SOUVENIR

XXIV MANIPEDICON, 2020

13th March, 2021

Theme :

"Child Health Amidst Covid-19 Pandemic "

Venue: IMA Conference Hall, Lamphelpat,
Imphal, Manipur

Organised by :

Pediatric Association of Manipur (PAM)

Published by:
Dr. Y. Rameshwor
Organising Secretary

Edited by:
Dr. N. Golmei

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ORGANISING SECRETARY			:	Dr. Rameshwor Yengkhom
ORGANISING TREASURER			:	Dr. Ng. Sonamani
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		Convenor	:	Dr. T. Gitaranjan Devi
		Co – Convenor	:	Dr. M. Meenakshi Devi
Scientific	:	Chairperson	:	Prof. Ch. Shyamsunder Singh
		Convenor	:	Dr. Khumanthem John
Souvenir	:	Chairperson	:	Dr. L. Basanta Singh
		Convenor		Dr. N. Golmei
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Catering	:	Chairperson	:	Prof. Ch. Mangi Singh
		Convenor	:	Dr. P. Arunkumar Singh
Travel & Accommodation	:	Chairperson	:	Dr. Shyamkumar Laishram
		Convenor	:	Dr. Chingthang Kshetrimayum

Office **BEARERS**

INDIAN ACADEMY OF PEDIATRIC 2019

KAMDHENU BUSINESS BAY, 5TH FLOOR, PLOT NO. 51, SECTOR 1, JUINAGAR EAST,
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Office BEARERS

PEDIATRIC ASSOCIATION OF MANIPUR (PAM) 2020

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

Patron	:	Dr. P. Ibomacha Singh
		Dr. L. Immo Singh
		Dr. H. Kumar Singh
President	:	Dr. H. Jashobanta Singh
Imm. Past President	:	Dr. Kh. Ratankumar Singh
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		Dr. B. Sarita Devi
		Dr. W. Joseph Singh
		Dr. Th. Omita Devi
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		Dr. Ksh. Chourjit Singh
		Dr. H. Ibemhal Devi
		Dr. Th. Nabachandra
		Dr. L. Ranbir Singh

Organising **Committee**

Dr. H. Jashobanta Singh
Organising Chairperson

Dr. Rameshwor Yengkhom
Organising Secretary

Dr. Ng. Sonamani
Organising Treasurer

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Chairperson Scientific Committee

Dr. Kh. Ibochouba Singh
Chairperson, Cultural Committee

Dr. N. Kameshore Singh
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Dr. Shyamkumar Laishram
Chairperson Travel & Accommodation

Dr. Ch. Mangi Singh
Chairperson, Catering Committee

Dr. Narendra Laishram
Convenor, Cultural Committee

Dr. Chingthang Kshetrimayum
Convenor, Travel & Accommodation

Dr. Kh. John
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Convenor, Souvenir Committee

Dr. P. Arunkumar Singh
Convenor, Catering Committee

Dr. T. Gitaranjan Devi
Convenor, Reception Committee

Dr. M. Meenakshi Devi
Co-convenor, Reception Committee

OBITUARY

Shri Late Dr. Athokpam Naranbabu

Born on 1st March, 1949

Expired on 29th November, 2020

Pediatric Association of Manipur (PAM)

Awardee

Irengbam Nivedita Devi

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

Advisor Manipedicon 2020

Dr. Ksh. Chourjit Singh
Advisor

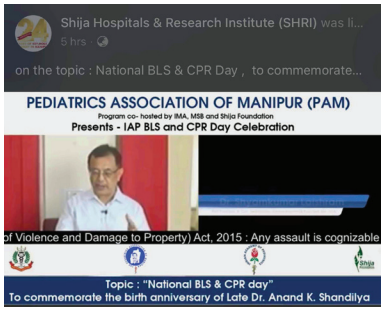
Dr. L. Braja Mohon Singh
Advisor

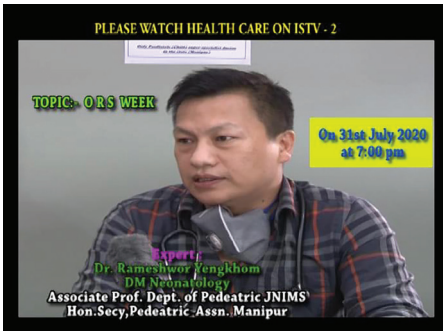
Dr. H. Ibemhal Devi
Advisor

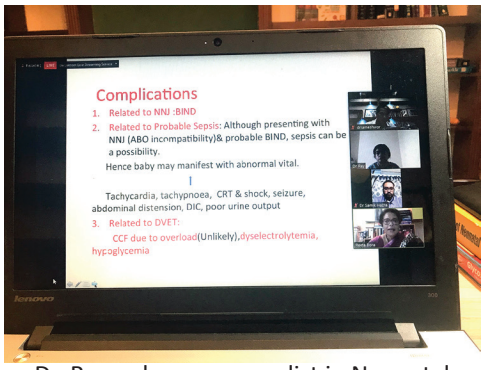
Prof. L. Ranbir SIngh
Advisor

Dr. Th. Nabachandra
Advisor

Activities of PAM



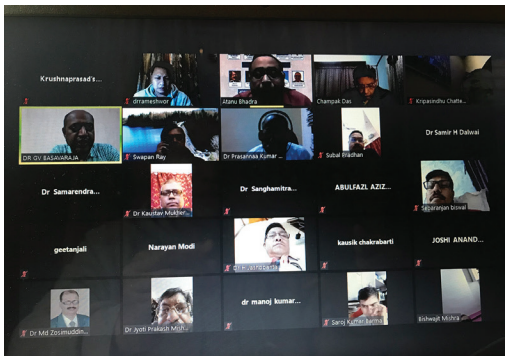




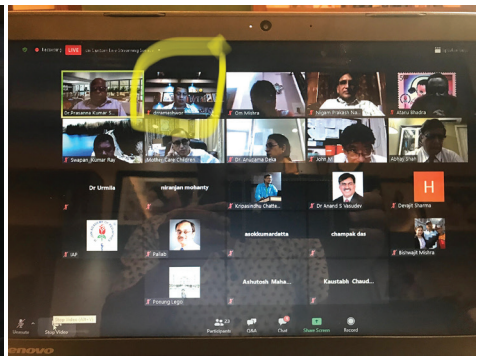
Dr. Rameshwor as panelist in Neonatal panel discussion organised by EZAP.

Dr. Rameshwor receiving First Prize in ORS Week Celebration 2020 at Mumbai.

CPR & BLS Day Celebration 2020.



CIAP-State Office Bearers virtual Meeting.



Dr. Rameshwor attending pediweek SUNRISE as faculty on Zoom.

ORS Week celebration 2020 at JNIMS.

HONORED PEDIATRICIAN OF THE YEAR 2020

Dr. Kh. Ratankumar Singh

MBBS, Regional Medical College, Imphal

MD (Pediatrics), PGIMER, Chandigarh

National Trainer, Breast feeding Counselling and Lactation Management Course, BPNI

Director designate, Training Course on Breast feeding Counselling and Lactation Management, BPNI.

Founder Secretary, NNF, Manipur

Founder Treasurer, BPNI, Manipur

President, PAM 2018-2020

Executive Member, CIAP for Manipur and Tripura, 2020

Founder Chairman, Mother's Care Children Hospital and Research Centre, 100 bedded dedicated pediatric teaching hospital.

Founder Managing Director, Imphal Heart Institute, dedicated cardiac care institute for both adults and children.

PROF. LAISHRAM IBETOMBI DEVI 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 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.

PROF. LAISHRAM IBETOMBI DEVI MEMORIAL ORATION

ORATOR

Dr. Shyamkumar Laishram

DR. SHYAMKUMAR LAISHRAM

QUALIFICATION : **MBBS 1982 RMC (NOW RIMS)**
MD PEDIATRICS (AIIMS, NEW DELHI) 1992

PRESENT STATUS : **SENIOR CONSULTANT PEDIATRICIAN, IMPHAL HOSPITAL & RESEARCH CENTRE, IMPHAL SINCE 2005**

EXPERIENCE : **WORKED IN MHS FROM 1984 TO 2005 (VOLUNTARY RETIREMENT)**

AWARDS : **SHISHU VISHESAGNA SHIROMONI AWARD (2018) &**
PIONEER AWARD (2002) OF EAST ZONE ACADEMY OF PEDIATRICS

BOOKS : **PUBLISHED BOOKLET "PEDIATRIC DRUG DOSES FOR MEDICAL OFFICERS"**
CONTRIBUTED TOPIC ON FUNDAMENTALS OF FEEDING BY IAP-IYCF CHAPTER
CONTRIBUTED IN ONE DAY MODULE OF IYCF BY IAP-IYCF CHAPTER PUBLISHED BOOK TITLE "ANGANGSHINGBU MASHA FAHANBA"

IAP ACTIVITIES : **PAST SECRETARY, IAP, MANIPUR STATE BRANCH PAST PRESIDENT, PAM**
PRESIDENT, EAST ZONE ACADEMY OF PEDIATRICS, 2018.
EXECUTIVE BOARD MEMBER, CENTRAL IAP (2018) HONOURED PEDIATRICIAN 2019.

BPNI ACTIVITIES : **FOUNDER SECRETARY, BPNI, MANIPUR STATE BRANCH NOW BPAM**

IMA ACTIVITIES : **PAST HON'Y SECRETARY, IMA MANIPUR STATE BRANCH PRESIDENT, IMA, MANIPUR STATE BRANCH, 2018-19, 2019-20.**

PIONEER MEDICAL COLUMNIST : **REGULAR ARTICLES ON LOCAL DAILY "POKNAPHAM" COLUMNIST "THE PEOPLES CHORNICLES"**

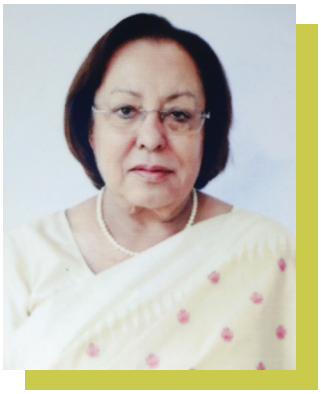
EXTRACURRICULAR : **SHORT STORY AND NOVEL WRITER (ONE NOVEL) & EIGHT SHORT STORY COLLECTION & ACTING IN DRAMA (LOCAL, STATE & NATIONAL)**

MESSAGE

सत्यमेव जयते

Imphal
December 2, 2019

DR. NAJMA HEPTULLA
Governor of Manipur



MESSAGE

I am very happy to learn that the Pediatric Association of Manipur (PAM) is organizing its Annual Conference "XXIV MANIPEDICON 2020" on 13th March, 2021 and a Souvenir is being brought out to mark the mega event.

It is indeed an onerous task for the Association to organize such an event at this critical juncture, the theme of which is "Child health amidst COVID-19 pandemic". The theme of the Conference itself is quite relevant at this trying satisfaction levels to our people due to various, such as insufficient resources including human resources,lack of awareness, poor infrastructure, etc. The efforts to take care of the children need to have precedence as they are the future of the country. A little extra effort can make a huge difference. There is a need to bring down the Infant Mortality rate to the acceptable levels. In this context, I am glad to add that Manipur has one of the lowest IMR in the country. Emphasis also to be given to reduce the impact of communicable disease. I am confident that during the deliberations, the experts will interact and come up with suggestions which can make the Association achieve the goals, including areas where cost cutting without affecting the benefits can be chalked out.

I wish the Conference all success.

Najma Heptulla

(Dr. Najma Heptulla)

MESSAGE

सत्यमेव जयते

CHIEF MINISTER
MANIPUR

Imphal
March 5, 2021

MESSAGE

I am glad to learn that Pediatric Association of Manipur (PAM) is going to organize the 24th MANIPEDICON - 2020 under the theme, "Child Health Amidst COVID-19 Pandemic", and that a Souvenir is being brought out to mark the occasion.

Children were declared one of the most vulnerable groups COVID-19 when the pandemic broke out in Wuhan, China. Luckily, the rate of infection among children and the number of cases of Multisystem Inflammatory Syndrome in Children (MIS-C) were quite low in our State. However, we must not let our guard down and not stop looking for ways to protect our children from COVID-19. It is important to observe all SOPs issued for various events and occasions.

I hope that our Pediatricians and experts would be engaging in fostering positive and productive discussions on the health management of children in the conference. I extend my best wishes for grand success of the conference and publication of souvenir.

(N. Biren Singh)

MESSAGE

सत्यमेव जयते

Imphal, the 19th February, 2021

DIRECTOR
FAMILY WELFARE SERVICES
GOVERNMENT OF MANIPUR

MESSAGE

I am delighted to learn that the Paediatric Association of Manipur is organising the "XXIV MANIPEDICON -2021" on the 13th March, 2021 at the IMA Conference Hall, the theme being "Child Health Amidst COVID-19 Pandemic".

The pandemic has taken a heavy toll on all the nations across globe and has affected mankind on an unprecedented scale.

Health, education, economy, in fact, all spheres of human civilization were, and are still, drastically jeopardised.

