3rd INDIAN NATIONAL CONFERENCE OF COMHAD -2022

COMHAD

Commonwealth Foundation (UK)

THEME:
Bridge the Gap-Empower Inclusion, Create, Integrated Approach to Prevent Childhood Disabilities

Under the Auspices of
COMMONWEALTH ASSOCIATION FOR HEALTH & DISABILITY

(RECOGNIZED BY THE COMMONWEALTH FOUNDATION, LONDON UK)

Host : COMHAD India

Co-Host :

- Divecha Centre for Climate Change, IISc Bangalore
- Ramaiah University of Health Science
- Rajarajeshwari Medical College & Hospital
  Recognised by National Medical Commission (NMC) & Govt. of India.
  A Constituent Institution of Dr.M.G.R Educational and Research Institute
  (Deemed to be University)
- IAP Centre, Karnataka, Bangalore
- Lakeside Education Trust

4 Credit Hours Awaited

DATE : 17TH to 18TH DECEMBER 2022
VENUE : J.N. TATA AUDITORIUM IISc

E-mail : indiacomhad2022@gmail.com

PREFACE

Prof. Dr. H Paramesh

President / Organizing Chairman
COMHAD India 2022

My dear brothers and sisters of our profession, invited faculty members and delegates. We welcome all of you for the 3rd National COMHAD 2022 Conference in Bengaluru. The organizing committee is putting their all efforts into successfully hosting all the events and implementing the scientific programme prepared by the scientific committee under the chairmanship of Dr. Suresh Rao Aroor.

The organizing committee has decided to bring out the souvenir COMHAD -2022 Bengaluru. This includes messages from dignitaries, executive committee members and organizing committee members, scientific programme, abstracts of talks by speakers.

We take this opportunity to congratulate Dr. Jagdish Chinnappa the chairman and editor of Souvenir and Dr. Joshitha Sankam of Divecha Center for Climate Change, IISc. and team for the wonderful work in bringing the souvenir.

Dr. Mansukh Mandaviya

It is informed that the Hon'ble Union Minister of Health & Family Welfare and Chemicals & Fertilizers will not be able to join this "3rd National Conference of COMHAD" on 17th December 2022 at J.N. Tata Auditorium, IISc, Bengaluru owing to prior engagements and commitments.

Conveys his best wishes for the success of this event.

With regards,

Dr. Mansukh Mandaviya
O/o Minister of Health & family Welfare; Chemicals & Fertilizers,
Government of India
3rd Floor, Nirman Bhawan, New Delhi – 110001,
Ph: 011-23063513/3024/1661
Fax: 011-2306235

Dr. Ashwath Narayan C. N.

Dr. ASHWATH NARAYAN C.N.
Minister for Higher Education,
IT & BT, Science and Technology,
Electronics and Skill Development,
Entrepreneurship & Livelihood and
Ramanagara District In-Charge Minister

Room No. 242-243
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No. HrEdn.IT&BT.S&T.SD/M/1835 /2021-22

Date: 13.12.2022

MESSAGE

Due to unavoidable circumstances, I had to skip the inaugural of 3rd National Conference of COMHAD(Common Wealth Association For Health and Disability) on 17th December, 2022 which I would have enjoyed being a medicine man. I wish all the best for the success of the conference and I believe the deliberation will enhance the quality education of the caregivers of the specially abled children and also work to prevent the various disabilities.

On this occasion, I extend my greetings to all those associated with the event and wish the conference a grand success.

(Dr. ASHWATH NARAYAN C.N)

Prof. (Dr.) S.K. Satheesh

Dean (Planning & Infrastructure)
Director, "Future Earth" Global Secretariat South Asia
Chair, Divecha Centre for Climate Change
Chair, HAL-IISc Skill Development Centre, IISc Challakere
Professor, Centre for Atmospheric & Oceanic Sciences
Indian Institute of Science Bangalore, India.

WHO and several international sustainability programs repeatedly remind us that “The health of people around the world is tightly linked to the health of the environment we inhabit”. WHO also recognizes that “The climate crisis is also a health crisis”. Now, it is globally accepted that our climate is changing and is attributable to human interference, also called anthropogenic activities. A recent report from the Intergovernmental Panel on Climate Change (IPCC) clearly states that we are already facing the consequences of 1-degree warming such as extreme weather events, sea-level rise, glacier melting and so on. The impacts of climate change have a significant effect on human health either directly or indirectly. Climate change also poses more dispersed effects such as poverty, displacement, and mental health issues. Heat-related mortality or morbidity; air pollution-related illnesses; infectious diseases, particularly those transmitted indirectly by water or by insects or rodent vectors; and refugee health challenges associated with forced population migration are all public health concerns due to a changing climate. Mental health issues include “eco-anxiety”, a condition that is found to be more prominent among the younger generation.

It is clear that the health of our planet is linked to the health of each and every one of us. One concept exploring this relationship in great detail is Planetary Health. It is a solutions-oriented, transdisciplinary field and social movement focused on analyzing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth. What this simply means is that everything is interconnected. What we do to the world comes back to affect us, and not always in ways that we would expect. Understanding and acting upon these challenges call for massive collaborations across disciplinary and national boundaries to safeguard our health. We all have a responsibility to take action to prevent the climate from deteriorating further. It will need massive efforts from all of us, both at the individual and community levels with collaborated efforts from the public and private sectors for the better health of our planet. That is the reason, we always advocate that medical practitioners and climate scientists should work together to tackle such important global issues.

Dr. Suresh Rao Aroor

Scientific Committee Chairman

COMHAD India 2022

Advances in scientific knowledge and technology have made unimaginable progress during the past two decades and this with vast resources available has given us a better insight into the various aspects of neuro psychiatric diseases like etiology, clinical picture, diagnosis and management and more importantly, early recognition and prevention which is the main theme of this conference.

The fields of developmental pediatrics, pediatric neurology, genetics and neuro-rehabilitation are still very much in their infancy. Every month and even every day, there are advances and newer knowledge that is being brought out. So there is tremendous scope for learning and self improvement, there is tremendous scope for each of us to go about our daily practice a little differently, a little better.

With this in mind, we have organized COMHAD 2022 which brings together some of the best minds in their respective fields of pediatrics, developmental pediatrics and neurology, pediatric neurology, psychiatry, physical and mental rehabilitation all together under one roof for an academic feast so that we can all discuss and learn existing and newer advances in all these fields so that we can go about practicing the theme of this conference "Early recognition & prevention".

Dr. Suresh Rao Aroor,
M.B.B.S, D.C.H, M.D (Paed)
D.M, Fellowship in paed neuro (U.S.A), F.R.C.P (Glasg)
Director and Chief Neurologist Parijma Neurodiagostic and Rehabilitation centre, Bangalore and Mangalore.

Dr. Somashekar .A. R

Organizing Secretary

COMHAD India 2022

Dear COMHAD Family,

Being the organizing secretary, I would like to invite you all to the 3rd Indian National Conference COMHAD 2022, with great pleasure and honour. The theme of COMHAD-2022 is "Bridge the Gap-Empower inclusion, Create, Integrated approach to Prevent Childhood Disabilities". The conference is being conducted at the IISC auditorium from December 17th to 18th. Hours of meticulous planning and effort have gone into designing and execution of this conference. Here, not only are we having a scientific bash, but also a comprehensive approach and guidance in handling conditions resulting in disability. Also, we are focused on improving and directing towards prevention and amelioration of intellectual and development deficiency-related disorders while bridging the gap in care with children and adults. Esteemed faculty, who have dedicated their life's work in their respective field have been invited to take part in the deliberations. Keeping the theme of the conference in mind, the Scientific Committee has arranged the deliberations on the prevention of various disabilities and their rehabilitation in the community. I also assure you, traveling to Bangalore, popularly renowned as the Garden city, shall be a pleasurable experience. I assure you, this shall be one of the most memorable academic experiences.

I welcome you all to COMHAD 2022.

Best wishes,

Dr.SOMASHEKAR .A. R

Dr. Madhu G.N.

Secretary

COMHAD India 2022

Commonwealth Association for Health and Disability is a long-standing partner of WHO with a vision to prevent disability and cure mental health.

Disability has a low priority in the general agenda of child and adolescent health care as disability often needs specific rehabilitation services with lot of coordination with multicentric approach. COMHAD with vision, is actively involved in promoting ideas and helping academicians and healthcare providers furthermore by providing education and helping in research for the same. It should be the bridge between the needy and the healthcare sector.

COMHAD National Conference is a tool in establishing this process.

Regards

Dr. Madhu.G.N

Dr. Yashwant Patil

MD (Ped), DCH, FIAP, FICMCH
International President COMHAD UK.
Former National Secretary Community Paediatrics Chapter of IAP.
Tutor for IPPC/DCH Sydney Uni/MUHS.
Former Professor in Pediatrics DMIMS Nagpur.
National Executive Board Member IAP 2002 to 2011.
State President – MS Chapter of NNF 2007 to 2009.
State President – IAP Maharashtra 2000.
Anjuman Complex, Sadar, Nagpur – 440001, MS, India.
Email: dryashwantpatil@gmail.com

Dear Esteemed Delegates,

It is a great pleasure to welcome you all for this unique 3rd National Conference of COMHAD at Bengaluru, India, from 17th and 18th December 2022 with pre-conference workshops on 16th December 2022.

The theme selected - “Bridge the Gap – Empower Inclusion, Create Integrated Approach to Prevent Childhood Disabilities” is very special and appropriate for the welfare of specially challenged people to empower their inclusion in the society at every level and in all aspects. The other part of the theme is for the welfare of society in general by creating integrated approach to prevent childhood disabilities thereby reducing the future burden of disabilities on society.

The Scientific Committee has put tremendous efforts to chalk out the scientific program diligently keeping in mind the theme of the conference. I am indebted for their fruitful inputs put in to make the program a Scientific feast with lingering taste in the minds of delegates and making the event a grand academic success.

And also, the pre-conference workshops on "Developmental monitoring & surveillance - Hand on training” and the other workshop “Inside the adolescent brain – Screening for mental health” have been carved scientifically in the right way to update the knowledge of delegates for the benefit of society.

I am grateful & would like to recognize the special efforts of Dr Suresh Rao Aroor Chairman Scientific Committee and Dr Savitha Ravindra Co-Chairperson Scientific Committee and other team members have given shape to the Scientific Program with perfection.

My accolades and congratulations to the enthusiastic organizing team members from Bengaluru - Dr Somashekar A. R. Organizing Secretary, Dr G. N. Madhu Secretary COMHAD India Chapter, Dr Salim Khatib Treasurer, Dr Adarsh E. Chairman Reception and Registration Committees, Dr K. Jayoji Rao Chairman Finance Committee and Chief Coordinator, Dr Mallikarjuna H. B., Dr Karunakara B. P. and all others who worked hard for the grand success of the conference, under the able guidance of the able, disciplined, meticulous and efficient Organizing Chairman and National President COMHAD India Chapter Prof Dr H. Paramesh.

I look forward to your active participation and assure that you will enjoy Scientific feast and Bengaluru warm hospitality to cherish sweet memories in future.

I wish the conference a great success and hope the scientific deliberations will tackle the issues of specially challenged as per the theme of the conference for their betterment.

“Wishing you all Merry Christmas and a Happy New Year 2023”.

With best regards and wishes.

Dr Yashwant Patil

Dr. Uday Bodhankar

Executive Director
Commonwealth Association For Health and Disability
Deputy Chairperson –CHPA UK
Adjunct associate professor Paediatrics -Sydney university
International Council Member - ASPR-Japan
Nodal officer -RCPCH -DCH -UK
Ramdaspeth,Nagpur - 440 012 India
ubodhankar@gmail.com

It is a matter of great pride and privilege to welcome you all for the Third National Conference of COMHAD India scheduled from 17th to 18 TH December 2022 in collaboration with Divecha Centre For Climate Change, Ramaiah Medical College Dept. of Pediatrics, Rajarajeshwari Medical College, IAP Bengaluru, Lakeside Education Trust, UNICEF India, Rajiv Gandhi University of Health Sciences with the theme Bridge the Gap –Empower Inclusion, Create integrated approach To Prevent Childhood Disabilities. COMHAD is designated NGO of The Commonwealth Foundation UK and is in official relations with WHO, CF and CHPA UK.

Globally, about 200 million children do not reach their developmental potential in the first five years because of poverty, poor health, nutrition and lack of early stimulation. The WHO estimates that 15-20% of children worldwide have disabilities; *85% in developing countries. The optimal development of the child must be ensured during the early years by avoiding – as much as possible – Perinatal, genetic, metabolic and environmental risk factors.. The most common forms were developmental delay (69.3%), speech delay (14.3%), global delay (5.7%), gross motor delay (5.3%) and hearing impairment (3.6%). The dividends of early intervention would be huge, including improvement of survival, reduction of malnutrition, enhancement of cognitive development, educational attainment, and overall improvement of quality of life of our children.
People living with disabilities have been disproportionately impacted by the COVID-19 pandemic. As this particularly vulnerable segment of the population encompasses a variety of conditions and impairments, those with disabilities have faced many barriers throughout the pandemic. As the pandemic is over, it is critical for both individuals living with disabilities, and those who are their caretakers, to take the necessary steps to protect their health and well-being.

