, Tuma F, Hoilat GJ, et al. Intestinal Perforation. [Updated 2023 Aug 8]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK538191/

3. Kelley-Quon LI, Arthur LG, Williams RF, Goldin AB, St Peter SD, Beres AL, Hu YY, Renaud EJ, Ricca R, Slidell MB, Taylor A, Smith CA, Miniati D, Sola JE, Valusek P, Berman L, Raval MV, Gosain A, Dellinger MB, Sømme S, Downard CD, McAteer JP, Kawaguchi A. Management of intussusception in children: A systematic review. J Pediatr Surg. 2021 Mar;56(3):587-596. doi: 10.1016/j.jpedsurg.2020.09.055. Epub 2020 Oct 6. PMID: 33158508; PMCID: PMC7920908.

4. Dörterler ME, Kocaman OH. Selection of Pneumatic Reduction in Invagination Treatment and the Factors Affecting the Success of This Method. Cureus. 2019 Oct 16;11(10):e5928. doi: 10.7759/cureus.5928. PMID: 31788385; PMCID: PMC6857832.

5. Bartocci M, Fabrizi G, Valente I, Manzoni C, Speca S, Bonomo L. Intussusception in childhood: role of sonography on diagnosis and treatment. J Ultrasound. 2014 Jul 19;18(3):205-11. doi: 10.1007/s40477-014-0110-9. PMID: 26261462; PMCID: PMC4529406.

6. McDermott VG, Taylor T, Mackenzie S, Hendry GM. Pneumatic reduction of intussusception: clinical experience and factors affecting outcome. ClinRadiol. 1994 Jan;49(1):30-4. doi: 10.1016/s0009-9260(05)82910-1. PMID: 8299329.

ABSTRACTS

POSTER & FREE PAPER

SPOTTING THE ZEBRA: EARLY RECOGNITION OF INCONTINENTIA PIGMENTI

Authors : **Dr Hassan Unais TP,** *Post Graduate Trainee, Department of Pediatrics, RIMS, Imphal*
Dr Priyanka Chettri, *Post Graduate Trainee, Department of Pediatrics, RIMS, Imphal*
Dr Rajkumar Sananganba, *Senior Resident, Department of Pediatrics, RIMS, Imphal*
Dr Punyo Beti, *Senior Resident, Department of Pediatrics, RIMS, Imphal*
Dr Namganglung Golmei, *Associate Professor, Department of Pediatrics, RIMS, Imphal*

Abstract :

Incontinentia Pigmenti (IP) is a rare X-linked dominant disorder affecting approximately 1 in 40,000 to 50,000 births, with a distinctive female predominance (male-to-female ratio 1:10-20). The condition, caused by mutations in the IKBKG gene. The hallmark of IP is its characteristic progression through four distinct cutaneous stages, beginning with vesiculobullous eruptions in the neonatal period. Additional manifestations may include alopecia, dental anomalies, neurological complications, and ocular involvement, though presentation can vary significantly even within families. Here we report the case of a newborn female who exhibited the classical first-stage manifestations of IP, presenting with multiple vesicles and pustular lesions along the lines of Blaschko. The diagnosis was established based on the characteristic cutaneous findings and gender. The patient was managed conservatively with supportive care, and regular follow-up was initiated to monitor for potential systemic involvement and disease progression.

Keywords : Incontinentia pigmenti, lines of Blaschko, IKBKG gene, alopecia , vesiculobullous eruptions

Correspondence Address : **Dr Hassan Unais**
TP,PGT-2nd,
Department of Pediatrics , RIMS, Imphal ,
Email id : Unaistp4@gmail.com,
Contact no : 7994338904

FROM SYMPTOMS TO SEQUENCING : THE ROAD TO A LEIGH'S SYNDROME DIAGNOSIS

Authors : **Dr. Jemi Debbarma,** *Post Graduate Trainee, Department of Pediatrics, RIMS, Imphal.*
Dr. Arularasuru T, *Post Graduate Trainee, Department of Pediatrics, RIMS, Imphal.*
Dr. L. Radhapyari, *Senior Resident, Department of Pediatrics, RIMS, Imphal.*
Dr. M. Amarjit, *Senior Resident, Department of Pediatrics, RIMS, Imphal.*
Dr. Angom Kiran Devi, *Senior Resident, Department of Pediatrics, RIMS, Imphal.*
Dr.Ch. Shyamsunder Singh, *Professor &HoD, Department of Pediatrics, RIMS, Imphal.*

Abstract :

Leigh syndrome is a rare, progressive neurological disorder that typically presents in infancy or early childhood, characterized by disruptions in mitochondrial energy production. It occurs in approximately 1 in 40,000 births. It is most often inherited in an autosomal recessive pattern but can also result from mitochondrial DNA mutations. .Prognosis varies, with many patients experiencing progressive decline, and life expectancy is often reduced. Here we are reporting a case of Leigh's syndrome in a 4 months old male infant presented with fever and seizure with altered sensorium for 1 day .On the basis of history and clinical examination, provisional diagnosis of acute meningoencephalitis was made and management was started accordingly. Sepsis screen, blood and urine culture were negative, cerebrospinal fluid analysis was unremarkable. Fever got subsided but there was no improvement in sensorium. Reviewed history revealed unexplained sibling death in family. Neurometabolic disorder was suspected and relevant workup was done, serum lactate was elevated. Ophthalmology examination revealed cortical visual impairment and ENT examination confirmed gross hearing loss. CEMRI Brain showed bilateral symmetrical areas of diffuse restriction and MR spectroscopy showed choline and lactate peak which was suggestive of Leigh syndrome. Later on diagnosis was confirmed by whole exome sequencing including mitochondrial panel. Patient was treated with IEM mitochondrial cocktail therapy and showed response. This case report aimed to familiarize with the disease and to emphasize to consider neurometabolic disorder when child presented with features of acute meningoencephalitis.