To organise the conference in the prevailing scenario of the pandemic is in itself a great achievement and the theme is very appropriate.

I am sure that the deliberation and scientific sessions of the Conference will be of high standards as maintained traditionally by the Paediatric Association of Manipur.

I wish the conference a great success.

(P. Shyamsunder Singh)
Director
Family Welfare Services
Government of Manipur

MESSAGE

सत्यमेव जयते

Imphal
The 16th Feb, 2021
Fax-0385-2414625
Phone: 241 1484 2414750 } Off.
E-mail: director@rims.edu.in
drsanta@rediffmail.com

REGIONAL INSTITUTE OF MEDICAL SCIENCES IMPHAL, MANIPUR, INDIA

MESSAGE

I am, indeed, very glad to learn that the Pediatric Association of Manipur (PAM), will be organizing its Annual Conference "XXIV MANIPEDICON 2020" on 13th March, 2021 at the Conference Hall of IMA complex, Imphal with the theme "Child Health Amidst Covid-19 Pandemic" and a Souvenir is also being published to commemorate the Conference.

I am sure that the deliberation during the conference will benefits not only the participant but also only the participants but also thereby help in providing Social Works in quality health care service to suffering children from Covid-19 of the NE region.

I heartily wish the conference a 'grand success".

(Prof. A. Santa Singh)
DIRECTOR

MESSAGE

Imphal
Dated : 29-11-2019

JAWAHARLAL NEHRU INSTITUTE OF MEDICAL SCIENCES, IMPHAL

MESSAGE

It gives me immense pleasure to learn that the Paediatric Association of Manipur (PAM) is organizing its Annual Conference, "XXIV MANIPEDICON 2020" on 13th March, 2021 under the theme "Child Health Amidst COVID-19 Pandemic" at the Conference Hall of IMA Complex, Lamphelpat.

I am sure that the detail discussion of the theme will give a good knowledge on child health management to all participants particularly paediatricians, Medical Officers and Post Graduate students in COIVD pandemic.

I wish the conference a grand success.

(Prof. Th. Bhimo Singh)
Director, JNIMS

MESSAGE

सत्यमेव जयते

Director
Health & Family Welfare Services
Government of Manipur

Imphal

MESSAGE

It gives me immense joy to pen a goodwill message for the annual conference "XXIV MANIPEDICON 2020" to be held on 13th March, 2021 at IMA conference hall, Lamphelpat, Imphal. The organizing committee has selected a very time appropriate theme for this year's annual conference, "Child health amidst COVID-19 pandemic". COVID-19 has forced most of us to be confined inside our homes. Human history will record this period as a time of unparalleled separation and crisis but also of great courage, learning and collaboration. As we have seen across the world in multiple situations of crisis, children being the most vulnerable are often the worst affected. While the medical and economic consequences of COVID 19 are critical and well known, we should keep reminding ourselves of the importance of psychological and emotional wellness of our children as it will determine their being for the rest of their lives. Psychological education therefore, of parents and caregivers, to support children in these difficult times to build their resilience is imperative so that it is easier to connect emotionally with children and understand their concerns during this pandemic so as to create an environment which is as normalised and joyful as it can possibly be. It has been a long fight but i urge all to keep adhering to strict COVID Appropriate Behaviours whether at home or at work after vaccination with the health and well being of our children in mind.

(Dr. K. Rajo Singh)
Director
Health & Family Welfare Services
Government of Manipur

MESSAGE

March 6th, 2021

President
Indian Academy of Pediatric
(IAP)

MESSAGE

I am extremely happy to learn that Pediatric Association of Manipur (PAM) is bringing out a Souvenir to mark XXIV MANIPEDICON 2020 to be held on 13th March 2021 at IMA Conference Hall, Lamphelpat, Imphal under the theme "Child health amidst Covid 19 pandemic".

The theme is quite relevant at this juncture, taking into account the impact of Covid 19 in child health both physical and mental well-being. I am confident that the deliberations during the conference will give immense benefit to the participants and thereby help in providing quality health care services to the children in need.

I convey my best wishes and greetings to the members of Pediatric Association of Manipur, participants and wish the conference a grand success.

(Dr. Piyush Gupta)

MESSAGE

March 5th, 2021

Honorary General Secretary
Indian Academy of Pediatric
(IAP)

MESSAGE

Dear Colleagues

My heartiest congratulations to the Pediatric Association of Manipur (PAM) for organising its annual conference "XXIV MANIPEDICON 2020".

Conferences are the right time to be upgraded on the new clinical and academic learnings and my appreciation to the entire organising committee and the members for choosing the right theme for the conference. The outbreak of the COVID-19 pandemic has exposed India's population to the country's requisite of prenatal/postpartum care addressing child health, nutrition and mental health is of utmost importance. "Child health amidst COVID 19 pandemic, the theme of the conference is the right choice made and is the need of the hour.

I wish the entire team of the Pediatric Association of Manipur - the best of luck and wish the grand success of the conference. I look forward to seeing this enthusiasm for future programs too.

Together Let's Build IAP

Thank you.

Warm regards

Dr G V Basavaraja
Honorary Secretary General 2020- 21

MESSAGE

Imphal
March 5th, 2021

President
Pediatric Association of Manipur
(PAM)

MESSAGE

It is my great pleasure to take part in organising the XXIV MANIPEDICON 2020 on 13 March 2021 though delayed due to Covid 19 pandemic. I do thank all the members of PAM for their courage and encouragement to organize this historic conference in the midst of this pandemic. The fears and challenges of Covid 19 engulfed our lives for the last one year and finally our victory over it is perhaps in our hands. We heard/read/talked/thought about Covid,fought against Covid and so on in the last twelve months. Alas! We could not gather together during this period except ORS Week Inaugural Function and one CME. I am glad that we are now able to hold this annual conference with the rightfully chosen theme of "Child Health amidst Covid 19 Pandemic". I hope the valuable oration and deliberations will throw more light on Covid19 and other important topics. I once more praise and congratulate the hardcore organisers for their hard work within a short period of time to make the conference a grand success.

Long Live IAP

Long Live PAM

(Dr H. Jashobanta Singh)
President,
Paediatric Association of Manipur.

MESSAGE

Imphal
1st March, 2021

General Secretary,
Pediatric Association of
Manipur (PAM)

MESSAGE

It gives me immense pleasure to welcome all the delegates, academicians and invitees in the "XXIV MANIPEDICON 2020", the annual conference of Pediatric Association of Manipur (PAM). The theme of the conference "Child health amidst COVID 19 pandemic" is very much pertinent and has been rightly chosen by the organizing committee considering the effects of ongoing pandemic of COVID 19 in children in all spheres of life.

I hope this conference will impart more knowledge about the ongoing COVID 19 pandemic to all the delegates and invitees and come forward all together to fight and overcome the present health crisis. The organizing committee warmly welcome all members and well-wishers of Pediatric Association of Manipur (PAM) to the "XXIV MANIPEDICON 2020" and enjoy the brain storming scientific sessions and deliberations by experts.

I take this opportunity to thank all the members, especially state working committee members of PAM who worked relentlessly to organize this conference and make it successful and memorable one in this pandemic.

I wish this conference "XXIV MANIPEDICON 2020" a grand success.

Long live IAP

Long live PAM

(Dr. Rameshwor Yengkhom)
Hon. Secretary PAM
Pediatric Association of Manipur (PAM)

Pediatric Association of Manipur (PAM)

Imphal
6th March, 2021

MESSAGE

It is an honor to write on behalf of Pediatric Association of Manipur that our association is organizing the XXIV MANIPEDICON 2020 with the theme most suitable with the present day scenario "Child health amidst COVID 19 pandemic". The pandemic has pushed everyone to the limit of his/her tolerability, right from the freedom of movement to the right to live. But as nature has shown us that there is an end for everything and I hope that this pandemic shall end soon too. This conference will provide an updated knowledge, covering vast aspect of pediatric sciences, which will certainly go a long way in the welfare of all the children of the state.

Long live IAP

Long live PAM

(Dr N. Golmei)
Convenor Souvenir Committee

SECRETARY REPORTS ON ACTIVITIES

Done by Pediatric Association of Manipur during March to December 2020

Though Pediatric Association of Manipur (PAM) usually hold many activities and programme for the health and benefits of children of the state, last year 2020, because of COVID 19 pandemic which hit the state hard like other states of India and world all over, we could not organise much activities and programme in 2020 as there were extreme social restrictions and lock down in the state of Manipur almost the whole year.

Inspite of the social restrictions and lock down, we could organise and celebrate the following special days and celebrations designed by Central Indian Academy of Pediatrics (CIAP) maintaining social distancing and following SOP of state government for COVID 19:

1. "National BLS & CPR Day" on 21st July 2020 to commemorate the Birth anniversary of Late Dr. Anand K. Shandilya. The programme was conducted as virtual facebook live streaming programme with support from Shija foundations, Imphal and Indian medical association (IMA), Manipur state branch. There were active discussions on Basic Life Support and Cardiopulmonary Resuscitation and questions from audience were answered and clarified.

2. "ORS Day & ORS Week celebration" from July 23 to July 29, 2020 with the theme ORS: The Health Drink in Diarrhoea". Inaugural function was held in JNIMS with Director and Medical superintendent JNIMS as chief guest and special guest. Power point presentation on the theme ORS: The Health Drink in Diarrhoea" was delivered by secretary PAM. Experts from PAM spoke on benefits of ORS in diarrhoea in All India Radio Imphal programmes like "Phone in Programme", "Chayonshida Manipur" and "Nupigi Thouram". Health talk on ORS was also done in local TV channel (ISTV) by secretary PAM. We, PAM won first prize award in ORS week celebration for the year 2020 and same was handed over to us in "CIAP-PEDICON 2021" in Mumbai on 6th February 2021.

Although there were physical restrictions, we had many virtual programmes, virtual CMEs and virtual conference organised by CIAP and East zone academy of Pediatrics. We had "Fever module" TOT, "98.7 FM" TOT, "WAR" TOT organised by CIAP for our state and many of us participated. We also had "East Zone Web Pediweek SUNRISE" from 15th – 21st August 2020 where some of our esteemed members participated as faculty.

I thank all the members of PAM for their support and guidance in organising the activities and programmes and made it successful and award winning at national level.

Dr. Rameshwor Yengkhom
Secretary, Pediatric Association of
Manipur (PAM) 2020

SCIENTIFIC PROGRAMME

XXIV MANIPEDICON 2020

Date: 13th March 2021, Saturday

Venue: IMA Conference Hall, Lamphelpat, Imphal

8:30 AM – 10:00 AM: Award paper session (Main conference hall)

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

TOPIC	SPEAKERS
Attainment of full enteral feeds in very low birth weight babies in neonatal intensive care unit, RIMS, Imphal.	Dr. Thangja Mekham Maring
Significant serum bilirubin rebound in near term (≥35 weeks) and term neonates receiving phototherapy in RIMS, hospital, Imphal.	Dr Avishek Datta
Clinical profile of hypocalcaemia in term neonates with birth asphyxia in RIMS, Imphal.	Dr. Deepak Sharma
Etiologies of prolonged jaundice in neonates admitted in RIMS	Dr. Rukuwe Thele
A Study on the Incidence and Risk Factors of Neonatal Sepsis in Regional Institute of Medical Sciences, Imphal.	Dr. Ashik Majumder
Assessment of social functioning of adolescent school children in Manipur: A cross sectional study.	Dr. Konjengbam Erora
Maternal and fetal outcome in obstructed labour.	Dr. Pavithra K.