The scientific programme with workshop, keynote address, panel discussion, guest lecturers has been well designed and appropriate to the Theme of the conference with a focus on prevention and amelioration of intellectual and developmental deficiency-related disorders while bridging the gap in care with children and adults. We must congratulate the enthusiastic scientific committee under the academic leadership of Chairman Prof Dr Suresh Rao Aroor & Co Chairman Dr Savita Ravindra who have been working hard for the success of this mega academic event by inviting galaxy of experts in the related field of rehabilitation.

We must recognize and salute the special efforts of the organizing team under the dynamic leadership of internationally known Pediatric pulmonologist and world Authority on environment Dr H. Paramesh National President of COMHAD. I will fail in my duty if I do not thank Prof Somshekhar, secretary org committee, Dr Adarsh Chairman reception committee and lastly but not the least our dear friend DR Jayoji Rao, Chairman finance committee and the backbone of COMHAD India Chapter. along with secretary Dr Madhu & Treasurer Dr Salim Khatib.

We place on record our gratitude to UNICEF & all Co-Host organizations for their timely assistance in fulfilling our mission of global welfare of the specially challenged. Our driving vision is of an inclusive world in which the challenged are all able to live a life of health, comfort, and dignity. We invite you to help this vision become a reality-
To achieve our MISSION of ABILITY FROM DISABILITY.

With Regards and Best wishes,

Dr Uday Bodhankar

Souvenir Committee- COMHAD India 2022

Dr. Jagdish Chinnappa

Disability is a major problem in India. Children with disabilities need a scientific and humane approach to help them cope with the challenges of living. Training of healthcare workers and society to recognize, understand and intervene to provide the best possible care is of vital importance.

This year's COMHAD is an endeavour in this direction to bring all the stakeholders on a common platform.

Wishing the meeting all the very best in its outcome of inclusiveness for all.

Dr. Jagdish Chinnappa

Dr. Joshitha Sankam

Disability has the unfortunate reality of affecting not just one's ability to live normally, but also one's sense of optimism, strength, and power. Growing evidence suggests that early detection, intervention, and family participation are all important in the prevention of impairment in infants and young children. To prevent disability, all sectors must work together to modify beliefs and attitudes that limit the activities of persons with disabilities. Disability inclusion is also critical to achieving the Sustainable Development Goals and the global health aim of improving health for everyone. With these perspectives in mind, this conference brings together eminent speakers to participate in deliberations on the prevention and rehabilitation of various disabilities in the community and we welcome you to be a part of the 3rd Indian National Conference of COMHAD 2022, in Bengaluru.

Dr. Joshitha Sankam

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President/ Chairman

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Dr. Suresh Rao Aroor	Prof. Savita Ravindran
Chairman	Co- Chair

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Dr. Vinod Ratageri	Dr. Adarsh E.
Chairman	Co- Chairman

SOUVENIR & MEDIA

Dr. Jagdish Chinnappa	Dr. Joshitha Sankam
Chairman	Co-Chair

TRANSPORTATION & ACCOMMODATION

Mrs. Mamatha G.	Mr. Pradeep
Coordinator	Coordinator

CATERING

Dr. Jayoji Rao K.	Prof. H.B. Mallikarjun

Invitation

Dear Esteemed Members/Colleagues

With great pleasure and honour we invite you to participate actively in the 3rd Indian National Conference COMHAD 2022 to be held in Bengaluru the Silicon Valley of India during December 17th and 18th 2022 Hosted by COMHAD India Chapter and Co-sponsored by *Divecha centre for Climate Change IISc., Bengaluru, *Ramaiah Medical College, Dept. of paediatrics, *Rajarajeshwari Medical College, * IAP Central, Karnataka and Bengaluru, *UNICEF India, * Rajiv Gandhi University of Health Sciences, * Lakeside Education Trust Bengaluru.

We are pooling our efforts to make this National COMHAD Conference not only a great scientific feast but also a calibration for those who devote their hearts and minds , not only in improving but also in directing towards prevention and amelioration of intellectual and development deficiency related disorders while bridging the gap in care with the children and adults.

The scientific programme will give you an insight to what we are planning- workshops, keynote address, guest lectures, Panel discussion. Keeping the Theme of Conference in mind the Scientific committee have arranged the deliberations on prevention of various disabilities and their rehabilitations in the community. Eminent speakers with their original work in their respective fields have been invited to take part in the deliberations.

Bengaluru is one of the finest, garden city in India, planned with lot of trees shaded gardens, it is also home city for many Internationally Acclaimed Education Institutions like ISRO, Indian Institute of Science, NIMHANS, Sri C.V. Raman Institute, National Wood Science & Technology, Indian Institute of Management and National Institute of Advance Science.

Pleasant climate that has helped it to play host for many National and International events.

Welcome to the Garden City, Bengaluru

Thanking you

On behalf of COMHAD India Team

Dr. H. Paramesh
President / Chairman- Organising committee

Dr. Salim Khatib
Treasurer

Dr. Suresh Rao Aroor
Chairman - Scientific Committee

Dr. Savitha Ravindra
Co-Chairman - Scientific Committee

Dr. Madhu
Secretary

Dr. Somashekar A.R.
Secretary - Organising Committee

Dr. Adarsh E.
Chairman - Reception Committee
Registration Committee

Dr. Jayoji Rao K.
Chairman - Finance committee

INDIA COMHAD 2022

FACULTY

Dr.H Paramesh
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Dr. M V Ashok
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Dr. Narayan Reddy
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Dr. Mahesh Kamte
Dr. Shekar Sheshadri
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Dr. Karunakar B P
Dr. Raghunath C N
Ms. Supriya Vishwas Aroor
Ms. Kavitha Saligram
Dr. Zafar Meenal

TENTATIVE SCIENTIFIC PROGRAMME

Sl.No	Timings	Topic - Scientific program - 17th December 2022	Speaker
1	8.30 - 9.00 am	Neuro developmental impact of adverse childhood experiences	Dr.Shekar Sheshadri
2	9.00 - 9.30 am	Transition of pre- pandemic life into new life shaped by Covid - 19 pandemic	Dr Kuduskar Prajakta
3	9.30 - 10.00 am	Identifying and measuring autism - Indian efforts	Dr M V Ashok
4	10.00 -10.30 am	ADHD and health risk behaviour: towards prevention and health promotion	Dr Shobha Srinath
5	10.30 -12.00 pm	**INAGURATION AND TEA**	
6	12.00 - 12.30 pm	Traditional values and disability	Dr. Narayana Reddy
7	12.30 - 1.00 pm	Intellectual disability and its impact on society	Dr Sanjay K S
8	1.00 - 2.00 pm	**LUNCH**	
9	2.00 - 2.30 pm	Epidemiology and prevention of respiratory handicap	Dr H Paramesh
10	2.30 - 3.45 pm	Neuro - Rehabilitation ----- Panel discussion	
		Moderator ----- Dr Sudhindra Aroor	
		Panalist -Dr Savitha Ravindra, Dr Zafar Meenal, Mrs Kavitha Saligram,	
		Ms Sushree Sudipta and Ms. Supriya Vishwas Aroor	
11	3.45 - 4.00 pm	**TEA**	
12	4.00 - 5.00 pm	Neonatology - Moderator -	Dr. Arvind Shenoy
		Optimum perinatal care for prevention of disability	Dr Yeshwanth Patil
		Early intervention programme for high risk new born	Dr Pradeep G C M
		Management of at risk mother and infant	Dr Mallesh
13	5.00 - 5.30 pm	Environmental factors and disability	Dr Vinod Ratgeri
14	5.30 pm onwards	AGM	

SL.No	TIMING	TOPIC - SCIENTIFIC PROGRAM - 18TH DECEMBER -2022	SPEAKER
1	8.30 - 9.00am	Early action for prevention of childhood disabilities- role of paediatricians	Dr Chhaya Prasad
2	9.00 - 9.30am	CP - Trends in epidemiology and recent development in prenatal mechanism of disease, treatment and prevention	Dr Mahesh Kamte
3	9.30 - 10.00 am	Challenges towards epilepsy and comorbid behavioural disorder and the management	Dr.Vykuntaraju K. N
4	10.00 - 10.30 am	When to suspect cerebral visual impairment [CVI]?	Dr Prathibha panmand
5	10.30 - 10.45 am	**TEA**	
6	10.45 - 11.15 am	Prevention of skeletal deformities in kids due to neurological and other problems	Dr. Prashanth Inna
7	11.15 - 11.45 am	Optimising outcome in brachial plexus injury	Dr Y N Anantheswar
8	11.45 - 12.15 pm	Genetics and disability	Dr Preetha Tilak
9	12.15 - 1.00 pm	Disability related to nutrition - recognition and prevention	Dr Dinakar More
		Role Of Dietician in the management and prevention of nutrition diasbility	Ms. Hema Arvind
10	1.00 - 2.00 pm	**LUNCH**	
11	2.00 - 2.30 pm	Adolescent with disability - enhancing resilience and delivering inclusive development	Dr A R somashekar
12	2.30 - 3.30 pm	Free Papers	
13	3.30 - 4.15 pm	Management of disabled child in PICU	Moderator: Dr. Prahalad
			Faculties: Dr. Basavaraj GV
			Dr. Raghunath C N
			Dr. Karunakar B P

Scientific paper presentation - Prof. H.Paramesh Award Papers
Free Paper Presentation
Poster Presentation

Co-ordinator : **Dr.Adarsh E.,** pediatricrtmch@gmail.com Ph. +91 9341231285
Dr. Sunil, sunilminajaji@yahoo.com, Ph: +91 9845172790
and Dr. Sharanappa, Ph: +91 9886550101

WORKSHOP at Ramaiah Medical College on 16th December, 2022

1) Developmental monitoring & Surveillance - Hands-on training.
   Dr. Prarthana, docprarthana@gmail.com, Ph : +91 98803 80361
   Dr. Nirmala, Ph : + 91 98862 39497
   Dr. Kirthi Joshi, kirtijoshi@msrmc.ac.in, Ph: +91 9686851063
2) Inside the adolescent brain – Screening for mental health-
   Dr. Chandrika Rao, chandrikadoc@gmail.com, Ph. +91 9980915125

General Body Meeting 5.30 pm to 6.30 pm

INDIA COMHAD 2022

Bank Details For Online Wire Transfer:

PAN No.: AADAC7576M, | **A/C NAME :** COMHAD | **BANK:** CANARA BANK

BRANCH : SANJAY NAGAR, BANGALORE – 560054

A/C No: 2871101011119 **IFSC CODE:** CNRB0002699 MICR CODE: 560015124

(Please submit Photocopy of Deposit slip with UTR No. Mentioning Registration and/or Accommodation Fees and sand along with Registration Form)

Important Contact Persons

Dr. Mallikarjuna H B +91 9448151124

Dr. Somashekar A R +91 9845212616

Dr. Karunakara B P +91 9845263322

Dr. Madhu G N +91 9611777866

Email : indiacomhad2022@gmail.com

Registration Tariff

Category of delegate	COMHAD/IAP Member	OT/PT & Others	Post Graduate Students	Accompanying (Spouse/Child 5 yrs)	Workshop Additional Fees
Reg. Fees	1500/-	1000/-	800/-	800/-	500/-

* Complimentary Registration For above 70 Yrs
* Accompanying Delegate – Child older than 5 Yrs will be charged.
* No refund of registration fees once paid.
* Student should submit bonafide certificate from the HOD for Registration.
* Registration includes free Folder, Coffee/Tea, Lunch and Dinner (on the 17th December, 2022)

We welcome abstract submission for oral/poster paper presentation. Oral abstracts will be selected for presentation as part of main conference.

Guidelines for abstract submission:

The main content should be limited to 300 words (Excluding title, author names and references)

Abstract should be structured as follows

- Title
- Author names
- Affiliations
- Main body
- Background/Objective
- Methods
- Results
- Conclusion

NOTE: One table may be included.

Only .doc/.docs files are accepted.