Keywords : Disorder of neurometabolic regulation, Leigh syndrome, Neuroregression,Disorder of basal ganglia.

Correspondence address : **Dr. Jemi Debbarma,**
PGT 2 Pediatrics,
Department of Pediatrics, RIMS, Imphal
Email id : jemi.debbarma50@gmail.com
Contact number : 8974264761

WHEN TUBERCULOSIS TRIGGERS THE UNEXPECTED: HYPERTENSIVE CRISIS UNVEILING TAKAYASU ARTERITIS WITH BILATERAL RENAL ARTERY STENOSIS

Authors: **Dr. K. Dilleswar Rao,** *Post Graduate Trainee, Department of Pediatrics, RIMS, Imphal.*
Dr. Mulongsunep Kichu, *Post Graduate Trainee, Department of Pediatrics, RIMS, Imphal.*
Dr. Sareet Laxmi Nandeibam, *Senior Resident, Department of Pediatrics, RIMS, Imphal.*
Dr. Chabungbam Smilie, *Assistant Professor, Department of Pediatrics, RIMS, Imphal.*
Dr. Ch. Shyamsunder Singh, *Professor &HoD, Department of Pediatrics, RIMS, Imphal.*

Abstract

Aortoarteritis is a chronic inflammatory disorder of large elastic arteries usually affecting the aorta and its larger branches along with pulmonary and renal arteries, with an incidence of 0.01 cases per 100,000 children per year. Despite the still wide prevalence of active tuberculosis in developing countries, tuberculous aortoarteritis appears to be rare. It is more common in females, with a ratio of 4:1 in India. It can be due to infectious and noninfectious causes, but aortoarteritis due to tuberculosis (TB) is a rare entity as seen in 1% of cases of aortitis. Takayasu's arteritis (TA) is an autoimmune disease that affects the large vessels. A possible relationship between TA and tuberculosis (TB) has been suggested. Both diseases have similar chronic inflammatory lesions and occasionally granulomas on the arterial walls. In cases of aortitis and arteritis, tuberculosis must be excluded as an etiological cause. We report a case of 6 years old boy who presented with hypertensive urgency to the OPD and diagnosed later to have Takayasu aortoarteritis along with TB, treated with anti hypertensives, ATT and steroids.

Keywords: Hypertensive urgency, Tuberculosis, TB Aorto arteritis, Takayasu Arteritis, Renal Artery Stenosis, ATT, Steroids.

Correspondence Address: **Dr K Dilleswar Rao,**
PGT-2nd,
Department of Paediatrics, RIMS, Imphal
Email id: dilleshwarrao94187@gmail.com
Contact no: 7872306433

A CASE OF IMMUNE THROMBOCYTOPENIC PURPURA (ITP) AS AN ISOLATED PRESENTATION OF CONGENITAL TOXOPLASMOSIS IN YOUNG INFANT.

Authors: **Dr. Md Mirza Abbas[1],** *Post Graduate Trainee, Department of Pediatrics, RIMS, Imphal.*
Dr. Don William K Muti[2], *Post Graduate Trainee, Department of Pediatrics, RIMS, Imphal.*
Dr. Lourembam Radhapyari [3], *Senior Resident, Department of Pediatrics, RIMS, Imphal.*
Dr. Malani Kalyanasundaram[4], *Senior Resident, Department of Pediatrics, RIMS, Imphal.*
Dr. Sunilbala Keithellakpam[5], *Professor , Department of Pediatrics, RIMS, Imphal.*

Abstract

Immune thrombocytopenic purpura (ITP) is a heterogeneous immune-mediated process triggered by infections, vaccines, allergies and parasites. Currently, there is little evidence in the literature beyond case reports of an association with Toxoplasma gondii (T. gondii). Here, we are presenting a case of a 2-month-old, male baby with an uneventful antenatal and postnatal history, with acute presentation of petechiae, purpuric and ecchymotic lesions with a life-threatening platelet count of 4000/cumm only. All relevant work up was done. Toxoplasmosis IgG and IgM was positive and other work up were negative. To look for other significant features of toxoplasmosis, NCCT brain, USG cranium and ophthalmology examination was done and findings are unremarkable. Given the scarcity of literature on management strategies, treatment decisions were made on to support platelets through emergency transfusion, first line pharmacotherapy for ITP including IVIG and steroids. As patient's platelet count increased with clinical improvement, patient was started simultaneously on Pyrimethamine, Sulfadoxine and Leucovorin for Toxoplasmosis. This case underscores the difficulties encountered in managing rare associations and emphasizes the necessity for further research and collaboration to establish standardized management protocols. By adding to the limited literature, this case highlights the importance of considering ITP as an isolated presentation of toxoplasmosis even when typical features are absent.