9:00 AM – 10:00 AM: Poster walk session (Poster arena)

10:00 AM – 11:00 AM Session I/ CME-I: Mixed Bag (20 mins each)

TOPIC	SPEAKERS	Chairpersons
Approach to a child with DSD	**Dr. N. Lakshmee**	**Prof. L. Ranbir Singh** **Prof. Kh. Ibochouba Singh**
Pediatric surgical emergencies	**Dr. I. Keshorjit**	
Kawasaki disease: Update	**Dr. N. Golmei**	

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 (20 min each)

TOPIC	SPEAKERS	Chairpersons
Covid 19 in children: An overview	**Dr. Kh. John**	**Dr. Shyamkumar Laishram** **Dr. Kh. Ratankumar Singh**
Perinatal and Neontal Covid 19	**Dr. Y. Rameshwor**	
MIS-C in Covid 19	**Dr. N. Johnson**	

1:30 – 2:00 PM Prof. Laishram Ibemtombi Memorial Oration (30 min)

TOPIC	SPEAKERS	Chairpersons
Impact of Covid 19 on child health: Beyond infection	**Dr. Shyamkumar Laishram**	**Dr. H. Jashobanta Singh** **Dr. Rameshwor Yengkhom**

2:00 – 3:00 PM **Session III/ CME – III: 1 hour (20 min each)**

TOPIC	SPEAKERS	Chairpersons
Children and adolescent mental health during Covid 19 pandemic	Prof. RK. Lenin	Prof. Ksh. Chourjit Singh Dr. Th. Nabachandra Singh
POCSO	Dr. T. Gitaranjan	
Gender incongruence in children	Dr. Sanjay Sharma	

3:00 – 3:30 PM **Session IV/ CME – IV: Vaccinology** **Half hour (30 min each)**

TOPIC	SPEAKERS	Chairpersons
Typhoid conjugate vaccine: An update	Prof. L. Ranbir	Prof. Ch. Mangi Singh Dr. H. Jashobanta Singh

3:30 – 4:30 PM **Session V/ CME – V: 60 mins (30 min each)**

TOPIC	SPEAKERS	Chairpersons
Late preterm newborns: Issues and management	Dr. Chingthang Ksh	Prof. N. Kameshore Singh Dr. RK Rupabati Devi
HLH	Dr. Ng. Sonamani	
Medical Ethics & Etiquette in Pediatric Practice	Dr. Narendra Laishram	

4:30 – 5:10 PM **Session VI/CME-VI: Free paper session 40 mins (10 min each)**

TOPIC	SPEAKERS	Chairpersons
The study of preterm labour: incidence, risk factors and perinatal outcome in a tertiary care centre	Dr. Caroline Laishram	Prof. L. Braja Mohon Singh Prof. Ch. Shyamsunder Singh
Feto-maternal outcome in patients with anaemia in pregnancy	Dr. Divya Bharathi	
Feto maternal outcome of primary caesarean section of multiparous women	Dr. Yaseera Ali	
Multisystem inflammatory syndrome in children temporally associated with SARS-COV-19 in an adolescent – first case report from Manipur	Dr. Lekkala Ramya	

5:10 PM – 6: 00 PM **AGM (Annual general meeting) and Election of new office bearers of PAM**

6:00 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

Perinatal and Neonatal COVID-19

Dr. Rameshwor Yengkhom
MD (Pediatrics), DM (Neonatology)
Associate Professor, Department of
Pediatrics, JNIMS, Imphal

COVID-19 (The coronavirus disease 2019) resulting from infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has caused severe and widespread illness all over the world in adults, including pregnant women, while rarely infecting neonates. An incomplete understanding of disease pathogenesis and viral spread has resulted in evolving guidelines to reduce transmission from infected mothers to neonates. Fortunately, the risk of neonatal infection via perinatal/postnatal transmission is low when recommended precautions are followed.

SARS-CoV-2 infection

Causative agent of COVID-19 pandemic, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is a member of the Coronaviridae family, initially discovered in the 1960s as the agent responsible for the common cold. Of the seven unique coronaviruses have been implicated in clinically relevant infections, three of them (SARS-CoV, MERS-CoV and SARS-CoV-2) have the capacity to cause severe respiratory illness with significant morbidity and mortality. The Coronaviridae family viruses utilize bats as a central reservoir of infection. Zoonotic transmission occurs after the virus undergoes genetic mutations that enable it to infect human cells. In the case of SARS-CoV-2, the receptor-binding domain (RBD) of the coronavirus spike protein located on the viral capsid evolved to enable binding to the human cell-surface protein angiotensin-converting enzyme 2 (ACE2) and initiate viral entry [1].

Viral cell entry

The expression of ACE2 on the epithelial surface of the upper and lower airways permits viral entry into these cells and underlies the ability of SARS-CoV-2 to cause respiratory illness [2]. Upon binding to ACE2, the SARS-CoV-2 life cycle requires the proteolytic activity of a host serine protease, Transmembrane protease, serine 2 (TMPRSS2), for viral entry [3]. SARS-CoV-2 then gains access to the cytoplasm of the cell either through endocytosis or direct fusion with the host cell membrane. Given that coronaviruses are positive, single-stranded RNA viruses, the viral RNA that enters the cytoplasm can directly be translated by the host protein-synthesis machinery. Translation results in the creation of a large polyprotein that is cleaved by a virally encoded protease to yield individual viral proteins. Subsequent viral replication also requires a virally encoded protein, the RNA-dependent RNA polymerase, to synthesize the RNA intermediaries needed to make more SARS-CoV-2- positive-stranded RNA. Finally, viral proteins and newly synthesized viral RNA are packaged into a complete nucleocapsid that can be released from the cell to propagate infection.

Pathogenesis

After viral entry into the host cell, viral recognition and immune activation occurs via Toll-like receptors, Retinoic acid-inducible gene I-like receptors, and inflammasome activation. The host

immune response to viral infection has been implicated in causing the pathology and clinical illness seen in SARSCoV-2 infection, with an overly robust immune response causing more severe illness. A comparison of the inflammatory response between adult survivors and non-survivors of SARS-CoV-2 infection from Wuhan, China, demonstrated significantly higher levels of IL-6, ferritin, and lactate dehydrogenase, as well as significantly lower lymphocyte counts both on admission and throughout hospitalization [4]. Similarly, another study of adults with SARS-CoV-2 from Wuhan, China found higher levels of an array of plasma proinflammatory cytokines (IL-2, IL-7, IL- 10, GSCF, IP10, MCP1, MIP1A, and TNFα) in SARS-CoV- 2 infected patients who required admission to the intensive care unit (ICU) compared to those who did not need the ICU [5].

Reduced infection rates and the dampened immune response to infection seen in neonates and older children has been the subject of much debate and currently remains unclear. Possible explanations include variations in the expression pattern of ACE2 with aging and the evolution of the immune system and response to infection that occurs with development.

Pregnancy and COVID 19

Pregnancy is a partially immunocompromised state and increases the risk of certain infections, particularly respiratory infections. Rates of infection with SARS-CoV-2 in pregnant women vary geographically and likely reflect the prevalence of the virus in the overall population. For example, data from a single center in New York City show that 20% of 161 pregnant women tested positive for SARS-CoV-2 with an asymptomatic carrier rate of 13%. In contrast, a similar study performed in Connecticut found that 3.9% of pregnant women were positive for SARS-CoV-2 with an asymptomatic carrier rate of 2.9% at time of admission to labor and delivery. Regarding illness severity, data from the Centers for Disease Control (CDC) suggest that pregnant women with COVID-19 are at increased risk for hospitalization and admission to the ICU compared to nonpregnant women of reproductive age [6].

Several studies have demonstrated fetal complications of maternal SARS-CoV-2 infection including medically indicated preterm birth, growth restriction, and miscarriage [7]. Given the hypercoagulability seen in patients with COVID-19, these fetal complications are hypothesized to be due to compromised perfusion in the maternal and/or fetal placental vasculature and possible thrombotic changes [8]. More studies are needed to clarify the impact of SARS-CoV-2 infection on the physiology of pregnancy, the placenta, and resultant fetal complications.

Antenatal management

The American College of Obstetricians and Gynecologists (ACOG) recommends that prenatal care does not require significant modification based on the presence of SARS-CoV-2 infection alone and should be based on the clinical condition of the pregnant woman. In the event that there is a suspected or confirmed SARS-CoV-2 infection in the first trimester, ACOG suggests an additional mid-trimester ultrasound be considered to evaluate fetal anatomy [9]. If infection occurs in the second or third trimester, ACOG guidelines recommend that an additional third-trimester growth assessment can be performed [9].

ACOG guidelines currently recommend a course of antenatal steroids for all pregnant women at risk for preterm delivery within 7 days with fetuses <33 6/7 weeks' gestational age, as well as for late preterm pregnancies 34 0/7 to 36 6/7 weeks' gestational age with no prior course of steroids administered. Earlier in the pandemic, ACOG recommended against the use of antenatal corticosteroids

at or beyond 34 weeks' gestation, given concerns at the time about the safety of corticosteroids in patients with SARSCoV-2. These recommendations have since changed in response to new data supporting the possible benefit of treatment with corticosteroids in patients with COVID-19. At this time, ACOG and also FOGSI/NNF/IAP recommendations guidance recommends that SARS-CoV-2 status should not alter decision-making regarding antenatal corticosteroid administration.

Antenatal magnesium sulphate for preterm neuroprotection (< 32 weeks gestation) should be decided on a case-to-case basis.

Delivery considerations

Labor and delivery has been altered by COVID-19 with measures in place to protect the safety of pregnant women, caregivers, and newborns. ACOG and also FOGSI/NNF/IAP currently recommends prioritization of testing for pregnant women admitted to labor and delivery units with suspected COVID-19 or who develop symptoms of COVID-19 during admission. Additionally, they suggest consideration of universal screening, utilizing rapid polymerase chain reaction (PCR) testing, in high prevalence areas, given concern for asymptomatic infection and transmission. Other general precautions include limiting visitors and isolating persons under investigation or SARS-CoV-2-positive patients in negative pressure rooms, or at least rooms with high-efficiency particulate absorbing units, if negative pressure rooms are unavailable. ACOG and also FOGSI/NNF/IAP recommendations state that SARS-CoV-2 infection alone is not an indication for preterm delivery or cesarean section, and timing of delivery should be informed by disease severity, maternal comorbidities, gestational age, and maternal and fetal status, as the majority of SARS-CoV-2 infections are asymptomatic or mild and most individuals make a complete recovery. For pregnant women who require inpatient management, regular monitoring of maternal vitals, and fetal heart rate for assessment of illness severity and fetal distress can assist in determination of delivery timing. In severe illness (respiratory rate ≥30/min, resting SaO2 ≤ 93%, arterial blood oxygen partial pressure (PaO2)/oxygen concentration (FiO2) ≤300 mmHg), or critical illness (respiratory failure requiring mechanical ventilation, shock with organ failure, or refractory hypoxemia necessitating extracorporeal membrane oxygenation), delivery of the premature infant or termination of a nonviable pregnancy may need to be considered to reduce risk of maternal and fetal death [10]. Early delivery may also be warranted in refractory cases of maternal hypoxemia and increased maternal oxygen consumption due to the resultant critical fetal hypoxemia and acidemia. In these cases, the risks of prematurity are balanced against the risk of continued fetal compromise if the pregnancy were to continue, similar to the routine management of other conditions during pregnancy that improve after delivery. A review of 51 cases of SARS-CoV-2 infection in pregnant women reported an increase in medically indicated preterm birth and cesarean delivery. In this study, 96% of deliveries occurred by cesarean delivery and the median gestational age was 36.5 weeks' gestation with delivery indications (available in 34 cases) reported as COVID-19 pneumonia (55.9%), premature rupture of membranes (26.5%), and fetal distress (17.6%). The authors hypothesized that provider and patient anxiety may have influenced this high cesarean delivery rate [11].

Neonatal COVID 19

Neonatal acquisition

Data indicate low rates of perinatal acquisition among neonates born to mothers positive for SARS-CoV-2. In a review of 27 studies, including data from the United States,

China, Italy, Sweden, South Korea, and Honduras, only 4 out of 137 neonates (3%) born to SARS-

CoV-2 infected mothers had positive viral PCR testing, and 3 neonates had equivocal testing (5% total prevalence including equivocal tests) [12]. Similar prevalence was reported in a large population-based cohort in the United Kingdom, which found 12/265 (5%) positive neonates born to SARS-CoV-2 infected mothers [13]. In a Spanish cohort, perinatal acquisition occurred in 5/72 (6.9%) of exposed newborns born to SARS-CoV-2-positive mothers, with no difference found between vaginal and Cesarean births. In contrast, data from the National Registry for Surveillance and Epidemiology of Perinatal COVID-19 Infection (NPC-19) found 44/2287 (1.9%) of viral tests to be positive in neonates born to mothers with confirmed SARS-CoV-2 infection [14]. Perinatal transmission of SARS-CoV-2 from mothers to their offspring may occur via the transplacental route, or through environmental exposure to aerosolized droplets of viral particles after birth. Some reports of potential transplacental transmission have shown the presence of anti- SARS-CoV-2 IgG and IgM serum antibodies in neonates born to mothers with SARS-CoV-2 infection; however, all infants in these studies subsequently had negative viral PCR testing. SARS-CoV-2 specific IgM antibodies in neonates may indicate in utero infection given that IgM does not cross the placenta, and positive IgG titers in neonates may reflect maternal or neonatal infection. A recent case report provided virological and pathological evidence of likely transplacental transmission of SARS-CoV-2; the neonate was born to a viremic mother who presented after birth with neurological manifestations and was subsequently found to also have viremia. Histological analysis of the placenta found signs of acute and chronic intervillous inflammation and real-time reverse transcription polymerase chain reaction (RT-PCR) on the placental tissue was positive for SARS-CoV-2 [15]. In other studies, the SARS-CoV-2 virus has been found in the analysis of placental samples, providing evidence of possible transplacental transmission, but contamination at time of delivery could not be excluded [16]. Postnatal contact transmission via environmental contamination is also possible given that live SARS-CoV-2 virus has been isolated from urine and fecal samples [17]. The possibility of transmission via breastmilk is currently under investigation, as initial studies reported negative viral PCR results sent on breastmilk samples from infected mothers [18]. Conversely, two recent studies of mother–newborn positive dyads have reported the presence of viral RNA in breastmilk, but it is unclear whether this was the route of transmission versus droplet or contact postnatal transmission [19]. The implementation of infection control precautions in breastfeeding infants may reduce postnatal acquisition. Three New York City hospitals reported a series of 120 neonates born to SARS-CoV-2 infected mothers who all tested negative for the virus at 24 h of life, 5–7 days of life (N = 82 completed follow-up) and 14 days of life (N = 72 completed follow-up). In this cohort, 78% of infants were still breastfeeding at 5–7 days of life, and the study described use of precautions including hand hygiene, maternal use of a surgical mask during breastfeeding and skin-to-skin, and use of a closed isolette when infants were not being held or fed [20]. Risk factors for maternal transmission and neonatal acquisition are not fully elucidated, and it remains unclear if severity of maternal disease, timing of acquisition, gestational age at delivery, or delivery mode contribute to transmission and infection risk.