Last date for submission is 25th NOVEMBER,2022

Mail ID for Submission : **indiacomhad2022@gmail.com**

Please use the QR Code for Registration Form

Scientific Program - 17th December 2022

SL.NO	TIMINGS	TOPIC	SPEAKER	CHAIR PERSONS
1	8.30 - 9.00 am	Neuro developmental impact of adverse childhood experiences	Dr. Shekar Sheshadri	Dr.Uday Bodhankar/ Dr. Nirmala Sahaia
2	9.00 - 9.30 am	Transition of pre- pandemic life into new life shaped by Covid - 19 pandemic	Dr. Prajakta Kaduskar	Dr. B.C. Chhaparwal/ Dr. Suman .U.S
3	9.30 -10.00 am	Identifying and measuring autism - Indian efforts	Dr. M.V Ashok	Dr. Sanjeev Rai / Dr. Sudhindra Aroor
4	10.00 - 10.30 am	ADHD and health risk behaviour: towards prevention and health promotion	Dr. Shobha Srinath	Dr. K. Jayoji Rao /Dr. M.S.Rawat
5	10.30 - 12.00 pm	**INAUGURATION AND TEA**		
6	12.00 - 12.30 pm	Traditional values and disability	Dr. Narayana Reddy	Dr. Priyanka Raikar /Dr. Mahesh Kamate
7	12.30 - 1.00 pm	Intellectual disability and its impact on society	Dr. Sanjay K. S.	Dr. K.M.Ganeshan /Dr. Ramesh .H
8	1.00 - 2.00 pm	**LUNCH**		
9	2.00 - 2.30 pm	Epidemiology and prevention of respiratory handicap	Prof. Dr. H. Paramesh	Dr. Ramesh Nigade / Dr. Somashekhar
10	2.30 -3.45 pm	**Panel Discussion:** Neuro - Rehabilitation Moderator ----- Dr Sudhindra Aroor Panelists -Dr Savitha Ravindra, Dr. Zafar Meenal, Ms. Kavitha Saligram, Ms. Sushree Sudipta and Ms. Supriya Vishwas Aroor		
11	3.45 - 4.00pm	**TEA**		
12	4.00 - 5.00pm	Neonatology - Moderator	Dr. Arvind Shenoy	
		Optimum perinatal care for prevention of disability	Dr. Yashwant Patil	
		Early intervention programme for high risk new born	Dr. Pradeep G C	
		Management of at risk mother and infant	Dr. Mallesh	
13	5.00 - 5.30pm	Environmental factors and disability	Dr. Vinod Ratageri	Dr. Prakash Sanghvi /Dr.Yashwant Patil

Scientific Program - 18th December 2022

SL.NO	TIMING	TOPIC	SPEAKER	CHAIR PERSON
1	8.30 - 9.00am	Newborn screening - Indian scenario	Dr. Usha Dave	Dr. Manjusha Giri /Dr. Pradeep Jaiswal
2	9.00 - 9.30am	CP - Trends in epidemiology and recent development in prenatal mechanism of disease, treatment and prevention	Dr. Mahesh Kamate	Dr. Sumitha Nayak/ Dr. Dinakara
3	9.30 - 10.00 am	Challenges towards epilepsy and comorbid behavioural disorder and the management	Dr. Vykuntaraju K N	Dr. Priya Shivalli /Dr. Ravi Shankar
4	10.00 - 10.30am	When to suspect cerebral visual impairment [CVI]?	Dr. Prathibha Panmand	Dr. Madhu /Dr. Geetha Patil
5	10.30 - 10.45am	**TEA**		
6	10.45 - 11.15am	Prevention of skeletal deformities in kids due to neurological and other problems	Dr. Prashanth Inna	Dr.Prasad /Dr. Shubha Badhami
7	11.15 - 11.45am	Optimising outcome in brachial plexus injury	Dr. Y N Anantheswar	Dr. Archana Bilagi /Dr. Shruthi S.H
8	11.45 - 12.15pm	Genetics and disability	Dr. Preetha Tilak	Dr.Vasudeva Dhananjay / Dr. K.K. Kishore
9	12.15 - 1.00pm	Disability related to nutrition - recognition and prevention -	Dr. Dinakar More	Dr. Saleem A. Katheeb / Dr. Adarsh E.
		Role Of Dietitian in the management and prevention of nutrition disability	Ms. Hema Arvind	
10	1.00-2.00pm	**LUNCH**		
11	2.00 -2.30pm	Adolescent with disability - enhancing resilience and delivering inclusive development	Dr. A. R. Somashekar	Dr. Beere Gowda
12	2.30pm -4.00pm	Free Papers		
4.00 pm Onwards		**VALEDICTORY FUNCTION**		

AGENDA

COMHAD INDIA CHAPTER:
ANNUAL GENERAL BODY MEETING
17.12.2022 | J.N Tata Auditorium at 5.30 PM

1	Read the notice of the meeting	Dr. G.N Madhu
2	Welcome speech	Dr. H Paramesh
3	Obituary references any	
4	Read record previous AGM meeting	
5	Highlight the activities of our team 21-22	- Dr. G.N Madhu
6	Adopt audited statement of a/c's financial year 2021-2022	Dr. Salim A Khatib
7	Any other subject with the permission of the chair	
8	Election of the new team 2023-2024	Dr. K Jayoji Rao (Chief polling officer)
9	Vote of thanks	Dr. G.N Madhu

Bangalore
17th Nov 2022

Dr.G.N Madhu
Secretary

PRESIDENTS WELCOME MESSAGE

My dear sisters and brothers of COMHAD India Chapter (UK), I place on record my heartfelt gratitude for unanimously electing me as a president of COMHAD India Chapter and reposing trust and confidence to the new executive committee for the years 2021-2022.

As planned, we focused on academics in the prevention of disability and focused on bridging the gap between children, adolescents and adults by organizing monthly lecture series on national health issues, workshops, virtual committee meetings and telecommunication and participating in the activities of local, national and international scientific forums and represented COMHAD.

Reviewer for DCCC IISc.

1. **National Mission for Clean Air (NMCA) Govt. of India 2021**
2. **"Mega Science Vision 2035** for Climate Research"- PMO Govt. of India
3. **National co-researcher with NIMHANS, ICMR,** Govt. of India 2022.

To keep the self-respect of our country we wrote an objection letter to **Commonwealth Foundation -London** through our international president regarding **U.K's discriminatory Quarantine Policy of Covid Vaccinated People in India on 24th Sept 2021**.

We sent a **condolence letter to Commonwealth Foundation on Queen Elizabeth II our patron of Commonwealth Foundation on 9th Sept 2022** and expressed our commitment to the values of the foundation:

1. Integrity, 2. Respect to colleagues with dignity and appreciation,
3. Professionalism, 4. Plurality of thoughts and expression.

I place on record my sincere thanks to all Advisors, office bearers' members for your solid support in every measure we took.

I place on record the support with commitment and sincerity to our chief advisors and coordinator Dr, K. Jayoji Rao. My sincere thanks to the chairman Dr. SK Satheesh, staff of Divecha Center for Climate Change IISc, Lakeside Education Trust and office staff.

Dr. H. Paramesh
President
In service of COMHAD India

Secretary's Report: Activities of the COMHAD India 2021-2022

- We took charge of the COMHAD Indian on 1st Jan 2021
- Worked to change the signatories to bank account of our trust in Bangalore
- We organized **48 monthly scientific program** on last Thursday of every month on hybrid program with the association of Divecha Center for Climate Change IISc. Bangalore and with Lakeside Education Trust.
- **3 workshops in physiotherapy**, occupational therapy, and psycho socio aspects of handicaps
- **Participated in service organizations** like **Rotary, Lion** and **Thalassemia** parents organization and also in social club activities **during covid pandemic along with IMA and IAP professional bodies.**
- Participated in print media, **Radio and TV** programs during pandemic and vaccine hesitancy.
- Participated in health camp at Fame India special school Feb 28th 2021
- Wrote strong protest letter to common wealth foundation regarding UK's unscientific rules in discrimination in quarenting the COVID vaccinated people in India at airport. While our achievement in manufacturing the vaccine has been appreciated by **U.N Chief Antonio Guterres "Indians vaccine production capacity is one of the best asset in the world history"**
- **WHO chief Dr. Tedros Adenom Ghabreyesus appreciated "India's concern on humanity in distributing the vaccine to other counties"**
- We had 7 virtual meetings with the executive committee in 2 years
- One dinner meet with patrons, advisors, and EC members meeting in Bangalore Golf club.
- We supported and participated in successfully held International conference of COMHAD in Nagpur
- We kept the accounts updated audited and filed the income tax on time. We have forwarded to you all the audited report for your perusal.
- Our members participated in many scientific programs, received honors, award which we have highlighted.

Continued…

DATE : 17TH TO 18TH DEC. 2022 VENUE : J.N. TATA AUDITORIUM IISc

THEME: Bridge the Gap-Empower Inclusion, Create, Integrated Approach to Prevent Childhood Disabilities

Date :

- **Our President participated as a Reviewer for DCCC IISc.**
- 1. **National Mission for Clean Air (NMCA)** ministry of Education Govt.of India, June 2021
- 2. **"Mega Science Vision -2035 Climate Research"** PMO Govt. of India May 2022
- 3. **National co-researcher** from IISc. with National Institute of Mental Health and Neurosciences **(NIMHANS)** Govt. of India. June 2022
- Prof. Dr. H Paramesh installed the **best paper award in cash** to encourage young academicians and the organizing committee unanimously appreciated the good deed.
- Dr. K.M Ganesan our executive member received the Life time Achievement Award at IAP Tamilnadu State Convention 2022
- Mrs. Elizabeth C Paramesh been elected as a President for N.G.O Global Alliance Health, Geneva for 2023.
- We place on record the work of secretary Dr. C.P Ravi Kumar who resigned in May 2022 with adverse communication problems with International office, the efforts of the coordinator Dr. Jayoji Rao in reiterating the guidelines of Common wealth Foundation for sustainable good relations between national and international organizations is a welcome measure and Dr. G.N Madhu Joint secretary took over as secretary.
- I have place on record the efforts of all organizing committee members in organizing our 3rd National Conference
- Our sincere thanks to all our sponsors and supporters in particular Divecha Center for Climate Change IISc., Ramaiah Medical College, Rajarajeshwari Medical College, IAP and Lakeside Education Trust.

Secretary
Dr.Madhu G.N

UK's Discriminatory challenges on Indian-made Covid-19 vaccine is challenged

Dear Sir's

On behalf of all the members of the COMHAD (UK) India chapter, we like to express our feelings to you regarding the UK's discriminatory quarantine policy to take it forward to the health authorities of the UK.

- In the year 2009 during the H1N1 pandemic in this world health assembly it was Thailand who raised the issue that the authorities permit only english speaking and European countries are allowed to produce H1N1 vaccine, if you allow us we will produce the same vaccine at 1/3rd the cost.
- We are proud that Govt. of India produced the vaccine in a short span at a very affordable cost to the developing countries
- This feat has been appreciated by U.N chief Antonio Guterres who lauded India on Jan 29th 2021 **"Indian's vaccine production capacity is one of the best asset in the world has today"**
- Dr.Tedros Adhanom Ghabrayesus of W.H.O. chief has appreciated **our concern to humanity in distributing the vaccine to other countries**.
- As the whole world knows, the Covishield Astrazeneca Oxford vaccine of UK produced by Serum Institute of India which is approved by W.H.O and UK being a member country of W.H.O is creating a **discriminatory attitude** is **highly deplorable**.
- As we understand, the U.K received 5 Million doses earlier and our country donated the vaccine to other less affluent countries. We had received the same vaccine
- As a Professional body we should express our displeasure on **UK's unscientific rules** and should not let the **Racism Trump Over Science**
- We pray almighty to give sense to save humanity and bring peace.

Thanks & regards,
On behalf of All the members of COMHAD India Chapter
Prof. Dr. H. Paramesh
MD, FAAP (USA), FIAP, FIAMS, FIAA, FICAAI, FPAI
Pediatric Pulmonologist, Environmentalist
National President COMHAD India Chapter 2021-2022
Chairman: Lakeside Education Trust
Distinguished Visiting Professor Divecha Center for Climate Change Indian Institute of Science
Visiting Professor Adichunchanagiri University

Condolence - Queen Elizabeth II- Patron Commonwealth Foundation

Dear All,

On behalf of the members of the COMHAD India Chapter under International Organisation started in 1983 with the support of the Commonwealth foundation having **Her Majesty Queen Elizabeth II** as the patron feel extremely sorry to hear about the demise of the patron.

We sincerely express our condolences. May her soul rest in eternal peace. We love to follow the values of the COMHAD Fondation as framed by the committee under her patronage.

1. Commitment to the Commonwealth and its character
2. Integrity
3. Respect the colleagues with dignity and appreciation
4. Professionalism
5. Innovation
6. Plurality of thoughts and expression.

Thanks & regards,
Prof. Dr. H. Paramesh
MD, FAAP (USA), FIAP, FIAMS, FIAA, FICAAI, FPAI, FICS, FICCP
Pediatric Pulmonologist, Environmentalist
National President COMHAD (UK) India Chapter 2021-2022
Chairman: Lakeside Education Trust
Visiting Professor Divecha Center for Climate Change Indian Institute of Science
Academic Council Member/ Visiting Professor Adichunchanagiri University
Alumni WHO-NGO Climate – Health Working Group GENEVA
W.H.O Spokesperson Climate and Health COP26 Glasgow
Lead: Future Earth Health-Related Sensitization Of South Asia
Member Editorial Board Of Current Science
Mob: 9845022689

COMHAD INDIA CHAPTER

Monthly Activities

2021-2022

Monthly Activities Of COMHAD With DCCC And Lakeside Education Trust - 5.30 PM - 7.00 PM

Sl. No.	Date	Speaker	Moderator	Topic
1	Jan 21 2021	Dr. Girimaji	Dr. Madhu Mahadevaiah	Environmental Issues in Relation to Developmental Disability: Causes and Prevention
2	Feb 25 2021	Dr. C.N Manjunath	Dr. Sreeram	Environmental Issues in Prevention of Congenital & Acquired Heart Diseases
3	March 25 2021	Dr. Ajit Huilgol	Dr. Bharat Chhapparwal	Impact of Environmental & Climate Change in the Prevention & Control of Kidney Diseases
4	April 22 2021	Dr. Poornima Prabhakaran	Dr. MKC Nair	Measures Needed To Build Fairer & Healthier World For Survival
5	May 27 2021	Dr. Murali Mohan	Dr. Veerabhadrappa	Role Of Environmental Issues In The Prevention & Control Of Asthma
6	June 24 2021	Dr. S.Chandrashekar Shetty Dr. H Paramesh	Dr. Sanjeev Rai	1. Desired Environmental Changes In The Prevention & Control Of Eye Diseases 2. The Need For Ecosystem Restoration
7	July 29 2021	Dr. Naresh Bhat	Dr. S Yachha	Desired Environment Changes In Prevention & Control Of Liver Diseases
8	August 26 2021	Dr. Arvind Kumar	Dr.Shekar Patil	Expected Environment Changes in the Prevention & Control of Lung Cancer
9	September 23 2021	Dr. Shekar Sheshadri	Dr. Kalyana Sundaram	Overall Environmental Issues In The Prevention Of Suicidal Tendencies
10	October 18 2021	Dr. Khader Valli	Dr. H.B Mallikarjun	Environmental Challenges To Prevent Food Related Health Issues
11	November 25 2021 Lead Discussant: Dr. Paramesh Shamanna Dr. Sudha Tinaikar	Dr. V Mohan	Dr. Vageesh Ayyar	Reversal Of Diabetes: Myth or Reality
12	December 23rd 2021	Prof. Ravi	Prof. Jacob John	Is There a Need for Global Flu Vaccination to Everyone?