Key words: Immune thrombocytopenic purpura, TORCH profile, Congenital Toxoplasmosis, IVIG

Correspondence Address: **Dr Md Mirza Abbas,**
PGT-II,
Department of Pediatrics, RIMS, Imphal
Email id: mirzaritaz999@gmail.com
Contact no: 7005151271

PATAU SYNDROME WITH DIAPHRAGMATIC HERNIA - A RARE ASSOCIATION

Authors : **Dr Ruksana Shahani[1],** *Post Graduate Trainee, Department of Pediatrics, RIMS, Imphal.*
Dr Alicia Phawa[2], *Post Graduate Trainee, Department of Pediatrics, RIMS, Imphal.*
Dr Rajkumar Sananganba, *Senior Resident, Department of Pediatrics, RIMS, Imphal.*
Dr Amarjit Moirangthem , *Senior Resident, Department of Pediatrics, RIMS, Imphal.*
Dr Ch Shyamsundar Singh, *Professor &HoD, Department of Pediatrics, RIMS, Imphal.*

Abstract :

Patau syndrome, also known as Trisomy 13,is a rare chromosomal disorder caused by an extra copy of chromosome number 13.The syndrome occurs in approximately 1 in 10,000 live births. Common clinical features include dysmorphic facies, clept lip, clept palate, postaxial polydactyly, ocular hypotelorism, low set malformed ears, microcephaly, micropthalmia, cardiac malformation s, scalf defects, hypoplastic or absent ribs, visceral or genital anomalies. We report a case of newborn presented with dysmorphic facies, polydactyly, cleft palate.Diaphragmatic hernia was detected in X-ray thorax and abdomen. It was diagnosed by karyotyping. The patient was managed conservatively

Keywords : Patau syndrome, Trisomy 13,karyotyping

Correspondence Address : **Dr Ruksana Shahani,**
PGT-2nd,
Department of Pediatrics, RIMS, Imphal
Email id : ruksanashahani04@gmail.com
Contact no : 8575807751

A GIRL WITH MULTIPLE JOINTS CONTRACTURE: A TALE OF BRITTLE BONE

Authors: **Dr. Dinesh Narayanan[1],**
Dr. Nameirakpam Johnson[2],

1. Post Graduate Trainee, Department of Paediatrics, JNIMS, Imphal
2. Consultant Paediatric Rheumatologist, Department of Paediatrics, JNIMS, Imphal

Abstract:

Case: A 12-year-old girl, born out of non-consanguineously married couple with father being bed ridden due to multiple joint deformities and contractures presented with additive painful swelling of multiple joints and progressive contractures involving right ankle, right hip, right knee, bilateral elbows and wrists for last 3 years. She was being treated as a case of Juvenile Idiopathic Arthritis elsewhere. She also had left supracondylar fracture at 3.5 years of age following trivial trauma. On examination, she had flexion contracture of bilateral knees, ankles, hips, elbows and wrists. Investigations revealed concavity of superior and inferior end-plates with decrease in vertebral height involving multiple thoracolumbar vertebrae, intraosseous calcification of bilateral forearms, healed fracture in humerus, expansion of meta-epiphysis of bilateral calcaneum and distal tibia and fibula on X-rays of whole body. Dual-energy X-ray absorptiometry scan showed osteoporosis. Next generation sequencing showed pathogenic variant at c.-14C>T, exon 1 of *IFITM5* gene, consistent with Osteogenesis Imperfecta, type V. She was started on inj. Zolendronate and physiotherapy.

Conclusion: Osteogenesis Imperfecta(OI)is a group of genetic disorders with abnormality in synthesis or processing of type I collagen.It is characterized by increased susceptibility to bone fractures and decreased bone density. Bisphophonates along with physical rehabilitation are often used for management of OI.

Correspondence: **Dr. Nameirakpam Johnson,**
Consultant Paediatric Rheumatologist,
Department of Paediatrics, JNIMS, Imphal

UNSEEN FORCES: STROKES IN INFANT WITH COMPLETE AV BLOCK AND DEXTROCARDIA

Author: [1]**Dr. Y. Teresa,**
[2]**Dr. Kameshore Nandeibam,**
[3]**Dr. Nameirakpam Johnson,**
[4]**Dr. Rameshor Yengkhom,**
[4]**Dr. H. Apabi**

1. Post graduate trainee, Department of Paediatrics, JNIMS, Imphal;
2. Professor and Head of Department, Department of Paediatrics, JNIMS, Imphal
3. Consulatant Paediatrics Rheumatologist;
4. Associate Professor, Department of Paediatrics, JNIMS, Imphal.

Background: Paediatric stroke is an uncommon occurrence, particularly in infancy, and often poses diagnostic and management challenges. Congenital heart defects such as atrio-ventricular (AV) canal defect, may predispose infants to cerebrovascular complications due to altered hemodynamics and potential embolic events.

Case presentation: The infant with normal developmental milestones and an uneventful birth history presented with inconsolable crying followed by right sided weakness, which persisted for one week. On second day, left sided facial deviation was noted. Examination reveals a systolic murmur was noted, prompting further cardiac evaluation. Chest X-ray showed dextrocardia, and echocardiography confirmed a complete atrioventricular (AV) canal defect with associated dextrocardia. Brain MRI and MR angiography revealed early subacute cerebral infarct and narrowing of left middle cerebral artery.