Neonatal presentations and outcomes

Clinical presentations of neonates infected with SARS-CoV-2 vary greatly, ranging from asymptomatic carriage to critical illness. Reported signs among neonates with SARS-CoV-2 infection include fever, lethargy, rhinorrhea, cough, tachypnea, increased work of breathing, vomiting, diarrhea, and poor feeding. The extent to which SARS-CoV-2 infection contributed to the reported signs of infection and complications is unclear, as many of these findings are common in term and preterm infants for other reasons (e.g., transient tachypnea of the newborn, neonatal respiratory distress syndrome). A systematic review of SARS-CoV-2 infection in children and newborns included a total of 25 neonatal cases [21]. Neonates were

most commonly tested due to a history of primary maternal infection (84%). Of the 25 cases, 20% were asymptomatic and a higher proportion of neonates were severely ill compared to children older than 1 month of age (12% vs. 2%). Among symptomatic neonates, the most common clinical presentation was respiratory distress (40%), followed by fever (32%) and feeding intolerance (24%). Laboratory findings included elevated white blood cell count (20%), creatine phosphokinase (20%), liver enzymes (16%), and C-reactive protein and/or procalcitonin (12%) [21]. One case series included in this review [22] described two neonates who developed disseminated intravascular coagulation and one who suffered multi-organ dysfunction, the latter resulting in neonatal death. There have also been reports of presumed postnatal acquisition of SARS-CoV-2 in term or late preterm infants who developed respiratory failure and were found to have ground glass opacities on chest radiography [23]. A case report of a 26-week preterm neonate described the new development of streaky infiltrates on chest radiography following acquisition of SARS-CoV-2 infection but had no changes in baseline respiratory support. Additionally, the previously described neonate with confirmed transplacental transmission presented with neurological manifestations, including irritability, inflammatory findings in the cerebrospinal fluid, and white matter injury on brain MRI [24]. Together, these data suggest that neonates with SARS-CoV-2 infection range from asymptomatic to severely ill, with respiratory distress being the most common presentation. While studies are limited, neonates may be at higher risk of experiencing severe illness compared to older children, making them a vulnerable population. Current evidence suggests that SARS-CoV-2 infections in neonates are uncommon. If neonates do become infected, the majority have either asymptomatic infections or mild disease (i.e., do not require respiratory support), and they recover. Severe illness in neonates, including illness requiring mechanical ventilation, has been reported but appears to be rare. Neonates with underlying medical conditions and preterm infants (<37 weeks gestational age) may be at higher risk of severe illness from COVID-19.

Diagnosis and management

The current gold standard to diagnose SARS-CoV-2 infection is RT-PCR on respiratory specimens. However, in asymptomatic or mildly symptomatic patients, as is often the case for newborns and infants, the sensitivity of the assay may be reduced by potential false negatives. Diagnosis via serological testing in neonates is particularly challenging given the transplacental transmission of maternal IgG, and that IgM assays are prone to false-positives and false-negatives, and therefore, while their presence might suggest a fetal response to in utero infection, they are not the gold standard for diagnosis of congenital infections. The presence of IgG and/or IgM antibodies does not clearly define whether infection occurred transplacentally or postnatally, but a rising IgG antibody titer on serial testing may be helpful to identify active infection.

Management of SARS-CoV-2 infection in neonates is largely supportive, including respiratory support, oxygen, fluid and electrolyte therapy, and empiric antibiotics if there is suspected bacterial co-infection. Specific anti-COVID 19 treatment is not recommended in symptomatic neonates. Use of adjunctive therapies such as systemic corticosteroids, intravenous gamma globulin and convalescent plasma is not recommended in symptomatic neonates with suspected or confirmed COVID 19.

During the respiratory management of a suspected or confirmed case of neonatal COVID-19, the risk of aerosol generation and dispersion also depends on the proximity to the patient's airway and the risk of dispersion of aerosolized droplets through interface leaks or respiratory circuits. Presumably, the lower tidal volumes of neonates and infants compared to adults decrease dispersion. At some institutions, all neonates on respiratory support greater than 2 L/min nasal cannula or those that may require an aerosol generating procedure are placed on airborne, contact, and eye-shield precautions,

however the evidence directing which procedures require these increased precautions is unclear.

Recommendations for the management of neonates at risk for COVID-19 infection

CDC, WHO, AAP, AAFP, and FOGSI/NNF/IAP have provided guidelines for the management of neonates at risk for COVID-19. These guidelines are summarized in Table 1.

Summary of clinical guidelines for infants born to SARS-CoV-2 Positive mothers

	Use of personal protective equipments	Establishing safe breastfeeding	Rooming in or Isolation	Infant testing
AAP	* N-95 mask, eye protection, gown, and gloves should be worn by providers attending the delivery and providers caring for infants of COVID 19 positive mothers that require positive pressure ventilation, mechanical ventilation or supplemental O2 > 2 litres/min. * COVID 19 positive mothers should wear masks and perform hand hygiene when providing care to infants	* Mother should perform hand hygiene before and wear a mask during breastfeeding. * An infected mother may express breast milk, and this may be fed to infant by uninfected caregivers.	Mothers and newborns may room-in according to usual center practice. Mothers should wear a mask and perform hand hygiene when performing hands-on care. Use of an isolette may facilitate distancing. * Symptomatic infants requiring NICU admission should be admitted in a single room with the potential for negative pressure air.	* For institutional requirements, a single swab of the nasopharynx or oropharynx followed by nasopharynx, or two swabs of each site. * Testing at 24 hours and again at 48 hours of age. * Repeat tests on positive infants every 48-72 hours until 2 negative tests are obtained. * Infants that cannot be tested should be treated as positive for a 14-day period of observation.
CDC	* COVID 19 positive mothers should wear masks and perform hand hygiene when providing care to infants.	* Mother should perform hand hygiene before and wear a mask during breastfeeding. * If possible, expressed breast milk should be fed to the infant by a healthy caregiver.	* Mothers and newborns may room-in, using shared decision-making. * Mother should wear a mask and perform hand hygiene when performing hands-on care. * Maintain a physical distance of ≥ 6 feet between mother and infant or use of an isolette when feasible. * Consider separation for neonates at higher risk for severe illness.	* RT-PCR testing on nasopharyngeal, oropharyngeal, or nasal swab samples. * Testing at 24 hours and again at 48 hours of age. * Infants without tests results born to mothers with confirmed or suspected disease should be treated as positive.
WHO		* Infant should be breastfed within 1 hour of birth using appropriate infection prevention measures, including mothers performing hand hygiene before and wearing a mask.	* Mothers and infants should not be separated. * Support for skin-to-skin contact and kangaroo care regardless of SARS-CoV-2 status.	
AAFP		* Mother should perform hand hygiene before and wear a mask during breastfeeding. * Consider expressed breast milk fed to the infant by a healthy caregiver.	* Avoid parent-infant separation whenever possible. * Limit contact with infant outside of breastfeeding.	

FOGSI / NNF /IAP	* Triple layered surgical mask. N-95 mask when aerosol generating procedures are performed and in environments where respiratory support is provided by CPAP machine or ventilator. Eye protection with face shield or goggle, full gown with complete shoe cover, and well-fitting gloves. * COVID 19 positive mothers should wear masks and perform hand hygiene when providing care to infants	* Mother should perform hand hygiene before and wear a mask during breastfeeding. * Consider expressed breast milk fed to the infant by a healthy caregiver	* Mothers and newborns should be roomed-in. * Mothers should wear a triple layered mask and perform hand hygiene when performing hands-on care. * Symptomatic infants requiring NICU admission should be admitted in a single room with the potential for negative pressure air.	* At birth or at detection of history of contact with a positive person. * If the first test is negative repeat after 5-14 days after birth or exposure. However, test should be done immediately if symptoms appear. * All SARI with onset after 48-72 hours.

Table 1: Clinical guidelines from the American Academy of Pediatrics (AAP), Centers for Disease Control (CDC), World Health Organization (WHO), American Academy of Family Physicians (AAFP), and Federation of Obstetrics and Gynaecology Society of India/National Neonatal Forum/Indian Academy of Pediatrics (FOGSI/NNF/IAP) for care of infants born to SARS-CoV-2- positive mothers.

While initial AAP guidelines at the onset of the COVID-19 pandemic recommended temporary separation of the mother and newborn as the risk of perinatal and postnatal transmission were not completely understood, this guidance has since changed. Based on data suggesting that the risk of infection is the same for infants who are temporarily separated from their mothers compared to those that room-in with their mothers, the AAP now recommends that mothers and newborns may room-in according to usual center practice.

The CDC continues to recommend temporary separation between SARS-CoV-2 positive or suspected mothers and newborns, defined by maintaining separate rooms, a physical distance of 6 feet or greater between the mother and newborn, or by placing the neonate in a temperature controlled isolette if the newborn remains in the mother's room. With regard to rooming-in, both the AAP and CDC recommend barriers between mother and newborn to maintain 6 feet of distance when possible.

The WHO does not currently recommend separation of mother and newborn, citing that physiological benefits of breastfeeding and skin-to-skin outweigh the likely limited risk of maternal to newborn transmission, especially in the context of the low virulence within the neonatal population [25].

The AAFP has similarly recommended promotion of breastfeeding and mother–newborn bonding and avoidance of separation of the mother and newborn whenever possible, although does suggest limiting contact between mothers infected with SARS-CoV-2 and their newborns when not directly breastfeeding.

FOGSI, NNF and IAP recommend delayed cord clamping, skin to skin contact after detailed discussion with relatives and also rooming in and direct breastfeeding with contact precautions.

Neonatal resuscitation of neonates at risk of COVID 19 infection

Modifications to ventilation practices during neonatal resuscitation have been proposed to protect HCPs during AGPs (aerosol generating procedures), based on limited evidence on vertical transmission and aerosolization of SARS-CoV-2. Mask ventilation and endotracheal intubation are AGPs critical to neonatal resuscitation. General COVID-19 resuscitation guidelines recommend the use of viral filters on mask ventilation devices to decrease risks to HCPs. Filters increase airway resistance, dead space and CO2 retention, and obstruct the ventilation circuit if soiled. Filter complications

may be exaggerated in neonates due to their lower tidal volume, minute ventilation, and functional reserve. Smallest filters are only rated for infants weighing 3 kg and above and should not be used in babies < 1000 gms. Pre-emptive intubation to avoid mask ventilation may lead to excess intubations and its complications. Changes to respiratory equipment or indications for their use may affect HCP workload, introduce equipment uncommon in neonatal care, or lead to neonates receiving supports or interventions unsuited to their needs. The impact of these approaches may be unpredictable. If vertical transmission is unlikely, the potential harms of these variations may outweigh potential benefits, particularly if HCPs don PPE.

Personal protection equipment

Guidelines support use of PPE in suspected or confirm COVID- 19 settings. Donning PPE introduce delays when neonatal resuscitation is not anticipated, and may be done incorrectly if HCPs are rushed. When the likelihood of resuscitation is low, HCP exposure, and PPE use may be minimized by limiting the resuscitation team to 1 or 2 members. This approach acknowledges that advanced resuscitation (e.g., umbilical venous line insertion, epinephrine), if required, may be delayed. Donning and doffing PPE take practice, time, and care for full effect. When pressed for time, HCPs may don and doff incorrectly. Additional staff may be engaged to "spot" breaches and prevent self-contamination during doffing. PPE itself may further impact individual performance. Eye-protection or fogging may hinder vision, interfering with clinical assessments and procedures such as intubation. Respirator masks create resistance to breathing and can cause anxiety and discomfort. Finally, PPE might disrupt interpersonal communication. Face coverings can obscure both verbal and non-verbal communication. Masks can decrease speech intelligibility, particularly in a noisy resuscitation environment. Simulation training can help ensure safe use and familiarity with PPE, but practice with PPE can be limited by the need to conserve supplies.