Monthly Activities Of COMHAD With DCCC And Lakeside Education Trust 4.00 PM to 5.30 PM

Sl. No.	Date	Speaker	Moderator	Topic
1	Jan 27th 2022	Dr.Jyothi Shetty	Dr. SC Shetty	National Glaucoma Awareness Month **Topic: Measures to Mitigate Blindness from Glaucoma**
2	Feb 24th 2022	Dr. Sushi Kadanakuppe	Prof. KS Nagesh	National Children's Dental Health Month **Topic: Importance of Oral Hygiene for Good Health**
3	March 24th 2022	Dr. Shivaram	Dr. Anandkumar Jayaram	National Colorectal Cancer Awareness Month **Topic: Measures to Mitigate Intestinal Cancer**
4	April 28th 2022	Dr. HV Srinivas 9845013427	Dr. Prashanth 9845266033	National Parkinson's Disease **Parkinsonism Risk, Recognition and measures to mitigate**
5	May 26th 2022	Dr. Gayathri Pandit	Dr. Vijayendra	National Asthma Allergy Awareness Month **Topic: Role of ENT specialist in Mitigating Allergic Rhinitis and Complications**
6	June 30th 2022	Dr. Pravin Thomas	Dr. S Raghavendra	National Migraine and Headache Awareness Month **Topic: Environmental Issues to Mitigate Migraine Headaches**
7	July 28th 2022	Dr. B.G Dharmanand	Dr. R Chandrashekar	Arthritis Awareness Month **Topic: Environmental Measures to Prevent Arthritis and Improve Quality of Life**
8	Aug 25th 2022	Dr. D.A Satish	Dr. H Paramesh	Psoriasis Awareness Month **Topic: Environmental Issues to Prevent Chronic Skin Disorders In Particular Psoriasis**
9	Sep 29th 2022	Dr. Ravigopal Varma	Dr. H Paramesh	National Traumatic Brain Injury Awareness Month **Topic: How Can We Prevent & Manage Traumatic Brain Injury**
10	Oct 27th 2022	Nadoja, Dr. Justice N. Santosh Hegde	Dr. H Paramesh	National Mental Health Day (Social Values) **Topic: Fall In Social Values And Its Consequences in the Current Environment**
11	Nov 24th 2022	Dr. Thomas Gregor	Dr. H Paramesh	National Alzheimer's Disease Month **Topic: Environmental Issues in the Recognition and Prevention of Alzheimer's Disease**
12	Dec 22nd 2022	Dr. Anil Paramesh Tulane University, New Orleans U.S.A	Prof. Ajit Huilgol	World National Renal Handicap Day **Topic: Jumping the Chasm: Strategies to Cope with the Increasing U.S. Kidney Transplant Waitlist**

ABSTRACTS

Scientific Talks

NEURO-DEVELOPMENTAL IMPACT OF ADVERSE CHILDHOOD EXPERIENCES

Neuroscience and common sense are decisive: the earlier we nurture children's minds and hearts, the better lives they will live as adults. All experiences change the brain, but not all experiences affect the brain equally. Because the brain is developing and organizing at such an explosive rate in the first years of life, experiences during this period have more potential to influence the brain in positive and negative ways. Traumatic events disrupt homeostasis in multiple areas of the brain that are recruited to respond to the threat.

Exposure to repeated stress in early childhood increases the amount of cortisol secreted….this increases with each exposure and last for a long time. The consequences of exposure to chronic stress appears to be mediated by at least four possible mechanisms

- endocrine imbalances,
- immunological abnormalities,
- gene-environment interactions including epigenetic factors and
- alterations in brain structure and function

This is not new knowledge - even the neuroscience underlying this awareness has been around for many decades. The primary policy implication of this knowledge is that programs and practices that promote safe, predictable, nurturing and enriched intrauterine and early childhood experiences will be much more likely to promote optimal brain organisation and functioning than programs that seek to influence and change the brain later in life.

The 2011 Lancet Global Mental Health Series highlighted the need to identify and assist high risk, vulnerable children, with sub-clinical symptoms, using selective and indicated interventions. If we are to continue to progress as a species, we will have to find better ways to integrate the fundamental gifts of early childhood into our policies, programs and practices. We have overwhelming evidence that doing this would help express the potential of our children and lead to a healthier, stronger, more creative humane culture. It is our belief that a better understanding of neurobiology will lead to better approaches to systemic change - including policymaking. There is hope from all of the good work over the last 50 years; we are further along the road towards truly developmentally informed societies.

Long and winding road: From neuroscience to policy, program and practice. Bruce Perry.2014, Insight: Victorian Council of Social Services Journal 9: 4-8

Child & Adolescent Psychiatry clinics VOLUME 7, ISSUE 1, JANUARY 01, 1998 Homeostasis, Stress, Trauma, and Adaptation - A Neurodevelopmental View of Childhood Trauma. Bruce D. Perry, Ronnie Pollard

The Lancet Series on Global Mental Health 2011

Dr. Shekhar Seshadri
Former Senior Professor.
Advisor
SAMVAD
Dept. of Child & Adolescent Psychiatry
NIMHANS

Identifying and Measuring Autism: Indian Efforts

There has been a big effort from funding agencies and academicians in the last decade, to improve ASD case-identification in the Indian context. Screening tools from infancy to 9 years of age have been developed while existing international measures have been explored too. Measuring the severity of ASD for certification purposes is now Implemented. It is expected that this decade will see a large scale sharing of experiences by clinicians and researchers who will be deploying these measures on the ground. In-fact repurposing of some of these measures are also being explored. The presentation will try to create awareness of available tools, and share evolving experiences around them.

Dr. Ashok Mysore,
Professor of Child and Adolescent Psychiatry,
ST John's Medical College Hospital,
Bengaluru

ADHD and Health Risk Behaviour: Towards Prevention and Health Promotion

Attention deficit hyperactivity disorder(ADHD) is classified as a developmental disorder (DD) and rightly so. Clinicians are now more aware that adolescents and adults are presenting with this disorder and need care. The search for aetiology is going the gene – environment interactions way. It can be understood as a disorder of the executive functions of the brain. That it is heritable and that a number of environmental risk factors adds to the vulnerability for its occurrence is also understood.

ADHD often presents with other developmental disorders like specific learning disabilities, autism spectrum disorders, coordination disorders and intellectual disability. Like other DDs it can manifest itself at different levels of severity.

As a consequence of the disorder in self-regulation, inattention and impulsivity, it puts the individual at risk for accidents, substance use disorders, challenges in decision making, damages to interpersonal relationships, teenage pregnancy, academic/ occupational underachievement and premature death.

The aim then must be prevention of such consequences. The fact that this is a developmental disorder means one takes a life- cycle approach to the management. The management must start with a good clinical diagnosis, education of the parents and the stakeholders involved, the plan for a management program that includes medication when needed and non-medication management. Strategies for prevention and health promotion include the presence of a parent/ caretaker/ teacher/coach/health professional in this endeavour but research in the area is in its infancy.

Dr. Shoba Srinath,
Consultant Child and Adolescent Psychiatrist,
Retired Senior Professor,
NIMHANS, Bangalore.

Intellectual Disability and its impact on Society

Hippopocrates in 5th BC stated that Mental retardation resulted from a physiological imbalance of 4 humors on brain. Perception of disability is an important construct affecting not only the well being of individuals with disabilities but also the moral compass of the society.Global prevalence of Intellectual Disability is 2.5%.The prevalence of ID in India is 2% in last 6 decades.Intellectual disability(ID) contributes to 10.8% of the burden of mental disorders, measured by disability- adjusted life-years, in India.The burden caused by ID in India is only third to the depressive disorders and anxiety disorders.

Ethology of intellectual disability is multifactorial. Genetic abnormality can be a single gene mutation, chromosomal abnormality leading to neurodevelopment defect, inborn error of metabolism or neurodegeneration. The most common chromosomal abnormality is Down's syndrome and genetic condition is Fragile X syndrome. Environmental causes include exposure to toxins, infectious agents, trauma, uncontrolled maternal medical conditions along with delivery complications. Social causes like impaired parenting , delayed diagnosis, inadequate family support may worsen the situation.

Diagnosis of intellectual disability is as per DSM 5 (table 1). It requires deficits in intellectual function, adaptive behaviour and onset before age of eighteen.Standard -Binet Intelligence(3-22 years) scales is the most widely used tool for IQ assessment. However other tools like Bayley Scale of Infant Development,Wechsler preschool and primary scale intelligence,Wechsler Intellegence Sacle of children above 6 yrs,Mallin's Intelligence Scale for Indian Children 6-15yrs and Vineland Social Maturity Scale (VSMS)- Indian adaptation- till 15yrs are used now.

Intellectual disability may affect learning, memory, problem solving, planning, other cognitive tasks, social skills, communication skills.

• Added impairments include cerebral palsy(30%), seizure disorders(8-18%) vision impairment(20-25%), hearing loss(10%), oppositional defiant disorder(0.5-12%), attenuation -deficit/hyperactivity disorder(0.5-11%). (Harris 2006)

• Impact on family and peers: economic burden, social burden, physical burden, emotional burden and family requirement.Various studies revealed - parents and care givers associated with more problematic family functioning, lower sense of coherence and less marital satisfaction. The deployment of these resources could be seen as time taken from other tasks or other children in family, and could explain feeling of bitterness, miscommunication and disputes among the family members' . •Physical burden :Families has difficulties and need assistance preparing meals and feeding their children, providing personal care to the children using medicines, maintaining hygiene, protecting children from danger and preventing threatening situation.

• Coexistence of another chronic disease (epilepsy, CP, autism can make the situation more complicated. Social interactions of the family are restricted since the care responsibilities for the child are plenty in early childhood and as the disease worsens.As the gap between the chronological age and mental age becomes more distinct inadequacy becomes clearer and this increases the perception of stigmatization. Thus family becomes more socially timid.

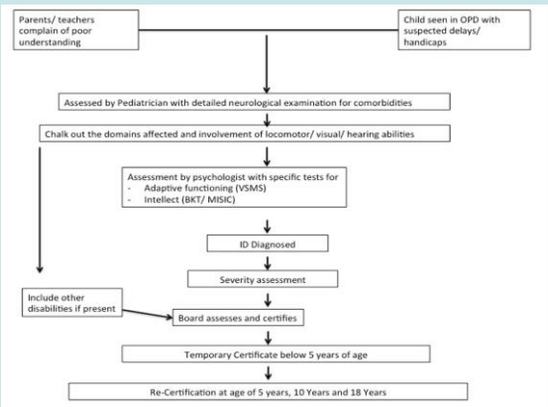
• Children's attendance to school lowered mother's social burden.Mother has 2-3 times more mental problems than society in large.

• Time requirement: The caregivers of severe intellectual disabilities have more daily routine family burden .Its natural to feel grief, resentment, disappointment and frustration. Sometimes it may lead to mental health burden of caregivers.Caregivers burnout has been seen more with the maladaptive coping abilities.Children with Intellectual Disability requires Multidisciplinary team with multiple referrals which is mainly possible in urban setup.

• Impact on society:

• Public Policy to be in place rather than philanthropic initiative.Access to health and social services, sexual and reproductive rights has to be preserved. Activities to promote physical activity and healthy lifestyle and ways to organizing free time in order to guarantee mental health and well being Most of political, social and economic agenda might not consider ID for policy making.Societal factors add another layer of influences shaping children's attitudes toward individuals with disabilities.It requires establishment of schools which are disabled children friendly providing Integrated Educational Plan (IEP) as well as individualized education plan for such children.The cultural beliefs will determine attitudes and behaviours towards ID children.

• Government initiatives:Ensure the right to development with dignity and equality creating an enabling environment where children can exercise their rights, enjoy equal opportunities and full participation in accordance with various statutes.Ensure inclusion and effective access to education, health, vocaltional training along with specialized rehabilitation services to children with disabilities.Ensure the right to development as well as recognition of special needs and of care, and protection of children with severe disabilities. Ensure right care, protection and security for children with disabilities;



DSM-5

Intellectual disability (intellectual developmental disorder) is a disorder with onset during the developmental period that includes both intellectual and adaptive functioning deficits in conceptual, social, and practical domains. The following three criteria must be met:

(A) Deficits in intellectual functions, such as reasoning, problem-solving, planning, abstract thinking, judgment, academic learning and learning from experience, confirmed by both clinical assessment and individualized, standardized intelligence testing.