Discussion: This case highlights the rare occurrence of stroke in a young infant with congenital heart anomalies. The pathophysiology may involve embolic phenomena due to altered hemodynamics from the cardiac defect leading to ischaemic injury.

Conclusion: Stroke in infant, though rare should be considered in the differential diagnosis when neurological deficits arise, especially in the context of congenital heart disease.

PATTERN OF MENTAL AND BEHAVIOURAL PROBLEMS AMONG CHILDREN AND ADOLESCENTS ATTENDING THE PSYCHIATRY OPD OF A GOVERNMENT HOSPITAL INIMPHAL EAST

Authors: **Dr. K. Shantibala[1],**
Dr. Yumnam Sana[2],
Dr. Jemila Shoibam[3],
Dr. Nelson Loitongbam[4]

1. Prof. and HOD, Dept. of Psychiatry JNIMS, Porompat
2. Consultant, Child and Adolescent Psychiatrist, Dept. of Psychiatry, JNIMS
3. PGT, 2nd year, Dept. of Psychiatry, JNIMS
4. Asst. prof. Dept. of Psychiatry, JNIMS

Abstract

Background: There is an increasing focus on child and adolescent mental health in India including Manipur state, thereby a need to have a data for epidemiological studies on children. Although, there are a few such studies done in different parts of India in different socio-cultural settings, those data cannot be generalised to the entire country. So far there is no data from Manipur state.
Aim: To study the pattern of mental and behavioural problems among children and adolescents from a government psychiatry department OPD located in Imphal East.

Method: The data from 10 months (January to October 2024) were extracted from the record files and analysed for the pattern of prevalent disorder among different age groups of children and adolescents.
Results:
Total number of cases reported during the study period was 310. Mean age was 13.06 years with higher number of females (54.2%) than males ((45.8%). Out of the various mental and behavioral problems reported, neurodevelopmental disorders (NDD) was the most prevalent (31.6%) followed by depressive disorder (14.5%) and anxiety disorder (12.9%). Most of the patients were from Imphal West (32.9%) and Imphal East (31.6%).

Keywords: Child and Adolescent, mental and behavioral disorder, prevalence, NDD

STUDY ON BACTERIOLOGICAL PROFILE OF ENDOTRACHEAL TUBE TIP CULTURE IN NICU OF PAEDIATRICS DEPARTMENT IN RIMS, IMPHAL

Author: **Dr Laldinpuii,** Post Graduate Trainee
Dr Sareet Laxmi N, Senior Resident
Dr. Sunilbala K, Associate Professor
Paediatrics Department RIMS, Imphal

Abstract

Background: Mechanical Ventilation is a life saving procedure among many patients admitted in Intensive Care Unit(ICU), but it is associated with high risk of acquiring respiratory tract infections, thereby increasing mortality and morbidity. Ventilation associated Pneumonia(VAP) is a common nosocomial infection, it is pneumonia in mechanically ventilated patients that develops later than or at 48 hours after the patient has been on mechanical ventilator.
The objectives of this study were to identify bacterial agents causing pneumonia in ventilated patients and to determine the antibiogram of these bacterial isolates in NICU of RIMS,Imphal.
This knowledge of common bacterial agents and local antibiotic sensitivity pattern will help in proposing suitable antibiotic among ventilated patients which is of great importance specially in our current scenario of increasing emergence of antibiotic resistant bacteria.

Method: It was a cross sectional study conducted in NICU of RIMS,Imphal from March 2023 to September 2024.

Result: Out of 100 samples, 38 were sterile and 62 were positive for organisms. Common bacterial isolates were *Acetobacter Baumanii* (24%), *Klebsiella*(15%), *Pseudomonas*(8%) and *E.Coli*(7%). Antibiotic sensitivity to Inj. Collistin(85%), Inj Tigecycline(76%), Inj. Minocycline(72%), Inj. Amikacin(70%) and Inj. Cefoperazone(65%) was seen.

Conclusion: From the present study we come to know the local antibiogram of VAP in our institute. The first line prophylactic antibiotics used at our NICU setting are Inj. Cefotaxime and Inj. Amikacin. Inj. Amikacin shows sensitivity in 70% bacterial growth while Inj. Cefotaxime shows sensitivity in 5% of bacterial growth.