Resuscitation environment

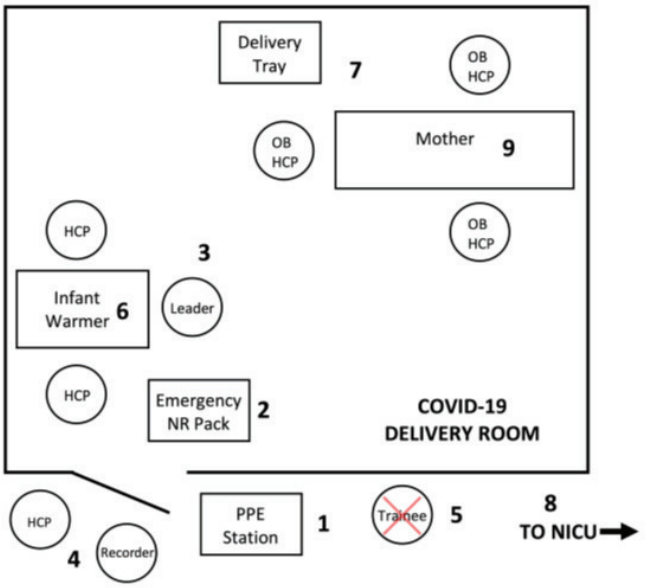
In addition to PPE, HCPs experience modifications to the physical resuscitation environment. Specific labor and operating rooms may be designated for women requiring COVID-19 precautions. Negative pressure isolation rooms are preferred for ongoing care, if available. Not uncommonly, designated rooms are remote from the neonatal unit, not designed for isolation, and previously reserved for cases not needing neonatal equipment or team involvement. Room changes can increase travel time for the neonatal team and may delay responses due to unfamiliarity with room location and layout. For COVID-19 cases, there are conflicting opinions on whether neonatal resuscitation should occur directly in the delivery room (DR). Remaining in the DR reduces the extent of contamination. On the other hand, resuscitation in a space separate from the mother (i) limits exposure of obstetrical HCPs to neonatal AGP, (ii) removes the neonate and the neonatal team from exposure to maternal infection, and (iii) allows for a dedicated resuscitation space. Some centers have rooms adjacent to DR and operating rooms for neonatal resuscitation and stabilization, ergonomically organized with equipment, and sterile supplies. These areas are infrequently designed for isolation or decontamination. Resuscitation in the DR changes the access to such organized equipment and alters workflow. Accessibility to equipment may be improved using modular, portable emergency packs that contain basic neonatal resuscitation equipment. Non-urgent interventions (e.g., line insertion), may be deferred in favour of transport to the Neonatal Intensive Care Unit (NICU) for procedures. Subsequent downstream disruptions include increased NICU workload and potential delays in procedures which would have previously occurred before transfer to the NICU. Conversely,

for units used to resuscitations in the DR, resuscitating in a separate room can also be disruptive. When transporting a potentially infected neonate to the neonatal unit, avoidance of environmental contamination and bystander exposure are priorities. Transporting a neonate in an enclosed incubator with a clean transport team in PPE may minimize contamination but requires additional personnel, PPE consumption, and choreographing of patient movement. Enclosed incubators are not airtight and may emit generated aerosols, contaminating hospital corridors, and putting bystanders at risk. Additional precautions include placing viral filters on ventilators to filter expired gases. The need for careful neonatal transport may (i) increase HCP workload, (ii) delay further interventions (e.g., venous access and intubation for surfactant), and (iii) increase the risk for hypothermia in small infants. Possible solutions include dedicated or escorted routes through the facility that are free of visitors and non-essential staff. Drills or briefings that clarify the physical environment, equipment, and transfer route will mitigate some of these risks.

Team structure and communications

Neonatal resuscitation team size and composition vary. For hospitals used to larger teams for complex resuscitations, decreasing team size to limit HCP exposure may disrupt

team function. Some potential changes include: (i) team leader performing procedures such as airway management, (ii) recorder staying outside the resuscitation room, and (iii) additional HCPs and trainees waiting outside the room. Neonatal, obstetrical, and anaesthetic teams need to share COVID-19-related information during briefings and timeouts, and in real-time. This should help the neonatal team prepare for COVID-19 precautions, as well as minimize personnel in the operating room if a mother is being intubated and extubated. By alerting when AGP are performed, neonatal HCPs can give obstetrical team members the opportunity to take suitable precautions. These communication practices will need training and reinforcement to ensure that they occur consistently. Finally, HCP trainees may be excluded from resuscitations of infants born to women under COVID-19 isolation. If COVID-19 or other similar communicable diseases become prevalent, this approach will negatively impact our ability to train HCPs. Strategies are needed that facilitate the training of both established team members and trainees in the “new normal” of this and future pandemics.



High risk COVID-19 delivery room layout and changes to neonatal resuscitation workflow

Discharge policy

Suspect neonates: Stable neonates exposed to COVID19 and being roomed-in with their mothers may be discharged together at the same time. Stable neonates in whom rooming in is not possible because of the sickness in the mother and are being cared by a trained family member may be discharged from the facility by 24-48 hours of age.

COVID 19 positive neonates: Asymptomatic neonates or those with mild to moderate clinical course whose symptoms and need of oxygen abate within 3 days can be discharged from the hospital after 10 days without repeating RT PCR test. In severe cases, a single negative RT-PCR should be demonstrated after resolution of symptoms, prior to discharge

Psychosocial and ethical considerations in the care of newborns and families

One of the major ethical concerns that has emerged from the COVID-19 pandemic is the separation of mothers with suspected or confirmed SARS-CoV-2 from their newborns after delivery. Professional society guidance on this issue has been conflicting, as described previously. Reports in the media of hospitals unilaterally separating mothers from their newborns without discussions of risks and benefits with families have exacerbated parental fear and concerns. The medical and psychosocial implications of separation after birth are undoubtedly significant. Separation has been hypothesized to interfere with the establishment of breastfeeding and lead to decreased bonding between a mother and her newborn, which may have long-term consequences. Separation without adequate parental involvement in decision-making may result in a loss of trust in the healthcare system. The combination of these concerns has led some women to change their birthing plan due to their fear of separation from their newborn at birth, inability to have a primary support person during delivery, and fear of being infected with SARS-CoV-2 in the hospital [26]. There is possibility of an increase in home births and increased demand for midwives and other personnel to attend home deliveries.

There are many neonatal/perinatal ethical concerns to balance parental decision-making rights while mitigating risks to newborns, maintaining public trust in the healthcare system, and issues of equity and bias. Parents are generally given decision-making rights for their children, thus, in the absence of serious harm for the newborn, parents are allowed to consent or decline separation after appropriate counselling. Transparency from hospitals about the guidelines they follow, and how they will implement policies aligned with those guidelines is key to maintaining public trust during the pandemic. The long-term implications of COVID-19 in the neonatal and maternal populations are unknown, and stress and adversity experienced by families during the pandemic may have implications on health and well-being. Therefore, health care providers must continue to seek a balance for their patient's safety and wellbeing.

Conclusion

Current data suggest the risk of neonatal transmission is low and that neonatal disease most commonly ranges from asymptomatic to mildly symptomatic. Recommendations from professional societies for the management of neonates represent different perspectives and prioritization, taking into consideration factors including the current understanding of disease transmission and pathology, local infection rates, and existing resources. The COVID-19 pandemic has created an unprecedented challenge for the global healthcare system. Many questions and knowledge gaps remain in our understanding of basic disease pathophysiology, epidemiology, and clinical manifestations of illness in pregnant women and neonates. There remains a critical need for the adaptation of the healthcare system, as information changes and the knowledge informing best practices in the care of pregnant women and newborns evolves.

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Pediatric Status Epilepticus (SE)

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Introduction:

Status epilepticus (SE) is a medical emergency requiring immediate, targeted treatment to help reduce patient morbidity and mortality. SE can be convulsive or non-convulsive, with convulsive status epilepticus (CSE) being the most common neurologic medical emergency in childhood. Prognosis is dependent on management of the underlying condition and on prompt treatment of seizures.

Definition:

The Neurocritical Care Society (Brophy et al 2012) defined status epilepticus as: "5 minutes or more of

(i) continuous clinical and/or electrographic seizure activity or

(ii) recurrent seizure activity without recovery (returning to baseline) between seizures."

This is a shorter seizure duration than the previously accepted definition of 30 minutes or longer of continuous seizure activity. The definition was revised since most clinical and electrographic seizures last less than 5 min, and seizures that last longer often to do not stop spontaneously. Animal data also suggest that prolonged seizures are more pharmacoresistant, may cause permanent neuronal injury and are associated with worse cognitive and behavioral outcomes.

Refractory status epilepticus is generally defined as status epilepticus unresponsive to standard treatment regimens, such as initial benzodiazepine followed by an additional anti-epileptic drugs(ED)

Classification:

Status epilepticus is classified as convulsive (tonic-clonic, tonic, clonic, or myoclonic) or non-convulsive (absence, non - convulsive speech sensorial alteration). In some cases it is only possible to diagnose non-convulsive status epilepticus with an EEG. Generalized tonic-clonic seizure is the most common type of status epilepticus.

Etiology:

Status epilepticus can be classified as per International League against Epilepsy (ILAE) recommendations according to the etiology as:

1. Acute symptomatic SE: it occurs in a previously neurologically normal child, within a week of an underlying etiology like CNS infections, head trauma and metabolic derangements.

2. Prolonged febrile seizure: it is a subtype of acute symptomatic SE and is the most common cause of status epilepticus in children (30%).
3. Remote symptomatic SE: it is SE in the absence of an acute insult but in a child with pre-existing CNS abnormality like cortical dysplasia.
4. Remote symptomatic with an acute precipitant: e.g. meningitis in a child with cerebral palsy
5. Idiopathic group which includes epileptic children in whom, status epilepticus develops following sudden withdrawal of anticonvulsant drugs.

In about 50% of patients, status epilepticus is the first seizure. It has been estimated that 3% of epileptic patients will experience a status epilepticus in their life time.

Pathophysiology:

Development of status epilepticus is mainly attributed to the fact that either there is excessive release of excitatory neurotransmitters or ineffective release of inhibitory neurotransmitters. Major excitatory neurotransmitters are glutamate, aspartate and acetylcholine, and the major neuroinhibitor is gamma-aminobutyric acid(GABA). The blockage of N-methyl-d-aspartate (NDMA) channels by magnesium ions seems to be important in the pathogenisis of neuronal damage. Neuronal damage may also be promoted by increase in concentration of calcium, arachidonic acid and prostaglandin. Pathologic changes include venous congestion, small petechial haemorrhages, and oedema. Ischaemic cellular changes are the earliest histologic changes, followed by neuronophagia, microglial proliferation, cell loss and increased number of reactive astrocytes. Vulnerable areas of brain include hippocampus (hippocampal sclerosis), amygdala, cerebellum, middle cortical areas and thalamus.

Evaluation in the Emergency department:

It is important to obtain a careful description of the seizure, preliminary symptoms, progression and duration of the seizure activity including postictal period and presence of incontinence or biting of tongue. Previous history of seizures,noncompliance with antiepileptic drugs(AEDs) or change of AED, and history of poor neurological development are important. The type of seizure, state of consciousness, vital signs and presence or absence of systemic disease need to be evaluated by careful clinical examination.

Postictal drowsiness and confusion may take several hours to resolve. Failure to improve gradually should prompt a search for other causes such as hypoglycaemia,CNS infection,CNS vascular event and drug toxicity. Nonconvulsive SE requires a high index of suspicion for diagnosis as it can present with subtle behavioural changes. It can be diagnosed by continuous EEG monitoring.

Investigations: The need for laboratory investigations in patients presenting to emergency department after having had an episode of seizure and who are alert, conscious, oriented with no clinical finding is controversial except for the serum glucose estimation. Patients who are in convulsive status epilepticus need comprehensive investigation which includes serum glucose, electrolytes (including calcium, magnesium), urea, creatinine. Complete blood count, ABG, LFT, KFT can also be done. Blood sample for possible poisoning should be stored. Patient with known epilepsy also needs detailed evaluation such as determination of anticonvulsant level in blood among other things. LP is indicated only when there is strong suspicion of CNS infection. A head CT is informative in children with head trauma, malignancies, meningoencephalitis, persistent headache or focal neurological sign. EEG is recommended for status epilepticus specially for nonconvulsive type.

Management Goals:

1. Treatment of SE should begin rapidly, within 5 minutes of seizure onset, and continue sequentially until all clinical and electrographic seizures are terminated, ideally within 60 minutes of onset.

2. Etiology of SE should be diagnosed and treated as soon as possible

3. Both treatment and diagnostic evaluation should be started simultaneously

LPCH Pediatric Status Epilepticus Pathway (Lucile Pachard Children's Hospital, Stanford))

Immediate Management (0-5 minutes):

- Non-invasive airway protection with optimal head/jaw positioning for airway patency and gas exchange. Administer oxygen, consider intubation if deemed necessary for respiratory failure
- Continuous cardiopulmonary monitoring
- Establish IV access, finger stick glucose
- Support blood pressure as needed
- Obtain pertinent STAT labs: serum chemistries, hematology studies, toxicology screen, AED levels.