(B) Deficits in adaptive functioning that result in failure to meet developmental and sociocultural standards for personal independence and social responsibility. Without ongoing support, the adaptive deficits limit functioning in one or more activities of daily life, such as communication, social participation, and independent living, across multiple environments, such as home, school, work, and community.

(C) Onset of intellectual and adaptive deficits during the developmental period.

Table 1: Diagnostic and Statistical Manual of Mental Disorders , Fifth edition (DSM-5)

References

1. *Dipti Kapoor, Sharmila B Mukherjee. Global Developmental Delay and Intellectual Disability in Indian Children- Where do we stand? Indian Pediatr 2018,55:1083-1085*
2. *Turan et al. A Family Burden in Intellectual Disable Children- Journal of Psychiatric Nursing 2017;8(1):9-16*
3. *American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. (DSM-5, APA 2013)*
4. *Krishna et al. Child Protection and Mental Health in ECCD. Indian Pediatr. 2021*
5. *Legal rights of the disabled in India . Vikaspedia. Ministry of Electronics and information Technology*
6. *National Policy for Persons with Disability. Government of India, Ministry of Social Justice and Empoerment.*
7. *American Psychiatric Association. DSM History.*

Dr Sanjay K S,
Director, Indira Gandhi Institute of Child Health

Epidemiology And Prevention of Respiratory Handicap

To prevent respiratory handicap one has to be aware of the environmental, maternal, fetal and placental factors. Various driving forces like industrialisation, rapid urbanisation, population growth, pervasive poverty and inequity, non-sustainable consumption and transboundary chemical transport contribute to global environmental degradation where children are disproportionately vulnerable, suffering most of the effects now and in the future.
The polluted air we breath is the major cause for disability which impact from womb to tomb. 43% of chronic respiratory disorders, 29% of lung cancer are related to it. The important air pollutants are suspended particulate matter, tobacco smoke and Ozone. The suspended particulate matter (SPM) 2.5 micron, is a mixture of solids and liquid invisible and having 3% of the size of the hair and can travel many hundreds miles and take 9 min to settle down in a closed place from 150cm height. Less than 2.5 micron cross the Lung parenchyma to blood stream and circulate all over the body to produce chronic inflammation of other vital organs as well.

During the first trimester where organogenesis happens, air pollution causes defects in lung development and placental coagulopathy syndrome can produce still birth, prematurity and small for date children who have fixed airway obstruction and are prone for recurrent wheeze, bronchiolitis, persistent asthma later, chronic obstructive pulmonary disease (COPD). SPM 10 micron and over affects predominantly upper airways; 5-10 micron affects the lower airways and 2.5 micron and less affects the lung parenchyma and interstituism and damage the vital organs by oxidative stress.

Our aim is to prevent the respiratory health and disability by a) Aligning climate and health goals b) Supporting fossil fuel free recovery c) Preparedness for future pandemics d) Health to be included In all policies of the country e) Researchers to think locally, act locally and propagate the results globally f) Traditional food habits g) Encourage natural birth and prolonged breast feeding g) Listen to the community on sustainable health and prescribe climate action plan at Global, National and at Individual level.

While measures being taken international and national level we individually take steps to reduce carbon foot print to 2 tonnes per person per year so that we can keep CO2 level at 250 PPM by the end of the century as recommended by united nations like – Car free living; using electric vehicles, using renewable energy, reduce unnecessary air travels, use of public transport; good cross ventilators housing using LED bulbs and prefer cooking vessels, encouraging vegan diet and adopting to new technology best possible way.

“Each One Teach One Plant One Tree And Maintain It”.

Prof. Dr. H Paramesh
MD, FAAP (USA), FIAP, FIAMS,
FIAA, FICAAI, FPAI, FICS, FICCP
Pediatric Pulmonologist and
Environmentalist

Optimum Perinatal Care For Prevention of Disabilities

Appropriate perinatal care is the key for prevention of neonatal deaths, disabilities ant ensures survival. Perinatal period extends from 28 completed weeks of gestation to 7 completed days of life. Perinatal period is a mid-part of most crucial period of the 1000 days Window of Opportunity. Any insult or injury during this period results in structural, biochemical and cell specific injury leading various disabilities or even death.

The overall prevalence rate of disabled children is about 2.7% and age specific prevalence rate was increasing with the age. In one survey it was shown that 21% of cases of disability resulted from prenatal damage, 3% arose from perinatal factors, 29% were acquired during infancy and early childhood & 47% had no known cause.

There are en-number of perinatal risk factors causing disability which includes – Maternal malnutrition, maternal diseases and infections, fever, heavy work load, multiple frequent pregnancies, obstetrics complications, prolonged labour, post/preterm/rapid labour, PROM, MSL, APH, malpresentation, prolapsed cord, placenta previa, convulsions, obstetrics analgesia & anesthesia, LBW/prematurity, birth injuries, asphyxia, hypothermia, hypoglycemia, acquired infections, intracranial hemorrhage.

With optimum perinatal care, one can minimize the risk of all these perinatal factors causing disability. In addition, essential immunizations during pregnancy, personal health and hygiene care, avoidance of overheating, smoking chewing tobacco/passive smoking, alcohol and drugs & substance abuse, unnecessary radiations, mother craft education, antenatal administration of essential drugs when necessary, emphasis on six cleans and good intra-natal and early neonatal care, all play an important role to prevent disabilities and ensure healthy pregnancy and outcome.

Dr Yashwant Patil
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Early Intervention Program for High-risk Neonate

Improvements in neonatal intensive care have been associated with increased survival of very low birthweight and infants born preterm; however, morbidity remains high. There is an increased risk of cognitive and/or behavioural impairments, speech and language delay, and sensorimotor deficits, including cerebral palsy (CP). This greatly increases the emotional and financial burdens on families, society, and health care systems.

Early identification of infants at high-risk of developmental delays and/or impairment is an important component of neonatal care. Not only is it important to identify impairments early in development to ensure early intervention can commence in a timely manner, but it is also important for counselling and supporting parents. It is crucial for NICU graduates to have access to comprehensive long-term follow up, and timely targeted developmental intervention.

An early intervention programme for high-risk infants typically begins within the first year of life. All early development (cognitive, motor, language and communication, and growth) is influenced by social and emotional development through caregiving relationships. Interventions during this period have a high potential to impact positively on neurodevelopmental outcomes. Early intervention practices include focus on family, supports in natural environments, instructional practices, the role of interactions, teaming and collaboration, and transition.

Practice points:

- Neonatal care should extend beyond hospital discharge for high-risk infants
- Early developmental follow-up is important for referral to early intervention and parental counselling
- Developmental follow-up of high-risk infants should include assessment of neurological, motor, cognitive, language and behavioural outcomes.
- Early intervention can commence in the hospital
- Parental engagement is crucial to implementing follow-up and early intervention.

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New-born Screening – Indian Scenario

Newborn screening (NBS) is testing newborn babies for serious developmental, genetic and/ metabolic disorders so that important action can be taken before symptoms such as mental and/ or motor retardation, physical disabilities or death. It is the process of testing neonates after 48 hours of birth for treatable genetic, endocrine, metabolic, and hematologic diseases before the development of symptoms. NBS is a simple blood or urine screening test conducted on apparently healthy babies & not a diagnostic. It is not a laboratory test but a comprehensive health program involving early detection, treatment and management of the newborn who may be affected with IEMs. These disorders may individually be rare but their collective incidence is 1 in 1200–2000. Their early & presymptomatic detection is significant as timely intervention, treatment and therapy can lead to the reduced morbidity, mortality and associated disabilities.

The mass-spectrometry method of NBS for IEMs (viz. amino acid, organic & fatty acid disorders) became worldwide popular during 1995-2000 & followed by confirmation of IEM diagnosis by urinary GC/MS metabolic analysis as an international protocol. The rapid and multi component techniques of tandem mass spectrometry screens about 46 metabolic conditions simultaneously from a single blood spot. The high through-put Mass Spectrometry & ELISA based six disorders (CH, CAH, G6PD, galactosemia , biotinidase deficiency and cystic fibrosis) are the common NBS disorders. The G6PD is the most common IEM (1:414) followed by CH (1:2735) & CAH (1:4102) & Galectosemia & PKU were rare (1:20513 & 1:41027 respectively) in our NBS study. The incidence reported by various States differs as Indian population has a great genetic diversity with social, racial & ethnic variations. In 2008, ICMR pilot study of 1 lakh babies revealed incidence of CH as 1: 1172. The CAH from Indian reports varies from 1:2600 to1:16000. In 2011, National Neonatology Forum (NNF) recommended 3 NBS conditions- CH, CAH & G6PD- as the basic screening panel. In the affordable patients, it can be extended to 46 conditions using TMS test, but not often the part of the screening panels due to resource constraints (significant capital costs, few experts, lack of treatment facilities and Follow-up). The NBS for Sickle cell disease & Thalassemia are proving significant in certain Tribal population of India. The hearing defects (4:1000) & congenital heart defects (5:1000) are other NBS conditions requiring serious attention.

Although NBS is worldwide well accepted preventive public health policy, it is implemented in India only in this decade & yet not totally accepted in clinical practice. As India does not have population-based genetic epidemiology studies, the exact burden & incidence of NBS disorders is not known. The pioneer work of the author in introducing IEM diagnosis by urinary GC/MS in 1998, could detect the most common 13 NBS Candidate disorders in India over past 20 years & strongly recommend for NBS Program. It may not be economically viable to cover annual birth of about 27 million babies in India & hence High-risk Screening is the first phase of Screening. The Govt/ Pvt hospital studies by few States emphasise the need of the hour but cannot achieve the goal of national NBS program which also requires a political will & mandatory health policy suitable to Indian scenario.

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Challenges Towards Epilepsy and Comorbid Behavioral Disorder and the Management

Introduction

Epilepsy is a disorder of the brain characterized by an enduring predisposition to generate epileptic seizures and by the ***neurobiological, cognitive, psychological, and social consequences*** of this condition. This definition implies a need to factor in the existence of comorbid "psychiatric" conditions in the comprehensive management of People with epilepsy (PWE). Mood and anxiety disorders account for most of these comorbidities. People with epilepsy (PWE) suffer a range of comorbid conditions which may hurt their quality of life (QoL). **Psychiatric comorbidities are 2 to 3 times more frequent in patients with epilepsy** (PWE) than in the general population. **Up to 50 or 60% of patients with chronic epilepsy have at least one mood disorder** including depression and anxiety.

Psychiatric comorbidities in epilepsy: How big of a problem is it?

Findings from the review published by AAN in April 2021 about the latest evidence concerning the epidemiology, clinical implications, and management of psychiatric disorders in epilepsy revealed the following findings.

1. People with epilepsy have 2–5 times increased risk of developing any psychiatric disorder
2. 1 in 3 patients with epilepsy has a lifetime psychiatric diagnosis.
3. Psychiatric comorbidities represent a poor prognostic marker as they have been associated with a poor response to treatment, increased morbidity, and mortality.

Lifetime Prevalence of psychiatric disorder in PWE- The lifetime prevalence of psychiatric disorders in PWE shows nearly double the risk

Psychiatric Disorder	Controls (%)	Epilepsy (%)
Major Depressive Disorder	10.7 (10.2–11.2)	17.4 (10.0–24.9)
Anxiety Disorder	11.2 (10.8–11.7)	22.8 (14.8–30.9)
Mood/Anxiety Disorders	19.6 (19.0–20.2)	34.2 (25.0–43.3)
Suicidal Ideation	13.3 (12.8–13.8)	25.0 (17.4–32.5)
Any Psychiatric Disorder	20.7 (19.5–20.7)	35.5 (25.9–44.0)

Epilepsy & PSYCHIATRIC DISORDERS-CAN TYPE OF EPILEPSY be the cause?
• Shared pathophysiological mechanisms may contribute to the concomitance of epilepsy and psychiatric disorders
• Patients with focal epilepsy (temporal and extratemporal) are at relatively higher risk of psychiatric disorders as compared to those with generalized epilepsy

Epilepsy & psychiatric disorders -can AED therapy be the cause?
1. Psychiatric and behavioral changes have been reported in ~17% of patients on AED therapy
2. Irritability was the most commonly reported behavioral change with AED therapy, while depression was a frequently occurring psychiatric change.

Conclusion
1. Epilepsy has a significant impact on the QOL of the patient throwing his daily routine off-track.
2. Dependency on family/caretaker drives more psychological problems for the patient.
3. Activities of daily routine (like driving, etc.) need to be done with due precautions or even avoided if possible.
4. Psychiatric comorbidities have a significant negative impact on a patient's life – also in turn impacting the patient's near and dear ones.
5. Hence, it is prudent to be cognizant of the rising burden of epilepsy, beyond epilepsy, and find ways to tackle it effectively.

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When to suspect CVI

CVI is a visual impairment in the presence of a normal ocular examination, reduced visual acuity or subnormal visual performance, and evidence of damage to the posterior visual pathways

Cerebral Visual Impairment (CVI) is one of the most common causes of visual impairment in children both in developed and developing countries but unfortunately goes undetected or untreated at the earlier stages.