ADVERTISEMENTS

List of Contributors


MAIPAKPI HOSPITAL
NORTH AOC, IMPHAL-795001, MANIPUR, REGD NO. : MNHCR/NO./080/NH/2007,
(AN ISO 9001:2008 CERTIFIED HOSPITAL)
ULTRASOUND
3D/4D SCAN
ANOMALY / LEVEL 2 SCAN
NT SCAN
COLOUR DOPPLER
CRANIAL (BRAIN)
SMALL PARTS ULTRASOUND
PERIPHERAL DOPPLER
FETAL ECHOCARDIOGRAPHY
ALL OTHER SCANS
24X7 HOURS CONSULTANT AVAILABILITY
OBSTETRICS & GYNAE OPD
PAEDIATRIC (CHILD) OPD
FULLY FUNCTIONING NEONATAL ICU (NICU) WITH NEONATOLOGISTS
LAPAROSCOPIC FACILITIES
HYSTEROSCOPY FACILITIES
CONVENTIONAL SURGERIES
CERVICAL CANCER SCREENING
CRYO-SURGERY FOR CERVICAL LESION
DIGITAL COLPOSCOPY
GENERAL MEDICINE
UROLOGY
GENERAL SURGERY
24X7 HOURS INHOUSE PHARMACY AVAILABLE.
MEDICAL REIMBURSEMENT FACILITIES AVAILABLE
CMHT AND PMJAY FACILITIES AVAILABLE
ROUTINE CHILD IMMUNIZATION AVAILABLE
EVERYDAY FROM 7:00 A.M. TO 5:00 P.M.
PARTICIPATION IN PPTCT (MACS)
INFERTILITY TREATMENT
SPERM FREEZING
IN VITRO FERTILISATION (IVF)
INTRA-UTERINE INSEMINATION (IUI)
TESTICULAR SPERM ASPIRATION (TESA)
FROZEN EMBRYO TRANSFER DONE.
INTRA CYTOPLASMIC SPERM INJECTION (ICSI)
PERCUTANEOUS EPIDIDYMAL SPERM ASPIRATION (PESA)
MAIPAKPI DENTAL
ALL KINDS OF DENTAL TREATMENT
FOR BOTH ADULTS AND CHILDREN,
INCLUDING BRACES, RCT.
AVAILABLE
PEDODONTIST, ORTHODONTIST,
ORAL &
MAXILLO - FACIAL SURGEON
CLINICAL LABORATORY
(FULLY AUTOMATED BIOCHEMISTRY & CHEMILUMINESCENCE ANALYZER FACILITIES AVAILABLE)
WWW.MAIPAKPIHOSPITAL.COM

ADVANCED HOSPITAL

AN ISO 9001:2008 CERTIFIED MULTI-SPECIALITY HOSPITAL

Harikhagok Makhong, Thangapat Mapal, Palace Compound,
Imphal East-795001, Manipur, India
Regd. No. MNHCR/NO/108/NH/2013
www.advancedhospital.in e-mail: ashri.imphal@gmail.com
Customer Care No. 9615259783

Empanelled with

- ✓ Manipur University
- ✓ National Institute of Electronics & Information Technology, Akampat
- ✓ Central Agricultural University
- ✓ Religare Health Insurance
- ✓ APOLLO MUNICH
- ✓ HDFC ERGO

24 x 7 Services

Emergency Trauma
Ambulance
Laboratory
Pharmacy

FACILITIES AVAILABLE

DEPARTMENTS

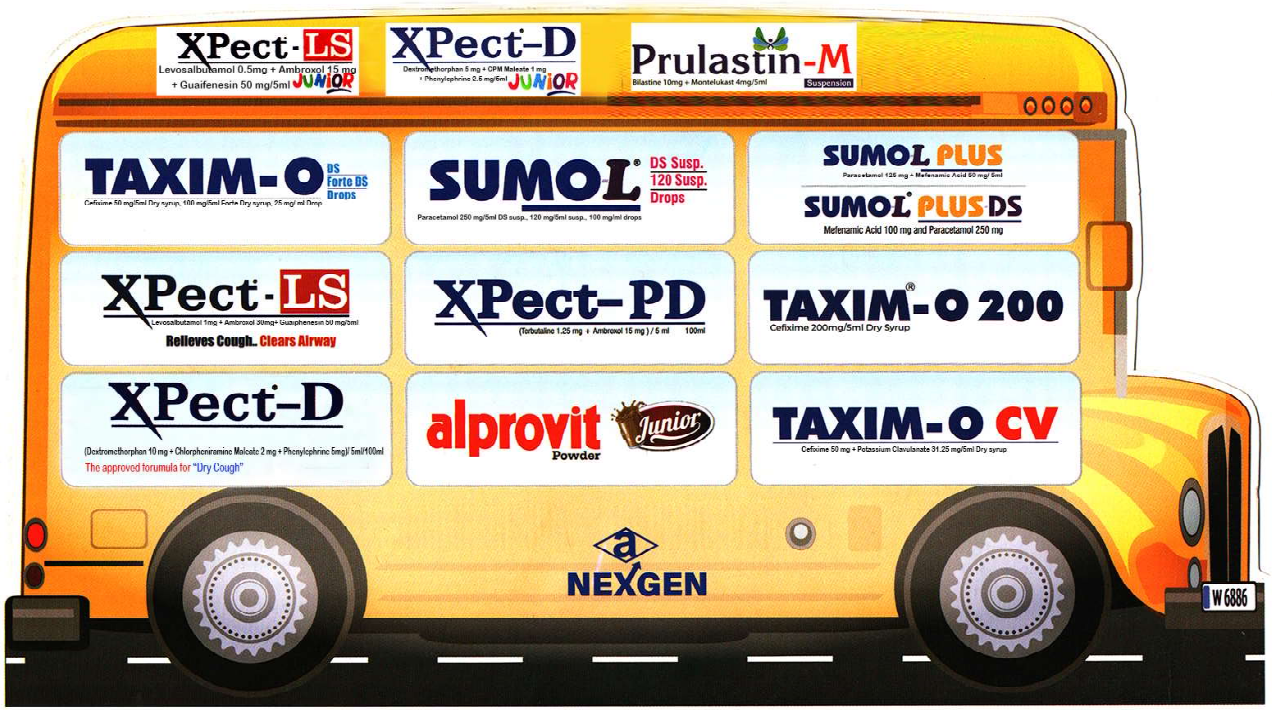
- General Medicine
- General Surgery
- Minimal Access Surgery
- Urology
- Nephrology
- Neuro Surgery
- Endocrinology
- Cardiology
- ENT
- Dental and Aesthetic Dentistry
- Obstetrics and Gynaecology - Painless Delivery
- Ophthalmology
- Dermatology
- Paediatrics
- Paediatrics Surgery
- Radiology
- All Orthopaedic & Spinal Surgery