Emergent Initial AED Therapy (0-5 minutes): all meds to be ordered STAT

- IV: Lorazepam: 0.1 mg/kg (max 4 mg) - may repeat in 5 minutes if seizures persist (have 2nd dose drawn up as first dose is being administered)
- No IV:

Midazolam (IM or intranasal): 0.2 mg/kg up to 10 mg max; OR Diazepam (rectal): 0.5 mg/kg (2-5 yrs), 0.3 mg/kg (6-11 yrs), 0.2 mg/kg (≥12 yrs, max 20 mg)

- Re-assess in 5 min; order 2nd AED STAT while awaiting response to benzodiazepine
- If patient is febrile administer rectal or IV acetaminophen (if no liver failure)

If seizures persist (6-10 minutes):

- Administer 2nd dose of benzodiazepine (if not done already), reassess in 5 min.
- If no response, administer 2nd AED:

For patient ≥ 1 month old: Fosphenytoin IV load: 20 mg PE/kg at rate of 3 mg PE/ kg/min, max 150 mg/min (if pt is already on PHT, give 10 mg/kg PE IV) For neonate < 1 month old: Phenobarbital IV load: 20 mg/kg at rate of 2 mg/kg/min, max 50 mg min

- Re-assess in 10 min; order 3rd AED STAT while awaiting response to 2nd AED
- Consider potentially treatable conditions (hypoglycemia, hyponatremia, hypocalcemia, hypoxia, intoxication, CNS hemorrhage, CNS infection, hyperthermia)

• CONSULT Neurology service **

If seizures persist (20 minutes):

- If 2nd line AED is Fosphenytoin, administer additional Fosphenytoin 10 mg PE/kg IV (total 30 mg PE/kg total), OR
- If 2nd line AED is Phenobarbitol (neonates), administer additional Phenobarbital 10-20 mg/kg IV (up to 40 mg/kg total)

If seizures persist (>30 minutes):

After 2 AED's (benzodiazepine and second AED) administered with no response, patient is considered to be in refractory SE regardless of elapsed time.

Refractory Status Epilepticus:

• Administer 3rd AED, such as: Levetiracetam 20-60 mg/kg IV at rate of 5 mg/kg/min (max 3g)

Phenobarbital 20 mg/kg IV at rate of 2 mg/kg/min Valproate 20-40 mg/kg IV at rate of 3 mg/kg/min, max 20 mg/min (use with caution for pts < 2 years; do not use if any concerns for liver/metabolic disease)

• If patient < 2 months old, consider 50-100 mg pyridoxine IV, infused over 1-3 hours

Constantly re-assess airway, breathing, and hemodynamics- support as needed. Sedation, hypotension and respiratory depression are common adverse effects of AEDs.

Once clinical seizures have stopped, consider continuous EEG monitoring to assess for non-convulsive seizures.

Do not wait for EEG to continue treatment of clinical seizures.

Continue diagnostic evaluation and treatment of underlying etiology:

- Common etiologies: sub-therapeutic AED levels, febrile seizures, electrolyte abnormalities, CNS hemorrhage, ischemia, sinus venous thrombosis, CNS infection, autoimmune or post-infectious pathology, intoxication, trauma, metabolic disease, hypertensive crisis
- Diagnostic studies may include: serum studies (chemistries, LFTs, toxicology screen, metabolic screen, cultures, CRP, autoimmune serologies), lumbar puncture, neuroimaging (CT, MRI, neuro-vascular imaging).
- Obtain imaging urgently if neurosurgical mergency (CNS hemorrhage, trauma) is suspected.

If seizures persist after 3rd AED:

- Goal of therapy is not just cessation of seizures, but to reduce metabolic stress on injured and at-risk cells. Thus it is critical to maintain adequate cerebral perfusion pressure, prevent hyperthermia, and deliver adequate oxygen and nutrients to the cells.
- Secure the airway via intubation/mechanical ventilation if not done already. Obtain central IV access and consider arterial line for continuous hemodynamic monitoring.
- Prepare to support hemodynamics, as many anti-epileptic infusions may decrease cardiac output, decrease systemic vascular resistance, and cause clinically significant hypotension.
- Start continuous EEG monitoring if not done already

Coma Induction:

Load: Midazolam 0.2 mg/kg IV (preferred in neonates) Continuous infusion: Start midazolam at 0.1 mg/kg/hr, and increase infusion by 0.05-0.1 mg/kg/hr every 15-30 min to goal (clinical seizure suppression, or burst suppression as noted on continuous EEG)- max dose 1 g/kg/hr (higher doses have been used).

OR:

Load: Pentobarbital 2-5 mg/kg IV

Continuous infusion: Start pentobarbital at 1 mg/kg/hr, and increase infusion by 0.5 mg/ kg/hr every 30 min to goal (clinical seizure suppression, or burst suppression as noted on continuous EEG)- max dose 5 mg/kg/hr (doses up to 10 mg/kg/hr have been used)

Once seizure control is established:

Goal is typically to maintain at least 24-48 hours of seizure control or burst suppression prior to weaning continuous infusions. Little evidence or expert opinion exists regarding optimal length of time, and will vary depending on severity of seizures and clinical status of the patient. Identify anti-epileptic medications for maintenance therapy prior to weaning continuous infusions.

Goal physiologic parameters:

- Temperature between 35.5 and 37.5° C
- Maintenance of age-appropriate mean arterial pressure and SBP >50%ile for age to maintain adequate cerebral perfusion pressure
- Normal sodium levels, euglycemia
- Normocapnia, avoidance of hypoxia

Surveillance labs during coma maintenance:

- Daily chemistries, LFT's, frequent blood gases, lactate levels
- Anti-epileptic levels
- CBC, coagulation profile as needed

Supplemental anti-epileptic therapies to consider:

Medications: ketamine, topiramate, lacosamide, acetazolamide, propofol, pulse steroids

Other options: ketogenic diet, hypothermia, immunomodulation, epilepsy surgery

** Neurology service should always be consulted for co-management of patients with status epilepticus. ICU service will be responsible for timeliness of medication administration and timely communication with Neurology service.

Home management: Status epilepticus frequently occurs outside the hospital. Rectal, intranasal, buccal and sublingual routes of drug administration may be used. Midazolam can be given intranasally (0.2 mg/kg) and bucally (0.3 mg/kg). Rectal administration of diazepam 0.5-1 mg/kg to a maximum of 10 mg or lorazepam 0.1-0.4 mg/kg is safe. For most children at highest risk, maintaining abortive therapy in the home may be a reasonable precaution. It is observed that more than half of the patients with status epilepticus do not receive their first antiepilepsy drug within 30 minutes. Thus there is a

need for patient education regarding seizure emergencies and wider availability of at-home treatment options to shorten time to seizure treatment in patients at risk.

Prognosis:

Despite recent improvements in diagnosis and therapeutic management, status epilepticus is still associated with significant mortality, with a case fatality reaching 3-10%, with etiology of seizures being the most predictive of outcomes.

Mortality is higher in younger children, likely due to higher incidence of CNS infections in this group. Risk of recurrence of SE and development of epilepsy is mainly determined by the underlying cause. It is low in children with febrile SE and idiopathic SE but higher in those with underlying pre-existing neurological abnormalities. Neurological sequelae can range from subtle impairment of higher function (poor attention or behavioural difficulties) and focal neurological deficit through to a persistent vegetative state.

ABSTRACTS
FOR FREE PAPER/ POSTER PRESENTATION

A MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN TEMPORALLY ASSOCIATED WITH SARS-COV-19 IN AN ADOLESCENT – FIRST CASE REPORT FROM MANIPUR

Nameirakpam Johnson, Lekkala Ramya, Lakshmee Naorem, Sareet Kumari Nandeibam, Khumanthem Ratankumar Singh, L.Braja Mohon Singh

INSTITUTE:

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CASE REPORT:

10 year old male child presented with acute febrile illness with myalgia, multiple episodes of vomiting and headache for 4 days. Fever was intermittent in nature, 2-3 spikes/day, not associated with chills and rigor, partially subsided with oral medications. There was no history of seizure, breathing difficulty, cough, coryza, sore throat or ear discharge. On examination, he had non exudative congestion of both eyes, red and cracked lips with increased redness of tongue, right cervical tender lymphadenopathy (3 cm x 3 cm), maculopapular rash all over the body with severe epigastric tenderness. The diagnosis of Kawasaki disease, Toxic shock syndrome and Multisystem inflammatory syndrome in children (MIS-C) were proferred.

Laboratory investigations showed neutrophilic leucocytosis with total leucocyte count-25,000 cell/m¬m3, absolute neutrophil count- 21,250 cells/mm3, elevated C-Reactive protein (CRP): 445mg/L, procalcitonin: 28ng/L, serum ferritin: 654 ng/ml, d-dimer: 4.1 mcg/ml, fibrinogen: 800 mg/dl. Blood culture came sterile. COVID serology was positive (total anti SARS-COV-2 antibody: 2.77, IgG SARS-COV-2 antibody: 2.14, IgM anti SARS-COV-2 Antibody: 0.63)

He was started on ceftriaxone. Intravenous immunoglobulin G (IVIg) @ 2gm/kg was administered on day 3 of hospital stay. Fever subsided after 24 hours of IVIg. Antibiotic was upgraded to intravenous vancomycin and meropenem in view of persistent high CRP, procalcitonin and development of shock on day 4 of hospital stay. He required multiple vasoactive support with dopamine (20 mcg/kg/min), dobutamine (20 mcg/kg/min) and noradrenaline (0.3mcg/kg/min). Two dimensional echocardiography showed low ejection fraction (40-45%) with normal coronary arteries. Inj. Methyprednisolone @ 30mg/kg/day was administered for 3 days and 10mg/kg/day for 1 day. Shock became passive by day 7 of hospital stay and ejection fraction improved over the course of hospital stay (65-70%).

He developed pain over left calf on day 8 of hospital stay. Doppler ultrasonography showed echogenic thrombus in left great saphenous vein (GSV). Low molecular weight heparin (LMWH) @ 1mg/kg twice daily was started subcutaneously.

A final diagnosis of MIS-C with decompensated shock with left lower limb deep vein thrombosis (DVT) was considered and discharge on day 11 of hospital stay. The left GSV was recannalised on follow up (2 weeks after discharge).

CONCLUSION: We report the first case of MIS-C from the state of Manipur.

B

Feto Maternal Outcome of Primary Caesarean Section on Multiparous Women

Dr. Yaseera Ali[1], Dr.M. Rameswar Singh[2] , Dr. Ch. Shyamsunder Singh[3]

ABSTRACT:

Background:

Primary caesarean section in the multipara means first caesarean section done in the patients who had delivered vaginally once or more Caesarean section is one of the most commonly performed surgical procedures in the world and can be life saving for the child, the mother, or both, in certain cases. Multiparity is a risk factor and the caesarean delivery rates in multiparous women have also been increased.

Aim: To study the indication of primary caesarean section in multiparous women and also to know the maternal and fetal outcomes after the surgery.

Materials and methods: A cross sectional study of 180 cases of primary caesarean section on multiparous women admitted in the Department of Obstetrics and Gynaecology, RIMS,Imphal during the period of 2 years from September 2018 to August 2020. The data deduced are analysed statistically.

Results: Among the 180 cases, maximum number of women undergoing primary caesarean section in multigravida was in the age group of 26 -30 years(42.8%) and 56.6% were booked cases. Majority of the women had parity less than two in 62.8% of cases and 72.8% underwent emergency caesarean section. The most common indications for primary caesarean section in multiparous women was fetal distress (17.2%), followed by PROM with oligohydramnios (16.7%), malpresentation (15.5%), CPD (14.4%) and failed induction (10%). Atonic PPH was seen as the most common intraoperative complication in 17.2% of the cases followed by extensions of incisions (7.2%) and traumatic PPH (2.8%).Among the maternal morbidity, most common was paralytic ileus (5.6%), followed by pyrexia (4.4%). In the study, 25 % had neonatal morbidity, the most common cause being birth asphyxia (10.6%), followed by prematurity (5%), IUGR (5%), MAS (5%) and sepsis (1.7%).In this study out of the 180 babies, 176 were born alive whereas 4 were stillbirth.

Conclusion: Many unforeseen complications occur in women who previously had a normal vaginal delivery. It is recommended that all antenatal patients must be booked and receive proper and regular antenatal care. Also 100% deliveries in multigravida should be institutional deliveries in order to reduce maternal and perinatal morbidity and mortality.

Keywords: Multiparous , Maternal outcome, Fetal outcome, Primary caesarean section.

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C

FETO-MATERNAL OUTCOME IN PATIENTS WITH ANAEMIA IN PREGNANCY

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ABSTRACT:

AIM

To observe the impact of anaemia on maternal and foetal outcome in pregnancy.

BACKGROUND

Anaemia is the most common and widespread nutritional disorder. WHO has defined anaemia in pregnancy as the Hb concentration of <11g/dl.

MATERIALS AND METHODS

A cross sectional study of 170 patients of anaemia in pregnancy in the dept of OBGY, RIMS for 1½ yrs from July 2019 to January 2021. The data deduced are analysed statistically.

RESULT

In the study we observed complications related to both maternal and foetal outcome such as preterm labour(15%), peripartum febrile illness(20.6%),PPH(9.4%), wound dehiscence (1.2%) and LBW(26.5%),FGR(14.1%),IUD(2. 9%),Low Apgar score(3.5%), Perinatal morbidity(5.9%) respectively. Maternal and foetal morbidity was found to be proportional to the severity of anaemia.