Improved survival of children with severe neurological damage increases the chances of encountering children with CVI. This impacts the child's psychomotor, educational, social, and emotional development

Causes

- Hypoxic-ischaemic encephalopathy (40%)
- Pre-maturity (32%)
- Epilepsy (12.9%)
- Localised infarction/stroke (3.23%)
- Neonatal hypoglycaemia(3.23%)
- Trauma
- Infantile Respiratory distress
- Cerebral palsy (47%)
- Chromosomal/Metabolic disorders(4%)
- Congenital brain malformations – Holoprosencephaly, Hydrocephalus, Septo-optic dysplasia (1.6%)
- Infections – Meningitis, Encephalitis, Pneumonia (2.42%)
- Unknown

Each child with CVI is likely to have its own unique visual and motor deficit, necessitating an individualized approach.

Even before a formal assessment is done, there are certain clues that point toward CVI right from the pre-natal period and as practitioners who cater to the pediatric population, the onus is on us to identify such clues so that the child can have a better quality of life.

These children require an integrated and an optimistic approach as early as possible so as to expose them to appropriate visual inputs that will help stimulate the development of visual functioning in an optimal way.

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Prevention of Orthopaedic Deformities in Neurological Problems and other Disorders

The talk titled " Prevention of Orthopaedic deformities in neurological problems and other disorders" focuses on interventions to prevent the development of the various joint deformities that are seen in the natural course of common diseases like cerebral palsy. The interventions covered are Physiotherapy, Braces (orthotics), Botox injection and surgery. The talk delves into the finer points of physiotherapy mainly the types of interventions and for how long the sessions are to be done on a daily and weekly basis. Various braces used to prevent the deformities will be discussed as will be the instances when bracing may not be helpful. Brief peek into Botox and surgeries also will be done. The above interventions are developing enormously and "consensus" still seems to be missing.

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Optimising Outcome in Brachial Plexus Injury

Management of brachial plexus injuries is geared towards normalisation of limb function, primarily through optimisation of nerve regeneration and mechanical increase in elbow flex ion and shoulder stabilisation. Changes in skeletal muscles and the bony structures of upper extremity are ongoing throughout the course of treatment, mandating continued assessment and aggressive rehabilitation.

In patients who present too late for microsurgical intervention, irreversible damage occurs in skeletal muscles, highlighting the importance of early referral. However, secondary procedures have been shown to be effective in older patients and in those patients where primary surgery has failed.

Further advances in bionics and stem cell therapy may help replace the dynamic functional deficits of obstetric brachial plexus palsy.

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Nutrition Intervention For Children with Neurological Disability

Nutritional support should be an integral part of the management of neurologically impaired children, and should focus not only on improving nutritional status but also on improving quality of life for patients and their families.Nutritional intervention should consider oromotor dysfunction, gastroesophageal reflux and pulmonary aspiration and a multidisciplinary team should be involved. Nutritional rehabilitation has been associated with improved overall health, improved peripheral circulation, healing of decubitus ulcers, decreased spasticity, decreased irritability and improved gastroesophageal reflux in patients with neurodevelopmental disabilitie. Non-nutritional factors may also influence growth, but nutritional factors such as insufficient caloric intake, excessive nutrient losses and abnormal energy metabolism also contribute to growth failure. An assessment of nutritional status should be performed at least yearly, and more frequently in infants and young children, or in children at risk for malnutrition. Oral intake should be optimized if safe, but enteral tube feedings should be initiated in children with oromotor dysfunction (as it could lead to significant aspiration,) or in children unable to maintain an adequate nutritional status with oral intake.

Diet for Cerebral Palsy -will be based on the patient's condition as in difficulty in swallowing , sitting up etc .Children with cerebral palsy (CP) commonly have feeding disorders and swallowing problems (dysphagia) that in many instances place them at risk for aspiration with oral feeding, in such instances enteral/tube feeding would be advised The diet for individuals with CP should include: Calcium-rich foods such as milk, yogurt, cheese, and calcium-supplemented fruit juices. Vitamin D-rich foods such as fish, fish liver oil, vitamin-D supplemented milk, orange juice, and cereals Diet for ASD-The gluten-free, casein-free (GFCF) diet has the most research and is one of the most common dietary interventions. It excludes gluten, the protein in wheat, and casein, the protein in milk. In theory, kids improve on the diet because incomplete breakdown of these proteins create a ... substance that can inflame the gut. Studies have shown improvement and parents anecdotally report success when these two proteins are removed from the diet.

Diet for ADHD- A high-protein , complex carbohydrate diet with Omega 3 fatty acid has been found to be helpful for ADHD.We also need to eliminate few items from the diet like Simple Carbohydrates-Sugar,candy honey etc, alongwith additives/preservatives, colors etc as it may lead to hyperactivity.We basically need to advise Balanced Diet with supplementation of vitamins & minerals if required and Elemination diet.

Diet for Epilepsy-The ketogenic diet is a high fat, adequate protein, low carbohydrate diet, primarily used in the treatment of difficult-to-control (refractory) epilepsy in children.The restriction of carbohydrates makes the liver converts fat into fatty acids and ketone bodies. The excess production of ketone bodies, a state known as ketosis, has an anticonvulsant effect

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ADOLESCENT WITH DISABILITY: ENHANCING RESILIENCE AND DELIVERING INCLUSIVE DEVELOPMENT

Around the world, there are between 93 million and 150 million children and adolescents living with disabilities (WHO and World Bank, 2011). An estimated 80% live in low- and middle-income countries (LMICs), where 80% of persons with disabilities live below the poverty line. While we know that adolescents with disabilities are far more likely than their peers without disabilities to be denied their basic rights to education, health, recreation and general wellbeing, research aimed at exploring their needs and identifying how best to support their transitions from childhood to adulthood is nascent.

Adolescents with disabilities face a range of challenges in reaching their full capabilities. They face widespread discrimination, stigma and social exclusion. Adolescent girls with disabilities tend to face intersecting disadvantages because discriminatory gender norms and practices become increasingly salient in adolescence. Adolescent experiences also differ by impairment type – whether physical, sensory or intellectual – and the severity of the impairment. Context can play a key role too, with adolescents with disabilities in rural and humanitarian and conflict-affected settings much more likely to be excluded from services and support.

Adolescents with disabilities in LMICs face multiple and interlinked challenges in realising their full capabilities including with regard to:
1) education and learning,
2) health, sexual and reproductive health and nutrition,
3) psychosocial wellbeing,
4) bodily integrity and freedom from violence,
5) voice and agency
6)economic empowerment.

Dr. Somashekar A. R.
Org Secretary Comhad 2022
Professor And Head Of Department Of Paediatrics
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ABSTRACTS

Poster

Japanese encephalitis

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Introduction:

JE is a vector-borne disease that can be prevented by vaccine administration Symptomatic Japanese encephalitis cases are uncommon and occur in approximately 1 in 250 subclinical infections. The case-fatality rate among those with encephalitis is as high as 30%. Permanent neurologic or psychiatric sequelae can occur in 30%–50% of those with encephalitis.

Case description:

A 15 year old male child hailing from Tumkur, came with history fever and yellowish discoloration of skin since one week and abnormal jerky movements since one day. At presentation child had status epilepticus and decorticate posturing, emergency intubation was done and shifted to PICU for further management. A provisional diagnosis of acute encephalitis syndrome (AES) was made. Antiseizure, antiedema measures were taken. Prophylactic IV antibiotics, antivirals and doxycycline was started. Over the next 24 hours child had no further seizures and signs of raised ICP reduced , CSF analysis was done, showed partially treated meningitis. MRI showed diffuse bilateral leptomeingeal and basal cisternal meningeal enhancement suggestive of meningitis. Child improved symptomatically over the next 48 hours and was extubated. Child recovered with no deficits .CSF ELIZA and PCR sent was reported on day 5 as JE IgM positive.

Conclusion :

There is no cure for the disease. Treatment is focused on relieving severe clinical signs and supporting the patient to overcome the infection. Of those who survive, 20%–30% suffer permanent intellectual, behavioural or neurological sequelae such as paralysis, recurrent seizures or the inability to speak. **L**ack of efficient antiviral treatment, diagnosis and prevention are the highest priorities that would greatly reduce the disease burden.

Disseminated Tuberculosis: A rare cause of Right focal motor seizures

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Introduction:

Disseminated tuberculosis (TB) is a life-threatening disease resulting from the hematogenousspread of Mycobacterium tuberculosis. Miliary pattern on chest radiography is a common finding that has an important role in the early detection of the disease. Nevertheless, approximately 10%-15% of patients have normal chest radiography. Although abnormalities are present, basic hematologic and biochemical tests as well as tuberculin skin test are nonspecific for the diagnosis. Imaging studies are helpful adjunct tools for disseminated TB as they can help determine the involved sites and guide technicians to obtain appropriate specimens for diagnosis. Clinical confirmation of the diagnosis of disseminated TB is usually based on bacteriological or histological evidence. Response to first-line anti-TB drugs is good as evidenced by many reports.1

Case:

17 year old female came with a history of headache,abnormal jerky movements of right upper and lower limbs,loss of balance with swaying to the right and lethargy since 1 month for which the patient was evaluated and systemic examinations were within normal limits and was admitted and routine investigations were sent.Reports being normal,thepatient was further evaluated and advised for ECG,ECG being abnormal, advised to get 2D ECHO,which revealed features of TB pericarditis and TB pleuritis and to confirm disseminated tuberculosis, patient advised for CSF analysis and MRI brain plain and contrast.CSF analysis revealed the following findings -637 cells(68%lymphocytes and 32% polymorphs),protien-81 mg/dl and glucose -45 mg/dl and MRI brain plain and contrast revealed Ring enhancing lesion within right cerebellar hemisphere in the inferior aspect -tuberculoma with mild perifocal edema.After microbiological confirmation(CSF sample was tested for tuberculosis using CBNAAT) patient was started on Anti-tubercular treatment (HRZE) with Vitamin B6 supplements and Tab.Levipil(Levetiracetam)suspecting right focal motor seizures and child was asked to review after 1 month.During follow ups,patient is on ATT with good compliance and has not developed further jerky movements and has improved balance.

Conclusion:

Disseminated tuberculosis is a deadly condition which can sometimes present with mild symptoms such as headache and lethargy and in severe cases can cause a disability hence should be evaluated thoroughly and promptly started on Anti-tubercular treatment as soon as diagnosed.

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Paediatric stroke – A rare case of Moya Moya disease

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Introduction: Moyamoya is a rare idiopathic progressive vaso-occlusive disease characterized by irreversible stenosis of main blood vessels to the brain as they enter into the skull. It has a prevalence of 10.4/100000 individuals. Cerebral revascularization surgery leads to favourable outcome.

Case report: 14-year-old boy presented with complaints of acute weakness of right upper & lower limbs with headache. No h/o trauma or fever. O/E asymmetry of face, hemiplegic gait and tone was decreased over right side with power of 2/5. DTR were exaggerated & plantar was extensor on the right. A provisional diagnosis of stroke ? ischemic was made and MRI brain was done which showed multiple watershed zone infarcts more on left side. MRA revealed stenosis of the proximal ICA s/o stage 1 MMD.

Conclusion :The diagnosis of MMD is now easily achievable in children. It is important to be familiar with the clinical manifestations and MRI/MRA findings in to make an early diagnosis for better neurological prognosis. Careful long-term follow-up & management focusing on hemorrhage prevention in adulthood is required. Social adaptation difficulty, related to cognitive impairment caused by ischemia, continues in 10–20% of patients after they reach adulthood, even if they do not have significant disability in daily life. Early surgical intervention might be considered, especially for patients at high risk of unfavorable social outcome.

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Status Epilepticus with Hypertensive Encephalopathy (PRES changes) secondary to Nephrotic Syndrome, with Hyperthyroidism

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Introduction:

Hypertensive emergency in children most commonly manifests as hypertensive encephalopathy. Children can present with severely elevated BP with cerebral edema and neurological symptoms such as seizures, abnormal reflexes, coma.

Case:

12 year old female adolescent was brought with % sudden onset of headache and was in status epilepticus. Seizure was aborted with Inj. Midaz and loading dose of Inj. Fosphenytoin. Child had low GCS(4/15) and poor respiratory efforts. Hence was intubated. A BP of 160/110mm Hg was recorded on admission and high BP readings persisted. Child was started on antiepileptics, Labetalol infusion and supportive measures. CT brain s/o hypodensities of frontal and parietal changes. Following morning, child was extubated due to improved GCS. CNS examination was s/o no focal neurological deficits, no signs of meningial irritation and MRI Brain s/o PRESS changes attributed to Hypertension. LP was normal. Proteinuria was present and 24 hour protein creatine was also elevated. Labetelol infusion was gradually titrated and stopped, child was later continued on T. Amlong and T.Hydralazine. Pheochromocytoma and Renal Artery Stenosis was ruled out. Thyroid profile s/o low TSH and elevated FT4. Child was advised for Thyroid Technium Scan during following uupto rule out Thyrotoxicosis and was discharged on antihypertensives and antiseizure medications.

Conclusion:

Hypertensive encephalopathy can have different characteristics depending on the underlying causes such as pheochromocytoma, thyrotoxicosis, glomerulonephritis. PRES is one of the most typical finding of hypertensive encephalopathy predominantly found in the renal group. Early detection and evaluation in children can significantly reduce the mortality rate and attempts to resolve the underlying disease can be made.