SPECIAL FACILITIES

- Advanced Health Check
- Super Specialist OPD
- Evening OPD
- Ultra-Modern Operation Theatres fitted with C-Arm
- CT Scan Machine
- Fully Equipped ICU
- Well Equipped NICU
- 24x7 Emergency Trauma Service
- 24x7 Ambulance Facilities
- 24x7 Pharmacy
- Single Cabin Room
- Super Delux Room
- Indoor Canteen
- Central Gas Pipe Line System
- Computerised Radiology
- Digital ECG
- Portable Mobile X-ray
- Ultrasonography
- Portable Ultrasonography
- Colour Doppler
- Echo Cardiography

Healthcare Par Excellence


ALKEM
COMMITTED TO
CARE BEYOND CURE
AZ
Swich
Cefpodoxime proxetil
100 50 DS
Drops
Swich CV
(Cefpodoxime100/50mg + Clavulanic acid 62.5mg/31.25mg/5ml Dry Syrup
100 50 DS
MEROSURE™-O
Faropenem sodium 100mg/5ml DRY SYRUP 30ml /60ml
TAXIM-O
DS
Forte DS
Drops
Cefixime 50 mg/5ml Dry syrup, 100 mg/5ml Forte Dry syrup, 25 mg/ml Drop
SUMOL
DS Susp.
120 Susp.
Drops
Paracetamol 250 mg/5ml DS susp., 120 mg/5ml susp., 100 mg/ml drops
XPect-LS
Levosalbutamol 1mg + Ambroxol 30mg+ Guaiphenesin 50 mg/5ml
Relieves Cough.. Clears Airway
Prulastin-M
Bilastine 10mg + Montelukast 4mg/5ml
Suspension


XPect-LS
Levosalbutamol 0.5mg + Ambroxol 15 mg
+ Guaifenesin 50 mg/5ml JUNIOR
XPect-D
Dextromethorphan 5 mg + CPM Maleate 1 mg
+ Phenylephrine 2.5 mg/5ml JUNIOR
Prulastin-M
Bilastine 10mg + Montelukast 4mg/5ml
Suspension
TAXIM-O
DS
Forte DS
Drops
Cefixime 50 mg/5ml Dry syrup, 100 mg/5ml Forte Dry syrup, 25 mg/ml Drop
SUMOL
DS Susp.
120 Susp.
Drops
Paracetamol 250 mg/5ml DS susp., 120 mg/5ml susp., 100 mg/ml drops
SUMOL PLUS
SUMOL PLUS DS
Mefenamic Acid 100 mg and Paracetamol 250 mg
XPect-LS
Levosalbutamol 1mg + Ambroxol 30mg+ Guaiphenesin 50 mg/5ml
Relieves Cough.. Clears Airway
XPect-PD
(Terbutaline 1.25 mg + Ambroxol 15 mg) / 5 ml 100ml
TAXIM-O 200
Cefixime 200mg/5ml Dry Syrup
XPect-D
(Dextromethorphan 10 mg + Chlorpheniramine Maleate 2 mg + Phenylephrine 5mg)/ 5ml/100ml
The approved forumula for "Dry Cough"
alprovit
Junior
Powder
TAXIM-O CV
Cefixime 50 mg + Potassium Clavulanate 31.25 mg/5ml Dry syrup
NEXGEN
W 6886

Raj Medicity is one of Manipur's largest multi-speciality Hospital located in the heart of the city, North A.O.C., Imphal west, Manipur, India. The Hospital has been envisioned with the aim of bringing to Manipur the highest standards of medical care.

Spread across 20,000 sq. ft., located adjacent to National High Way No. 2, in the heart of the city - a destination for Trauma and Accidents. The Hospital gives 24 x 7 services to Trauma and Emergency supported by a Cardiac Ambulance (ICU on wheels). The parking area of 10,000 sq. ft. Inside its premises for visitors and patient's attendants gives security to their vehicles.

24 hours Trauma Care & Emergency Services with diagnostic and treatment facilities.

MEDICAL SERVICES AVAILABLE
Emergency & Trauma Care,
Cardiothoracic & Vascular Surgery, ENT, General Medicine, Surgical Oncology, General Surgery, Orthopaedics, Nephrology, Neuro Surgery, Obstetrics & Gynaecology, Paediatrics, Clinical Laboratory, Physiotherapy, Plastic & Cosmetic Surgery, Radiology & Imaging Centre, Urology, Psychiatry, Neuro-Psychiatry and Psychological Counselling.

DIAGNOSTIC FACILITIES: RADIOLOGY & IMAGING CENTRE
Advanced post processing workstation.
Modality of choice for brain & spine imaging.
32 Slice CT Scanner, C-Arm with IITV.
Digital X-RAY with IITV.