CONCLUSION

Risk of anaemia during pregnancy can be reduced by better access to health care facilities by adequate antenatal care, regular IFA intake, proper birth spacing. Improving Hb level have positive impact on fetomaternal outcome.

Keywords: Anaemia, Low birth weight, foetal growth restriction, peripartum hemorrhage.

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D

THE STUDY OF PRETERM LABOUR: INCIDENCE, RISK FACTORS AND PERINATAL OUTCOME IN A TERTIARY CARE CENTRE

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NEIGRIHMS

ABSTRACT:

Background:

Prematurity is the leading cause of morbidity and mortality in children under the age of five years and a cause of lifetime disability. Although risk factors of preterm labour have been commonly studied worldwide, no such study has been conducted in this part of the country. Hence, this study is about strategies that are etiologically based and region specific to prevent preterm birth.

Objective:

To find the incidence of preterm labour and delivery in tertiary care hospital and to assess the risk factors and perinatal outcome of preterm labour.

Method:

Prospective follow up study conducted on 332 participants using SRS of cases attending labour room for a period of 1 year. Statistical measurements like mean, SD, odd's ratio, chi-square test, regression analysis were used with discrete variables. P-value<0.05 was taken as statistically significant.

Results:

Of all 1266 deliveries, incidence of preterm labour and delivery were 12.5% and 21.2% respectively. A significantly positive correlation was noted with increased maternal age, lower parity, incomplete ANC, anaemia and multifetal gestation. Most of the prematurely born babies were LBW and RDS was the most common cause of mortality(4.2%) and morbidity(17.6%) amongst them.

Conclusion:

Incidence of preterm labour was much higher compared to other states probably being a tertiary care centre. Anaemia and multifetal gestation being the leading cause of prematurity.

Keywords:

Preterm labour, Perinatal outcome.

E

A CASE REPORT OF KAWASAKI DISEASE

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Abstract:

Kawasaki disease (KD, previously called mucocutaneous lymph node syndrome) is one of the most common vasculitides of childhood, particularly in East Asia. It is typically a self-limited condition, with fever and other acute inflammatory manifestations lasting for an average of 12 days if not treated. The underlying etiology is unknown.

KD can cause a variety of cardiovascular complications, including coronary artery aneurysms, cardiomyopathy with depressed myocardial contractility and heart failure, myocardial infarction, arrhythmias, and peripheral arterial occlusion. These complications may cause significant morbidity and mortality, particularly in children who are inadequately treated. The frequency of aneurysm development and mortality has dramatically decreased as a result of intravenous immunoglobulin therapy. Early diagnosis is critical to achieve the optimal treatment result.

Here we are reporting a case of Kawasaki disease in a 11 year old male child who presented with fever , rashes, strawberry tongue and lymphadenopathy. Investigation showed raised inflammatory markers. Patient was managed with intravenous immunoglobulin, aspirin and other supportive care.

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F

A CASE REPORT - CONGENITAL TOXOPLASMOSIS

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ABSTRACT:

Toxoplasma gondii, an obligate intracellular protozoan, is acquired perorally, transplacentally, or, rarely, parenterally in laboratory accidents; by transfusion; or from a transplanted organ. Toxoplasma infection is ubiquitous in animals and is one of the most common latent infections of humans throughout the world.

Transmission to the fetus usually follows acquisition of primary infection by an immunologically normal pregnant woman during gestation. Infection is acquired by children and adults from ingesting food that contains cysts or that is contaminated with oocysts from acutely infected cats.

Diagnosis is establish by isolation of T. gondii from blood or body fluids; identification of tachyzoites in sections or preparations of tissues and body fluids, amniotic fluid, or placenta; identification of cysts in the placenta or tissues of a fetus or newborn; and characteristic lymph node histologic features . Serologic tests are very useful for diagnosis. Polymerase chain reaction (PCR) is useful to identify T. gondii DNA in CSF and amniotic fluid , and has been reported to be useful with infant peripheral blood and urine to definitively establish the diagnosis.

Pyrimethamine and sulfadiazine act synergistically against Toxoplasma, and combination therapy is indicated for many of the forms of toxoplasmosis.

We reported a 2 month old female patient admitted in Pediatric ward RIMS with congenital toxoplasmosis with obstructive hydrocephalus and cerebral calcification. On examination AF tense and bulging, Sagittal and coronal sutures gaping .A diagnosis of congenital toxoplasmosis was based on clinical, and laboratory investigations. Patient was managed with pyrimethamine and sulfadiazine . A report is made on the basis of its rarity.

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G A CASE REPORT: NEUROCYSTICERCOSIS

Dr. Paban Debbarma, PGT-2, Pediatrics, RIMS

ABSTRACT:

Cysticercosis, an infection caused by the larval form of the pork tapeworm, Taenia solium, is the most common parasitic infection of CNS worldwide. The WHO estimate that over 50,000 deaths due to cysticercosis occur annually. In its normal life cycle, children can acquire the tapeworm form by ingestion of undercooked pork containing the larval cyst. Ingestion of pork is not necessary to develop cysticercosis but individuals harboring an adult worm may infect themselves with the egg by the fecal-oral route. Infection with the cystic form is termed cysticercosis and involvement of CNS is termed neurocysticercosis. The pork tapeworm is widely distributed wherever pigs are raised and have contact with human fecal material. Intense transmission occurs in in Central and South America, Southern, and Southeast Asia and much of Sub-Saharan Africa. In these areas, approximately 30% of cases of seizures may be a result of cysticercosis. Seizures are the presenting finding in vast majority of children with neurocysticercosis. Less common manifestation include hydrocephalus, diffuse cerebral edema or focal neurological finding. It is important to classify neurocysticercosis as parenchymal,intr aventricular,subarachnoid,spinal or ocular on the basis of anatomic location,clinical presentation and radiologic appearance since the prognosis and management vary with location. Neurocysticercosis can be diagnosed with MRI and CT scan. The treatment include antiepileptic drugs, antiparasitic (e.g., Albendazole and praziquantel) and neurosurgical intervention depending upon situation. We reported a 8 years old male child admitted in pediatrics ward,RIMS with multiple episodes of seizure for 5 days, headache on & off for 5 days,fever for 2 days. On examination, seizure-unilateral left upper and lower limb clonic jerks were present and all deep tendon reflexes were exaggerated. A diagnosis of neurocysticercosis was made based on MRI finding. A report is made on the basis of its rarity.

H A CASE REPORT-ANENCEPHALY

Dr. Bishal Gurung PGT-II, Pediatrics, RIMS

ABSTRACT:

Anencepahly is neural tube defect (NTD) that occurs when the cephalic (head) end of the neural tube fails to close, resulting in the absence of a major portion of the brain, skull, and scalp. The incidence of anencephaly approximates 1 in 1000 live births; the greatest incidence is in Ireland, Wales and Northern China. An anencephalic infant presents a distinctive appearance with a large defect of the calvarium, meninges , and scalp associated with a rudimentary brain. The primitive brain consists of portions of connective tissue, vessels and neuroglia. The cerebral hemispheres and cerebellum are usually absent, and only a residue of the brainstem can be identified. The pituitary gland is hypoplastic, and the spinal cord pyramidal tracts are missing due to absence of the cerebral cortex. Many factors, in addition to genetics, are implicated as a cause of anencephaly, including low socioeconomic status, nutritional deficiencies, and a large number of environmental and toxic factors. Approximately 50% of cases of anencephaly have associated polyhyramnios. It can be diagnosed antenatally with the help of ultrasound, and by determining the AFP levels between the 14th and 16th week if gestation. The prognosis is usually poor with life expectancy ranging from several hours to days. Prenatal folic acid supplementation decreases the risk of this condition. We reported a male baby delivered in RIMS hospital and admitted in Pediatric ward RIMS, with this condition. A diagnosis was made based on clinical and antenatal USG findings. A report is made based on its rarity.

I

HYPOTHALAMIC HEMARTOMA WITH GELASTIC SEIZURE: A CASE REPORT

Dr Manisha Sharma
PGT II pediatrics
RIMS, Imphal

ABSTRACT:

Hypothalamic hemartoma may have diverse clinical manifestations. It's hallmark association is with gelastic seizures. Gelastic epilepsy is characterised by episodes of loud, hollow, mirthless, stereotyped, forced laughter. The patient may stare and giggle briefly without any motor manifestations.. Hypothalamic hemartoma is most often the cause of gelastic seizures..Here I report a case of gelastic seizure with hypothalamic hemartoma in a 14 months old boy with an associated tonic clonic seizure. Our case highlights the possibility of underdiagnosed hypothalamic hemartoma in younger age groups among pediatrics population .

J

SIRENOMELIA (MERMAID SYNDROME) - A RARE CASE REPORT

Dhivya Bharathi S1, R.K Praneshwari Devi2, L. Ranjit Singh3
2, Associate professor, Department of Obstetrics and Gynaecology, RIMS, Imphal
3, Professor and Head, Department of Obstetrics and Gynaecology, RIMS, Imphal
1, Post graduate trainee, Department of Obstetrics and Gynaecology, RIMS, Imphal

ABSTRACT:

Introduction:

Sirenomelia (Mermaid syndrome) is a rare congenital malformation, which is an extreme example of the caudal regression syndrome. It consists of varying degrees of lower limb fusion, appears like a mermaid's tail. Sirenomelia has an incidence of 0.8 to 1 case per 1,00,000 births. This is usually fatal within a day or two of birth because of complications associated with abnormal kidney and urinary bladder development and function. Although, this syndrome is incompatible with life due to the association of several congenital visceral abnormalities, however there are few reports of surviving infants.

Case report : A 19 years old mother, unbooked ,G2P0010 presented to RIMS Emergency labour room at 34 days 4 days gestations with history of discharge per vagina and pain abdomen .There was only one antenatal checkup at PHC and no USG done during her antenatal period. There was no significant medical history .Fundal height corresponds to 26-28 week size and liquor appeared clinically reduced. She went into labour spontaneously and delivered a 1.5 kg a live baby with normal upper part of the body, deformed pelvic bones with fused lower limb into single lower limb, absent external genitalia and imperforate anus.

Clinical relevance : Patients who present with oligohydramnios along with foetal growth retardation either with or without history of leaking, we should look for foetal kidneys and foetal bladder along with foetal vasculature. Therapeutic abortion can be carried out in earlier gestation due to invariably lethal condition. If diagnosed in later gestation we can avoid caesarean section for foetal indication. Sirenomelia is a rare fatal congenital malformation with severe visceral anomalies that decide the survival. Fusion of the lower limbs is less fatal. Few surviving patients need a multidisciplinary approach of treatment.

Key words: Caudal regression syndrome, Mermaid syndrome, Sirenomelia

K ARNOLD-CHIARI MALFORMATION TYPE-II ASSOCIATED WITH HYDROCEPHALUS AND MENINGOMYELOCELE: A CASE REPORT

Dr. Deepak Sharma, PGT-III, Pediatrics, RIMS

ABSTRACT:

Introduction:

Chiari malformations include a large spectrum of anomalies of hindbrain formation which appear at different stages of development of central nervous system, characterised by downward elongation of the brain stem and cerebellum into the cervical portion of spinal cord. The anatomical variations attributing to the chiari malformation is due to failure of pontine flexure to form normally from 28-29th day of gestation. Type ll Chiari malformation is a caudal descent of cerebellar tonsils and the vermis into spinal canal along with brain stem and fourth ventricle. It is usually accompanied myelomeningocele. Hydrocephalus is seen in 90%. Myelomeningocele results in partial or complete paralysis of area below the spinal opening. Due to severity patient become symptomatic in infancy or early childhood. Chiari ll occurs in 0.44/1000 births without gender predominance. MRI and CT brain and spine are modalities of choice for detecting and characterising the full constellation of findings associated with Chiari ll malformation and combined with the clinical presentation allow a clear diagnose of this pathology. We reported a new born female baby delivered here in RIMS hospital and admitted in pedia ward with Hydrocephalous (head circumference 39 cm) and meningomyelocele in lower dorsal and lumber vertebra. A diagnosis of Arnold-Chiari malformation ll was made based on clinical and MRI brain and spine. A report is made on the basis of its rarity.

ABSTRACTS FOR AWARD PAPER PRESENTATION

A Study on the Incidence and Risk Factors of Neonatal Sepsis in Regional Institute of Medical Sciences, Imphal

Dr. Ashik Majumder1, Dr. Sunilbala K2, Dr. Kh. Sulochana Devi3
1(PGT, Department of Paediatrics, RIMS, Imphal, India)
2(Associate Professor, Department of Paediatrics, RIMS, Imphal, India)
3(Professor, Department of Microbiology, RIMS, Imphal, India)

ABSTRACT:

Background:

Neonatal sepsis is a clinical syndrome of systemic illness accompanied by bacteraemia occurring in the first month of life. There is a paucity of studies on the incidence of neonatal sepsis and the risk factors associated with it in this part of the country and with above background, the study was conducted in a tertiary care centre.