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Mesial temporal sclerosis presenting with Breakthrough seizures

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Introduction:

Epilepsy is one of the most common neurologic public health concern. The Medial temporal lobe (Mesial temporal lobe) structures- hippocampus, amygdala and parahippocampal gyrus are most commonly involved in Temporal Lobe Epilepsy (TLE). Mesial temporal sclerosis(MTS) is defined by hippocampal gliosis, atrophy and neuronal loss.Focal seizures with impaired consciousness or awareness are the most common manifestations of Mesial TLE. Approximately one-third of patients also have focal seizures evolving to bilateral convulsive seizures.

Case:

16 year old female presented with repeated attacks of syncope. Clinical examination showed vital parameters within normal limits, no focal neurological deficits. Blood investigations showed no abnormalities. MRI showed reduced volume of right hippocampus with abnormal high FLAIR intensity involving right temporal lobe consistent with diagnosis of right mesial temporal sclerosis, Electroencephalogram showed no epileptiform discharges, Electrocardiography was normal and 2D ECHO showed good biventricular function. She was started on anti-epileptics. After 3weeks she presented with seizure relapse due to poor drug compliance for which her anti-epileptics were upgraded .

Conclusion:

Clinical recognition of mesial temporal lobe epilepsy (MTLE) is important. High quality MRI is essential to diagnose hippocampal sclerosis. In many children conventional anti-epileptics are effective initially for controlling seizures, however many become resistant to anti-epileptics(60-90%). There is progressive cognitive, behavioural and memory impairment if epilepsy remains uncontrolled and may require early surgery by adulthood.

Prevention and Rehabilitation:

Exact cause of MTS is still unclear, prolonged febrile seizures, genetic susceptibility, viral encephalitis and Autoimmune diseases can cause damage to temporal lobe and induce MTS. Drug refractory seizures can be managed with surgery, many patients have challenges with memory with higher rates of anxiety and depression .Memory will improve once patient becomes seizure free and often respond well to mood stabilizers. Paying attention to these non-seizure symptoms is crucial.

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LEIGH DISEASE

Dr Spandana S, Dr Sunil Kumar B M

A Case of leigh's disease 3 month old male child presenting with regurgitation of feeds .

INTRODUCTION-

Leigh disease is a progressive degenerative disorder presenting in infancy with feeding and swallowing problem with faliure to thrive, lesions in brain stem or basal ganglia and multisystem involvement known to carry poor prognosis.

CASE-

A 3 month old male baby, born to a non-consanguineously married couple, 4th order child was brought with complaints of regurgitation of feeds since 1 and 1/2 month and not making eye contact with mother since 1 day with starring episodes.

Further workup revealed right squint, hypotonia exaggerated knee reflexes, pale right optic, high levels of lactate. Altered signal intensities in bilateral basal ganglia, periaqueductal grey matter and medial temporal regions on MRI.

VEP- mild slowing of P100 latency bilaterally indicating delayed maturity. A diagnosis of Mitochondrial encephalomyopathy- Leigh disease was made, started on multivitamins, coenzyme Q and carnitine and antiepileptics . Baby's condition improved and was discharged with the same.

Leigh syndrome is known to have a poor prognosis, with no definitive treatment, however precautions should be taken to prevent seizure activity with antiepileptics and supplement the child with a range of vitamins riboflavin, thiamin, coenzyme Q10 in order to improve mitochondrial function and other supplements like biotin, creatine, succinate, idebenone and high fat diet.

Avoid the use of phenobarbitone and valproate as theya re known to have a inhibitory effect on mitochondrial respiratory chain.

CONCLUSION-

Mitochondrial encephalomyopathies are a rare disorder which when diagnosed and managed can help in better lifestyle of the child.

Thank you.

A Rare Case Of Intellectual Disability

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Introduction:

Genetic disorders associated with cerebellar vermis hypoplasia and pontomesencephalic molar tooth sign may be associated with hypotonia,ataxia,global development delay ,characteristic breathing abnormalities (apnea,hyper apnea),nystagmus,strabismus,ptosis and oculi motor apraxia.

Associated systemic features include progressive retinal dysplasia,Colomboma,congenital heart disease,microcytic kidney disease ,polydactyls ,tongue protrusion and soft tissue tumours of tongue.

Case:

8 year old female child presented with complaints of delayed speech and delayed development of milestones.Child had significant antenatal history as the child cried after 10 minutes after birth.Development quotient in each domain is gross motor-25%;fine motor-12%;spcial-12%;language-25%.Currently,the child tells 2-3 words with meaning ,asks for food and toilet and scribbles.Anthropometry and vitals were normal.Nutrition was adequate.General physical examination showed left esotropia .Central nervous system examination revealed hypotonia and cerebellar signs were positive.Blood investigations revealed microcytic hypo chronic anemia .Other metabolic work up was normal.MRI Brain revealed hypoplastic cerebellar vermis with long action and thickening of superior cerebellar peduncles.EEG Brain was normal.BERA was normal.Opthalmology opinion suggested exotropia.The child was started with speech therapy,physiotherapy,glasses for left exotropia,oral iron therapy for anemia.Regular follow up was done every 2weeks .The child improved neurologically and child was able to make 2-3 sentences with meaning .

Conclusion:

Due to variability in clinical phenotypes a delayed diagnosis is possible.Management of such cases includes managing respiratory and feeding difficulties along with rehabilition for cognitive and behavioural problems.

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A Rare Case Of Congenital Hypomyelinating Neuropathy With Arthrogryposis

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Introduction : Congenital hypomyelinating neuropathy is a rare form of hereditary peripheral neuropathy characterized by nonprogressive weakness, areflexia, hypotonia, severely reduced nerve conduction velocities, and hypomyelination. Electrodiagnostic evaluation as an extension of physical examination may help to narrow the differential. If significant positive family history is present,reasonable to proceed with genetic tests.

Case : A case of preterm male baby born to a second degree consanguinous married couple with previous pregnancy of still birth female baby with arthrgryposis .No further evaluation was done .The second pregnancy was a spontaneous conception, antenatal scans suggestives of polyhydramnios with normal fetal karyotying. At birth ,baby was intubated in view of poor respiratory efforts and shifted to NICU. Baby was shifted to higher centre on day 11. At admission, baby was noted to be floppy with marked hypotonia and muscle wasting .Baby also had dysmorphic features in the form of masked facies , biateral ptosis with ophthalmoplegia ,high arched palate ,low set ears , temporal hallowing along with fixed flexion deformities of bilateral wrists ,fingers and ankles. On examination baby had tongue fasciculations and absent deep tendon reflexes . A differential of floppy neonate due to neuromuscular disorder and myopathy was considered.Nerve conduction study showed low amplitude compound muscle action potential .EMG was not suggestive of motor neuron disease. Muscle biopsy showed no significant histomorphological changes .Further narrowing down the differential genetic evaluation done showed mutations in contactin-associated protein 1 (CNTNAP1)

Conclusion:

In the current case ,baby had severe hypotonia with dysmorphic features along with significant obstetric history. Electrodiagnostic evaluation was suggestive of neural pathology. Whole genome sequencing done showed homozygous mutation in CNTNAP-1. CNTNAP-1 related congenital hypomyelinating neuropathy has been described as distinct form of hereditary neuropathy affecting both central and peripheral nervous system with or without arthrogryposis with high mortality in first few years of life.

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Developmental Delay Secondary to Nutritional Anemia

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Introduction: Malnutrition and feeding difficulties in growing children are common with an incidence of 47% of children were stunted, 16% wasted, and 36% underweight in India. Developmental delay is associated with multiple interrelated medical issues, one of which is lack of timely interventions to address inadequate nutritional intake leading to deficiencies and feeding difficulties.

Case: 2yr old male child presented with poor appetite, constipation, developmental delay compared to peers. Antenatal history of maternal anaemia and preeclampsia was present. Child was born by emergency LSCS in view of preeclampsia and was small for gestational age with low birth weight. Post-natal history was uneventful. Developmental history showed that child was able to stand independently and not run, hold a pencil well but did not draw. Diet history revealed inadequate calorie and protein intake along with faulty feeding practices. On examination, weight/height less than 3rd centile, MAC <11.5cm, pallor and frontal prominence was present. Systemic examination was normal. Laboratory workup done showed moderate iron deficiency anaemia with vitamin B12 and D deficiency.

The child was started on nutritional supplementation as per SAM protocol and diet correction was given.

Conclusion: Nutritional anemia can cause delay in the development of cognitive and psychomotor domain. Early intervention for antenatal and postnatal correction of maternal anemia plays a role in preventing anemia in children. Appropriate complimentary feeding practises must be emphasised and other interventions for developmental stimulation like play therapy and sensory stimulation with a good home environment also have an impact in the management of a child with malnutrition.

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Rickettsial Encephalitis presenting as Neuro Regression

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Introduction: Rickettsial illness is caused by obligate intracellular coccobacilli with severity ranging from acute febrile illness to multi-organ involvement with carrying high mortality. The most common neurological manifestations reported in Rickettsial infections include meningitis, encephalitis, and acute disseminated encephalomyelitis.

Case: A 5 year female child presented with excessive crying, fever and rashes on palms and soles for 3 days. Child's GCS was (E4V2M6) with Global hypotonia, neck rigidity, Kernig's and Brudzinski's positive. Investigations showed high CRP, ESR, low platelet. Infective work up was negative (WIDAL, DENGUE, WEIL FELIX). CT and MRI brain normal. Fundoscopy was normal. EEG showed frontal sharp wave discharges. Thyroid, serum ammonia levels were normal. Child showed neuro-regression in language domain. CSF analysis showed lymphocytes. Repeat Weil Felix showed agglutination (ox19). Child was treated with DOXYXYCLINE and CEFTRIAXONE for 10 days. Physiotherapy and speech therapy was done regularly. The irritability improved gradually through the course of treatment. Child was discharged at caretaker's request.

Discussion: Rickettsial disease should be considered in acute neurological manifestations, especially children coming from the endemic areas with fever, rash. Rickettsial infection is a relatively under-diagnosed entity in children with fever and rash, probably due to low index of suspicion and the lack of definitive diagnostic facilities.

Prevention: Prevention of Rickettsial infection is aimed at individual control and epidemic measures (especially in epidemic typhus), vector and rodent control, milk pasteurization (in Q fever), chemoprophylaxis and immunoprophylaxis. For short-term high-risk exposure, doxycycline may be an effective prophylaxis of illness but may not prevent infection with scrub typhus or spotted fever group Rickettsiae. At present, for specific prevention by vaccination, only Q fever vaccines are available for common use.

Rehabilitation: Physiotherapy regularly along with speech therapy to continue until clinical improvement in tone and language domain.

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Neuroregression in vitamin B12 Defieciency

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Introduction

Vitamin B 12 deficiency in infants occurs in exclusively breast fed infants of mothers on strict vegetarian or vegan diet or malnourished infants. The affected infants have normal development during the first 4 to 6 months of their life and later present with neurological manifestations. Infantile tremor syndrome is a common manifestation of Vitamin B12 deficiency.

Case report

8 month old male, first order child born to a non consanguinously married couple with no significant birth or family history with came with history of vomiting since 15 days and reduced activity since 15 days with regressions of milestones noted with one episode of seizures. Since past 15 days, mother gives history of regression of milestones with no social smile, not able to roll over, does not reach out for objects, does not alert to sound or coos and babbles which the child was able to do before. Examination showed hyperpigmentation over knuckles, axilla and groin. CNS examination revealed hypotonia in all four limbs. Investigations: vitamin B12 <150, normal folic acid with macrocytic anaemia. MRI Brain showed diffuse cerebral atrophy. Child was started on therapeutic doses of Inj. Vitamin B12. Child's condition improved and was able to recognize mother and grasp objects. Head lag was present but could roll over. Hypotonia improved.

Discussion

Infants with vit B 12 have normal development during the first 4 to 6 and neurological manifestations occur in the form of seizures, hypotonia, irritability, developmental delay, regression and movement disorders. Involuntary movements like tremors, myoclonus supervene which are often triggered by intercurrent infections and sometimes, paradoxically by treatment with vitamin B12 (Infantile tremor syndrome). Treatment with vitamin B12 has shown significant improvement in neurological manifestations and general condition. Cerebral atrophy and nerve demyelination reverse within several months and growth was resumed.

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Perinatal Asphyxia: As a Consequence of Antenatal Insult

Dr. Apoorva, Dr. Pradeep, Dr. Sharanabasavesh

Introduction Perinatal asphyxia refers to a condition when fetal gas exchange becomes impaired during pregnancy and labor, leading to acidosis, hypoxia, and hypercarbia. The diagnosis of hypoxic ischemic encephalopathy is based on clinical and laboratory evidence of acute or subacute brain damage due to asphyxia. Approximately 23 percent of neonatal deaths worldwide are caused by Birth asphyxia. A survivor of moderate or severe HIE is at risk of death or severe disability by 60%.