DIAGNOSTIC FACILITIES: LABORATORY
Patented Dry Slide Technology.
Cuve Tip.
Micro Sensor.
Micro Tip - Intellicheck
E-Connectivity
Extended Menue: Vitros 5,1 FS provides comprehensive menu:
Routine Chemistries - Electrolytes.
Therapeutic Drug Monitoring (TDM).
Special proteins - Drugs of Abuse - 10 User Defined Assays.
Blood Culture, ECG.

OPERATION FACILITY: 24 x 7 MODULAR OT
Operating microscope, CCTV and Diode & CO_2.
Mobile C-arm with IITV, Harmonic Scalpel.
Laparoscopic/Endoscopic Procedure, Modular OT.

TRAUMA CARE & EMERGENCY SERVICES
Trauma Care & Emergency of Raj Medicity hospital consist of multidisciplinary team ready to extend prompt treatment and care of around 15000 acutely ill and injured patients per year. The Trauma Care & Emergency Services have been running for 7 years in our hospital.

SURGICAL ONCOLOGY
Head & Neck Cancer Surgery, Open & Laparoscopic Gastrointestinal Cancer Surgery, Gynaecological Cancer Surgery, Breast Cancer Surgery, Thyroid Cancer Surgery, Gall Bladder & Pancreatic Cancer Surgery.

SOME SPECIAL SURGERIES DONE AT OUR HOSPITAL: ENT
Rhinoplasty, Micro-surgery of EAR,
Tonsillectomy with Harmonic Scalpel.
Bloodless Tonsillectomy, Coblator.
Endoscopic Procedures.

GENERAL & ADVANCED LAPAROSCOPIC SURGERY
Gall Bladder, Appendectomy, Hernia operation done both open & Laparoscopic Procedure.
Advance Laparoscopic Surgery - Gastro - Intestinal - Stapling Surgery.

NEURSOSURGERY
Micro-Neurosurgery for brain Tumours, Spinal Tumours. Hydrocephalus, Stroke Management.

OBSTETRICS & GYNAECOLOGY
Normal Delivery - Caesarean Section.
Laparoscopic Surgery.
High Risk Delivery supported & well equipped NICU.

NEPHROLOGY & DIALYSIS
5 imported Haemo Dialysis Machines with experienced Nephrologist, well trained doctors & technicians.

UROLOGY
Endourology Surgery - T.U.R (Trans Urethral Resection) - PCNL
All Laparoscopic Urology Surgery - TURP
URSL (day care) - Laser (RIRS)

PLASTIC SURGERY
Reconstructive Surgery - Burn Surgery
Hand Surgery, Microsurgery

CARDIO-THORACIC SURGERY
VATS (Video Assisted Thoracic Surgery)
Cardiac Pacemaker implantations.
Pericardiotomy, Bullectomy, Decortication.

ICU/ICCU
Centrally air-conditioned ICU with Central Gas Line, bed side monitor,Defibrillator, Ventilator, Multichannel Monitor with round the clock supervision by qualified Doctor & well train staff nurse.

ORTHOPAEDICS
Joint Replacement Surgeries, Spinal injuries, Arthroscopic Surgeries, Sports injury related Surgeries. Complex Orthopaedic trauma surgeries in all limbs including Pelvi-Acetabular fractures and Scapula fractures.


MODULAR OT


X-RAY ROOM


32 SLICE CT SCAN


DIALYSIS


ULTRA SOUND


LABORATORY


CCD (CRITICAL CARE DEPARTMENT)


NICU


C-ARM MACHINE


CARDIOVASCULAR AMBULANCE

Website: www.rajmedicity.com
North A.O.C, Imphal West-795001, Manipur, India.

LUPIN Respira Spiritus
COMPREHENSIVE RANGE OF PAEDIATRIC PRODUCTS
Inhalation Respiratory Range
Budamate
Formoterol & Budesonide
100 Transhaler
Budate
Budesonide 100/200 Transhaler
Salbair
Levosalbutamol
Transhaler
Esiflo
Salmeterol and Fluticasone Propionate
New
TRANSPACER-M
Advanced device for optimum delivery
HELP THE LITTLE ONES TO CHASE THEIR DREAMS
For the use of Registered Medical Practitioner, Hospital and Laboratory only

LUPIN Respira Spiritus
COMPREHENSIVE RANGE OF PAEDIATRIC PRODUCTS
Respiratory Range
Telekast - L Kid Tablet
Montelukast 4 mg + Levocetirizine 2.5 mg
Telekast - L Kid Syrup
Montelukast 4 mg + Levocetirizine 2.5 mg
Momeflo
Mometasone Furoate Nasal Spray
LCF LS
100ml Syrup
Levosalbutamol 1mg+ Ambroxol 30mg+
Guaiphenesin 50mg
Other Oral Products
Fexy Suspension
Fexofenadine Hydrochloride
Telekast 4/5
Montelukast sodium
Chewable tablets
LCF kid
DISTACLOR
Crisacor
HELP THE LITTLE ONES TO CHASE THEIR DREAMS
For the use of Registered Medical Practitioner, Hospital and Laboratory only

With Best Compliments from Glenmark

OUR MOTTO: To serve humanity with quality service.

So kindly visit: **The Bless Diagnostics, Porompat, Imphal** to avail all these facilities.