Aims and Objectives:

Study was conducted to determine the incidence and the risk factors of neonatal sepsis.

Materials and Methods:

A hospital based prospective analytical study was conducted among 87 neonates with perinatal risk factors and clinical manifestation suggestive of neonatal sepsis admitted in the Paediatric ward, RIMS, Imphal from September 2018 to August 2020. Pre-designed pro-forma was used for complete clinical history, clinical examination and investigations. Blood was collected for sepsis screening and blood culture and sensitivity. Analysis was done using SPSS v21 for Windows.

Results:

Perinatal risk factors was present in 87.4% (95% CI: 78.1%-93.2%) of the neonates admitted with suspicion of sepsis. The incidence of neonatal sepsis among the neonates with probable sepsis in our study was 13.8% (95% CI: 8.2%-23.3%). In-adequate antenatal visits, place of delivery, socio economic status and maternal UTI were the factors associated with neonatal sepsis.

Conclusion:

In-adequate antenatal visits, place of delivery, socio economic status and maternal UTI were the factors associated with neonatal sepsis. There were no significant association for gender, low birth weight, prematurity, PROM, prolonged labor and maternal fever with the incidence of neonatal sepsis.

B

ASSESSMENT OF SOCIAL FUNCTIONING OF ADOLESCENT SCHOOL CHILDREN IN MANIPUR: A CROSS SECTIONAL STUDY

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Mob: 8259805200, Category: PG student, Type: E-oral presentation

ABSTRACT:

Background:

Globally an estimated 10-20 % of adolescents experience mental health conditions, yet these remain under-diagnosed and undertreated. Identification and quantification of mental disorders has remained a challenge as greater part of the burden is subclinical, and multiple inter-linked factors play a causative role.

This study was undertaken keeping in view the paucity of relevant studies addressing the burden of mental health disorders among adolescents in North-Eastern India. The aims and objectives of the study were -

1) To assess the psychosocial functioning among school going adolescents

2) To determine the socio-demographic factors associated with psychosocial functioning.

Materials and methods:

A cross-sectional study of 3200 adolescent-students in classes 9 to 12 recruited with a stratified-random sampling technique. A predesigned self -administered questionnaire containing of socio-demographic profile, and 'Child and Adolescent Social and Adaptive Functioning (CASAF) Scale, was used for data collection, which were analyzed using SPSS Version 20. Descriptive statistics for Socio-demographic attributes, and Chi-square and Fischer's exact tests were used for statistical analysis.

Result:

Near half of the respondents (48.7%) had an average, 22.5% had good and 29.6% had a poor psychosocial-functioning skill. Females (29.5%) had better social functioning skills (29.5 vs 13.3%). Respondents in class 12 (34%) had the poorest social functioning skill. 'Social functioning skill' had a positive association with the 'level of mother's education'. Students from government school had poorer social functioning skills (p value <0.001).

Conclusion:

This study revealed 21.8% of adolescents had good psychosocial functioning, 48.7% had average psychosocial functioning, 29.6% had poor psychosocial functioning.

Present study revealed females had better psychosocial functioning. Government school adolescents was significantly associated with poor psychosocial functioning than private schools. Class 12th standard adolescents had the highest proportion of poor psychosocial functioning as compared to other classes.

C

ATTAINMENT OF FULL ENTERAL FEEDS IN VERY LOW BIRTH WEIGHT BABIES IN NEONATAL INTENSIVE CARE UNIT, RIMS, IMPHAL

Dr . Thangja Mekham Maring 1. Prof. Dr. Y. Tomba singh 2. Dr. Sunilbala K (1- PGT, Department of Paediatrics, RIMS, Imphal, 2- Professor, Department of Paediatrics, RIMS, 3- Associate Professor, Department of Paediatrics, RIMS)

ABSTRACT:

Aims and objective:

To assess the average time taken to reach full enteral feeds in Very Low Birth Weight babies and to determine the association between timely establishment of full enteral feeds, time to regain birth weight and associated factors

Materials and methods:

Longitudinal study was carried out in NICU, RIMS during a period of two years (Sept 2018- Aug 2020) with approval from Research Ethics Board . Sample size was 75 based on consecutive sampling .

Results:

The median duration to reach full enteral feeds among the infants admitted in NICU with VLBW was 8 days. The median time for initiation of feed for the neonates admitted in NICU was 10 hrs with a minimum of 3 hours and a maximum of 30 hours. There was a significant association between age at initiation of feeding, the type of VLBW, gestational age & type of delivery and the time to reach full enteral among the infants admitted in NICU with VLBW.

Conclusion:

In VLBW babies the earlier achievement of full enteral feeding is very important. Full enteral feeding results in decreased risk for sepsis, liver dysfunction, inadequate growth, reduced mineral accretion, decrease feed intolerance and rapid gain of birth weight. Early introduction of enteral feeds is advantageous in resource limited settings where the availability and usage of TPN is limited and severe infection (septicaemia, pneumonia) is an important cause of mortality and morbidity.

D

CLINICAL PROFILE OF HYPOCALCAEMIA IN TERM NEONATES WITH BIRTH ASPHYXIA IN RIMS, IMPHAL

Dr. Deepak Sharma 1, Prof. Dr. C.S.Singh 2, Dr. Sunibala K
(1-PGT, Department of pediatrics, RIMS, Imphal, 2-Professor and Head, Department of pediatrics, RIMS, 3- Associate Professor, Department of Pediatrics, RIMS)

ABSTRACT:

Aims and objectives:

To determine the incidence, clinical features and short-term outcome of hypocalceamia in term neonates with birth asphyxia.

Materials and methods:

Prospective longitudinal study carried out in pediatric department, RIMS, Imphal during a period of two years (Aug. 2018-July 2020) with approval from Research Ethics Board. Sample size was 236 based on purposive sampling.

Results:

Birth asphyxia is a significant risk factor for hypocalcaemia (17.1%). Among neonates having APGAR score 0-3 (46 neonates), 24 neonates (52.17%) developed hypocalcaemia while among neonates having APGAR Score 4-6 (125 neonates) and >6 (65 neonates), 13 neonates (10.4%) and 4 neonates (6.1%) developed hypocalcaemia respectively. These finding were found to be statistically significant ($p < 0.05$.).

Conclusion:

Birth asphyxia is a significant risk factor for hypocalcaemia. The other risk factors noted were infant of diabetic mothers, formula feeding, neonates receiving bag and mask ventilation. Seizure was found most common sign/symptoms constituting 35.2%.

Other sign and symptoms are Jitteriness, Poor feeding, lethargy, irritability and high pitch cry. Hypocalcaemia should be anticipated in neonates with birth asphyxia, and a timed intervention is required, thereby preventing the complication and succeeding in giving a healthy newborn in the hands of future for everything it needs.

E

ETIOLOGIES OF PROLONGEDJAUNDICE IN NEONATES ADMITTED IN RIMS HOSPITAL

Dr. Rukuwe Thele 1, Prof. Dr. Kh. Ibochouba Singh 2, Prof. Dr. L. Shaini 3 (1 PGT, Department of Paediatrics RIMS,Imphal ,2 Professor Department of Paediatrics RIMS,Imphal ,3 Professor& Head, Department of Biochemistry RIMS,Imphal

ABSTRACT:

Objectives :

To determine the underlying causes of prolonged jaundice.

Materials and Methods:

A hospital based cross-sectional study was carried out in RIMS Hospital with the approval of Research Ethics Board from September 2018 to August 2020 in prolonged Jaundice Neonates. Sample Size was 100 and based on consecutive sampling.

Results:

Breast milk jaundice is the most common etiology for prolonged jaundice (65.0%) followed by neonatal sepsis (17.0%) and hypothyroidism (9.0%) ABO incompatibility 4%.

Conclusion:

- Although breast milk jaundice is considered as a major cause of prolonged unconjugated hyperbilirubinemia in neonates, identification of other etiological factors, such as sepsis, congenital hypothyroidism and hemolysis remains a paramount importance.
- Early diagnosis and treatment could effectively prevent further complication in neonates.
- Hence further studies may reveal to get a detailed insight into the etiologies of the prolonged jaundice.

F

MATERNAL AND FETAL OUTCOME IN OBSTRUCTED LABOUR

Dr. Pavithra K 1, Prof L Ranjit Singh2
(1- Postgraduate Trainee,2- Professor)
Department Of Obstetrics & Gynaecology, Rims

ABSTRACT:

Background:

Obstructed labour continues to be a major cause of maternal and perinatal morbidity in low income countries even in 21st century. If detected and managed early, which will give a healthy mother and baby.

Materials and Methods:

90 patients admitted with feature of obstructed labour were studied. Detailed history included age, antenatal check-up, sociodemographic factors, referral history, obstetric history, features of obstruction, intrapartum events were recorded. Condition of patients, mode of delivery, preoperative and postoperative complications, maternal and fetal outcomes was recorded.

Results:

Out of 90 cases of Obstructed labour, majority of the patients were from low (82.2%) socio-economic group, 80% of the patients were from rural areas and 76.7% of patients were unbooked and 62.2% patients were primigravida. The commonest cause of obstructed labour was cephalopelvic disproportion (67.8%) followed by Malpresentation & Malposition (17.8%). The commonest mode of delivery was cesarean section (86%). Instrumental deliveries were conducted in 2% of cases. Destructive procedures were done in 2%. Rupture uterus was seen in 4 cases (5.7%) out of which repair was done in all 4 cases. The common maternal complications were PPH (50.0%), pyrexia (28.5%), genital tract sepsis (8.6%), shock (4.3%) and vesico-vaginal fistula (2.9%). Perinatal mortality was 4/90 (4.4%) and livebirth rate was 86/90 (95.6%). Perinatal morbidity was most commonly due to birth asphyxia (61.6%), meconium aspiration syndrome (19.2%), jaundice (15.4%) and septicemia (3.8%).

Conclusion:

Poor referral system, low socioeconomic status and inadequate antenatal care services lead to increased number of obstructed labour even today. Early recognition of obstructed labour and immediate safe abdominal or vaginal delivery can decrease the incidence of maternal and perinatal morbidity and mortality.

G SIGNIFICANT SERUM BILIRUBIN REBOUND IN NEAR TERM (≥35 WEEKS) AND TERM NEONATES RECEIVING PHOTOTHERAPY IN RIMS, HOSPITAL, IMPHAL

Dr Avishek Datta 1, Prof. Dr Ch. Shyamsunder Singh 2, Prof. Dr L. Shaini Devi 3 (1- PGT – Department of Pediatrics, RIMS, Imphal, 2- Professor and Head - Department of Pediatrics, RIMS, Imphal, 3- Professor and Head – Department of Biochemistry, RIMS, Imphal)

ABSTRACT:

Aims and objective:

To determine the incidence of significant serum bilirubin rebound and risk factors associated with significant serum bilirubin among the near term (≥ 35 weeks) and term neonates who received phototherapy in Paediatrics ward in RIMS hospital, Imphal.

Study design:

Longitudinal study.

Results:

Our study found that the incidence of rebound hyperbilirubinemia to be 13.2% (8.5%-19.9%). Incidence of rebound was higher in those birth weight< 2500 gm, prematurity, those with higher bilirubin at time of admission, longer duration of phototherapy. Rebound hyperbilirubinemia was higher in newborns with other risk factors such as sepsis, polycythemia, congenital hypothyroidism, and extravasation of blood.

Conclusion:

Routine measurement of serum bilirubin after phototherapy cessation is generally not required, but it should be done in cases of high-risk neonates. Neonates with post phototherapy bilirubin rebound usually responds within 24-48 hours of retreatment with phototherapy.


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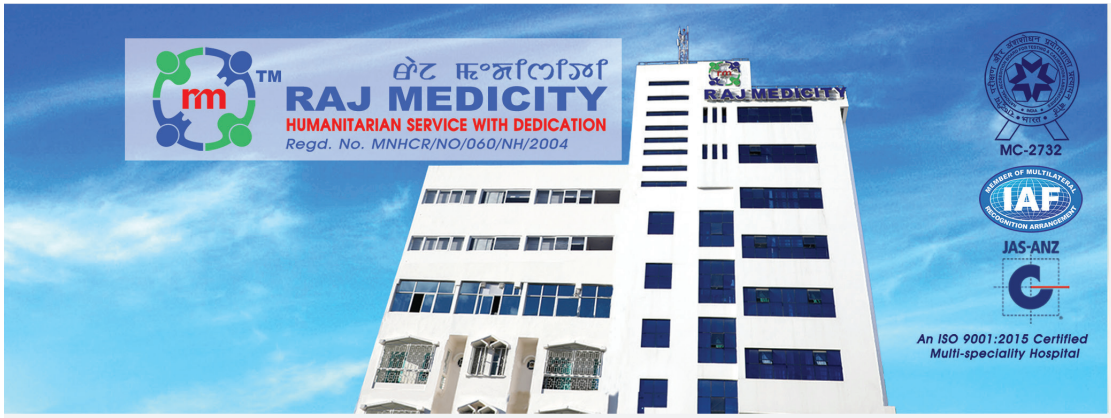

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