- **THE BLESS DIAGNOSTICS** for the first time in entire **North East**, is glad to present you the **MRD TEST** OR **MINIMAL RESIDUAL DISEASE TEST** which help in detecting the number of cancer cells that remained in the body after the completion of treatment course of different types of blood cancer, especially Acute Lymphoblastic Leukemia & Multiple Myeloma.
- Apart from this test, we provide you the **BCR-ABL test**, first time in Manipur, for diagnosis of the **Chronic Myeloid Leukemia** or **CML**.

Recently Introduced tests in
THE BLESS DIAGNOSTICS

1. FLOWCYTOMETRY IMMUNOPHENOTYPING USING 11 COLOUR FLOWCYTOMETER:

***First time use in Manipur and North East Region.**

2. HEMOGLOBIN High performance liquid chromatography (Hb HPLC):

- To detect abnormal hemoglobin.
- Especially in patient with anemia refractory to transfusion, microcytic hypochromic picture with normal hemoglobin etc.

3. Full APLA (ANTIPHOSPHOLIPID ANTIBODY) WORK UP:

- For patient having recurrent abortions thrombosis at unusual sites, stroke in young adult etc.
- Includes anti β2 glycoprotein 1, anti cardiolipin antibodies and lupus anticoagulant.

4. INHIBITOR SCREEN & confirmatory test BETHESDA ASSAY:

- Specially for bleeding patients (known hemophiliac or otherwise) not responding to usual treatment.

5. FACTOR VIII coagulation ASSAY:

- Same day reporting in urgent cases.

6. ARTERIAL BLOOD GAS ANALAYSIS (ABG). 24X7

- Report within 5-10 mins.

7. Early Detection of HIV:

- To detect P24 antigen during window period
- Requires 50µ (1drop) of whole blood/serum/plasma.
- Requires 20-40 mins.

~~~~Last but not the least we provide all the various kinds of Hematology test. ~~~~~

Any Query Please Contact: +91 - 8416095636/8798928275
e-mail: theblessdiagnostics@gmail.com
website: www.theblessdiagnostics.in
~~~~

SHAIBO HOSPITAL

HELLO,

we are here to hear and heal your health problems

OTHER FACIITIES

24 X 7 PHARMACY & LABORATORY SERVICES

&

IVF FOR INFERTILE COUPLE

FACILITES

OBSTETRICI & GYNAECOLOGY
OPD : Morning : 7: 30AM to 12 noon
Evening : 3.30 PM to 6 PM
for emergency 24 X 7 with minimal cost

GENERAL SURGERIES
OPD : Morning : 8.30 AM to 10 AM (Mon - Sat)

ORTHOPAEDIC
OPD : Morning 8. am to 10 am (Sunday Only)

MEDICINE
OPD : Morning : 8:30 -9-30 AM (Mon-Sat)
Evening : 4.00 - 5.00 PM (Mon - Sat)

EYE (OPTHALMOLOGY)
OPD : 10: 00 AM to 1 : 00PM (Mon -Sat)

ENT
OPD : Morning : 8:00 Am to 12 noon (Mon- sat)
Evening : 2;:00 PM to 4 pm (Mon & Thursday)

SKIN (DERMATOLOGY)
OPD : Morning : 8:00 Am to 12 noon (Mon, Wed & sat)
Evening : 2;:00 PM to 4 pm (Mon , Wed & Friday)

PAEDIATRICS
OPD : Morning : 8:00 Am to 9:00 AM

CONTACT US NOW

+ 91 6009623622

shaibohospital22 @gmail.com

Khurai Sajor Leikai,
Near Chaithabi Leirak,
Imphal East-795010

www.shaibohospital.com

YOUR HEALTH IS OUR PRIORITY


Pacimol DS
Paracetamol
ipca
The Caring Fever Specialist
DROPPER WITH 10 GRADATIONS (0.1ml-1ml)
Pacimol DROPS
Paracetamol 100mg/ml Suspension
In strawberry flavour
Pacimol Susp.
Paracetamol 120mg/5ml Suspension
Delicious Mango Flavour
Pacimol DS
Paracetamol 250mg/5ml Suspension
Pacimol® MF 250 125 Susp.
Paracetamol 250mg + Mefenamic Acid 100mg;
Paracetamol 125mg + Mefenamic Acid 50mg
The Mega Power for Fever and Pain
EASIER ABSORPTION
75 µ
Particle size
EASIER ACTION
Delicious mango Flavour

PRODUCT RANGE CARD

1st Peripherally Acting Antitussive Cough Syrup

Rapitus

Levodropropizine 30 mg / 5 ml

Antibiotic Range

Zedocef

50 DT / Susp.
100 DT / Susp.
25 mg DROPS

Cefpodoxime Proxetil

CLARIGARD

Tab | DS
250 | 125
500 | 250

Clarithromycin 250 / 500 mg Tablets

Clarithromycin 125 & 250 mg / 5 ml Suspension

Anti-allergic

Montemac-L SYRUP Kid

Montelukast 4 mg + Levocetirizine 2.5 mg per 5 ml / each kid Tab.

Gold Standard Anti-Viral

Fluvia Syp.

Oseltamivir Oral Suspension 12 mg/ml

The safe & recommended option for GERD

Lanzoprax 15 30

Lansoprazole Orally Disintegrating Tablets Kid