CASE: We report a 1-day old male baby who was born by Normal Vaginal delivery in an outside hospital to a Primigravida mother a term gestation with no known comorbidities. The baby said to have not cried immediately after birth, was kept in NICU for observation. At 36 hours of life, baby presented to us after an episode of seizures. At presentation, baby was diagnosed with Hypoxic Ischaemic Encephalopathy Stage 2 in shock with severe metabolic acidosis. 2D ECHO done showed severe biventricular dysfunction with reduced ejection fraction of 35 %. Investigations done revealed Deranged coagulation profile, with raised creatinine, Hyperkalaemia and Hyponatremia. TMS done was normal. Thus, final diagnosis of HIE stage 2 with Asphyxial kidney Injury and Asphyxial myocardial injury was made. Baby was managed for the above and discharged on oral phenobarbitone.

At 6 weeks of life, MRI brain revealed Multicystic Encephalomalacia, as a consequence of Perinatal Asphyxia.

DISCUSSION: The onset of leukomalacia due to intrapartum insult typically occurs between 3 months and 6 months. Prenatal factors may contribute to an early presentation of leukomalacia at 6 weeks.

A number of antenatal factors have been identified, including severe hypotension during pregnancy or hypertension during pregnancy, antepartum haemorrhage, a history of stillbirth, fewer antenatal visits, oligohydramnios, maternal fever, maternal anaemia, young mothers, advanced mothers, socioeconomic disadvantages, and undernutrition, though little is known about the underlying causes. In a study published by JIPMER, primiparity was found to be a significant risk factor for severe asphyxia. Primiparous women are often unaware of the demands of pregnancy and neglect regular antenatal care. As a result, complications may occur that result in perinatal asphyxia.

In newborns with HIE, approximately 23 % die in the neonatal period; 25 % live but suffer permanent neurodevelopmental abnormalities such as cerebral palsy, poor IQ, learning/cognitive disabilities and visual impairments.

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GLOBAL DEVELOPMENTAL DELAY-GROWTH JUST DELAYED, NOT STOPPED

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Introduction:

GDD is defined as significant delay (at least 2 standard deviations below the mean with standardized developmental tests) in at least two developmental domains in children under 5 years of age.

Case:

A 3.5 yr old child born by 2oCM; presented with complaints of delayed development of milestones.Child had significant antenatal history as child was born preterm by emergency LSCS due to oligohydramnios with IUGR(?impaired neurological growth) and NICU stay for 15 days and an episode of febrile seizure at 11 months of age(started on Levateracetam).Child had further episodes of GTCS at 14 month and 17 months of age(diagnosed with seizure disorder and started on Eptoin).Developmental quotient in each domain:Gross motor- 14% ;Fine motor-14% ;Language-9% ;Social-7% .Child currently sits with support ,transfers objects bimanually ,smiles sometimes and makes sounds.Anthropometry-microcephaly.Vitals-stable.GPE-squint (left esotropia).CNS examination-upper and lower limb spasticity,decreased trunk control,diminished reflexes,extensor plantar reflex and cerebellar signs were positive.MRI Brain-Global cerebellar hypoplasia and hypomyelination.EEG Brain-abnormal.BERA-normal.Blood investigations-Normal.

Conclusion:

For all children, in addition to routine surveillance, developmental screening using standardized tools should be done at 9-12 months,18-24 months, and at school entry; whereas, for high-risk infants, it should be done 6-monthly till 24 months and yearly till 5 years of age; in addition to once at school entry. All children, especially those diagnosed with GDD, should be screened for ASD at 18-24 months, and if screen negative, again at 3 years of age. Early intervention programs are helpful for these children, and the addition of structured home activity programs may augment the effects on developmental progression.

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ABERNETHY MALFORMATION PRESENTING WITH BRAIN ABSCESS: A CASE REPORT

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BACKGROUND: Abernethy syndrome is a rare congenital vascular anomaly with prevalence of 1 in 30,000-50,000 cases. It has been classified based on the pattern of anastomosis between the portal vein (PV) and inferior vena cava (IVC) and the presence or absence of an intrahepatic portal venous supply.

CASE REPORT: A 6 year old female child with normal birth and development presented with low grade fever spikes and status epilepticus.She was found to have cyanosis and gradeIII clubbing. Systemic examination was normal. MRI brain with contrast showed ring enhancing lesion along the lateral aspect of left central gyrus with peripheral blooming and surrounding vasogenic edema.

As child had persistent desaturation,cyanosis and clubbing, She was further evaluated with 2D ECHO which showed findings suggestive of pulmonary AV malformation.CT ANGIOGRAM showed mildly confluent branches of pulmonary arteries and further CECT abdomen showed dilated splenic and inferior mesenteric veins with Porto systemic shunt between IMV and left internal iliac veinconfirming the presence of Congenital porto-systemic shunt with QP/QS: 1.1:1, flow across the port venous fistula - 4.5cc.

Child underwent left parietal burr hole and neuronavigation guided biopsy and aspiration of the left subcortical ring enhancing lesion. Aspirate culture showed no growth and biopsy was suggestive of an abscess.AFB and gram stain was negative. Blood CMV IgM was positive and she was treated accordingly. During follow up, there was no further increase in the size of the abscess or increased flow across the shunt.

CONCLUSION: Congenital portosystemic shunt carries risks of severe complications such as portopulmonary hypertension, hepatic encephalopathy and hypoglycemia. The Surgical treatment of the patients either by shunt occlusion or transcatheter coiling depends on the site of the shunt, associated congenital anomalies and the extent of liver damage. Some cases may require liver transplantation also.

Child presenting with cyanosis with no cardiac or respiratory cause, should be evaluated further with USG abdomen to rule out portosystemic shunt. Early diagnosis, careful evaluation, and appropriate management results in fully relieving symptoms including cyanosis and improved quality of life.

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A RARE CASE OF NMOSD WITH ANTI- MOG ANTIBODY POSITIVITY

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INTRODUCTION: Neuromyelitis optica spectrum disorders(NMOSDs) classically present with episodes of optic neuritis and/or transverse myelitis. Presence of pathogenic antibodies to the astrocyte water channel protein aquaporin-4(AQP4), particularly at the blood brain barrier and incorporation of these antibodies into the 2015 revised diagnostic criteria for NMOSDs have helped to distinguish AQP4-Ab–related disorders from other demyelinating conditions. However, Anti-MOG-Ab(Anti-Myelin oligodendrocyte glycoprotein antibodies) haverecently been identified in many antibody-negative presentations, withoutreports of both antibodies being present in a single individual[1].

CASE: We report a case of a 14 year old adolescent male who presented with fever, pain and weakness of bilateral lower limbs and difficulty in walking for 3 days. Examination revealed decreased power in hip flexors, extensors, abductors and adductors. Bilateral lower-limb reflexes were brisk and bilateral plantar reflex extensor.

Reduced perception of pain, temperature pressure from T4 level upto L5. Rombergs sign was positive with an unsteady gait. MRI spine revealed hyperintensities in cervical column C4-C5 with few non-enhancing hyperintensities in dorsal spinal cord. Nerve conduction study done showed decreased amplitude in left common peroneal nerve.VEP done showed prolonged P-100 latency in both eyes (R>L). Lumbar puncture done and CSF analysis was normal. Anti-MOG antibodies were strongly positive and was started on Methylprednisolone pulse therapy. Patient improved clinically, able to walk independently, weakness and swaying reduced. On follow up, child improved with no residual weakness.

DISCUSSION : NMOSD and anti-MOG syndromes are immune-mediated demyelinating conditions of the CNS that mostly involve optic nerves and spinal cord. Anti-MOG syndromes result from damage to MOG, a membrane protein on oligodendrocyte cell surfaces and outermost surface of myelin sheaths. About two-third of NMOSD patients test positive for AQP-4 antibody, one third of AQP-4 antibody negative NMOSD patients are detected positive for anti-MOG antibody. Patients with NMOSD with MOG antibodies have distinct clinical features, fewer attacks, and better recovery than patients with AQP4 antibodies or patients seronegative for both antibodies.[2]

CONCLUSION: About one-third patients have isolated Anti-MOG antibody positivity which has shown favourable response to treatment with steroids in early course of diseasepreventing disabilities.

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Acute encephalitis in pediatric multisystem inflammatory syndrome associated with COVID-19

Authors : Dr Mansoor Shazaman Ulla Khan, Dr Somashekhar A R

INTRODUCTION:

MIS-C is a post infectious immune mediated hyperinflammatory syndrome with involvement of multiple organs and is treated with IVIg and steroids. CNS presentation is as focal CNS disease or as widespread involvement causing acute disseminated meningoencephalitis.

CASE:

A 1 year 10 month old female child with normal developmental history presented with complaints of fever since 5 days, 1 episode of right sided focal seizures lasting for 30 minutes and altered sensorium since 1 day. On examination child had GCS of 9/15 with hypotonia of all 4 limbs with hyper reflexia and bilateral extensor plantars. Investigations included elevated CRP levels. CSF analysis showed aseptic meningitis and CSF for HSV DNA PCR and JE IgM antibody tests were negative. EEG showed slowing of background rhythm over posterocentral leads comprises of 4-5hz theta and frontotemporal leads reveal 18-19hz beta intermixed with 1-2hz delta. MRI showed bilaterally symmetrical areas of diffusion restriction in basal ganglia, caudate, midbrain and left temporal lobe with significant enhancement and enhancing meninges over bilateral cortical sulci. Drop in GCS to 6/15 required support of mechanical ventilator and in view of persistent fever spikes, covid antibodies and inflammatory markers sent were markedly elevated. MIS-C associated with Covid 19 was considered. Child was administered 2g/kg of IVIg over 2 days and other treatment as per MIS-C protocol. Childs condition improved and child was extubated by day 10 of admission.

CONCLUSION :

In the current post covid scenario, MIS-C encephalitis should be considered as a part of acute encephalitis syndrome. The detection through neurological evaluation and distinctive EEG patterns will allow timely diagnosis and treatment of these cases. There is a need for rehabilitation in the form of physiotherapy aiming at bed mobility activities and oromotorretraining to make child perform his /her daily activities at ease.

ADEM , EARLY SYMPTOMS WITH LASTING DEFICITS

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Introduction: Acute disseminated encephalomyelitis (ADEM) is a rare disease of central nervous system with myriads of presentation. It is a diagnosis of exclusion and relies on neuroimaging which may be normal at the onset. It is a diagnostic challenge at its first attack. Here we present a case of ADEM which initially presented with atypical feature but later turned out to be a case of ADEM. Early diagnosis and treatment holds the key for favorableoutcome.

Case report: A 3 year old female child, was brought to hospital with complaints of two episodes of Seizures and altered sensorium. She was evaluated at emergency and her GCS was 10/15 (E4V3M3). On examination, he was in altered sensorium; tone was increased in upper and lower limb with brisk deep tendon reflexes. Plantars were upgoing and cranial nerve examination was normal. No meningeal sign was present. She was started on with IV antibiotic (ceftriaxone), and supportive measures. Prior to this she had fever for 5 days along with mild cough and cold. Initial CT done in an outside hospital showed bilateral hypodensities suggestive of demyelination. Steroids were started in view of demyelinating disorder after ruling out other infective causes. MRI Brain Plain and contrast done showed bilateral hemorrhagicencephalitis.Levipil dose was increased.Anti MOG antibodies in CSF done and was negative for it.Oligoclonal bands in CSF and serum done and was negative. After ruling out other demyelinating conditions and the based on the clinical presentation, the diagnosis of Acute Demyelinating Encephalo Myelitis was made. Pulse therapy with Methylprednisolone was given for 5 days followed by maintenance therapy. IvIg also was transfused. Initially the child was irritable with altered sensorium. Gradually the irritability subsided and sensorium improved. Tube feeds were initiated and gradually changed over to oral feeds. However due to posturing, child developed contractures although physiotherapy was initiated at an early stage. Physiotherapy was continued and splint was applied. Child was later discharged with oral steroids and physiotherapy. 8 weeks later, on follow up, child's higher mental functions have returned to pre disease state, however she continued to have difficulty in walking due to spasticity of bilateral lower limbs and possible contracture development. She continues to be on physiotherapy with monitoring of growth and development and also on follow up with psychiatrist for Cognitive Behavioural Therapy

Conclusion: Acute Disseminated Encephalo Myelitis, an acute demyelinating condition , needs prompt early diagnosis and work up. Early treatment and intervention is necessary to prevent long term neurological deficits.

ATYPICAL PRESENTATION OF MIS IN NEWBORN

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INTRODUCTION

• Multisystem inflammatory syndrome in Neonates (MIS-N) is a post-infectious immune mediated condition, seen 3–5 weeks after COVID-19.

• Maternal SARS-CoV-2 may potentially cause a similar hyperinflammatory syndrome in neonates due to transplacental transfer of antibodies (SARS-CoV-2 IgG),which is temporally related to maternal antennal SAR's-CoV-2 exposure.

CASE REPORT

Male baby born out of vacume assisted vaginal delivery with POG 40+6 weeks with birth weight 2.62kg, cried after tactile stimulation. Initial assessment showed no dysmorphic features.

Mother was covid positive in her 3rd trimester of pregnancy; vaccination status unknown. APGAR 1 minute: 7/10 ,5 minutes: 8/10 .Baby was noted to have tachypnea and retractions, hence was shifted to NICU for observation. Initial clinical Dx – TTN at 2 hrs of life

AT 10HRS- tachypnoea + I/C retractions were noted and baby was connected to CPAP, paleness of palms, feeble pulses and cold peripheries were felt? Thromboembolic phenomenon

ACTIONS TAKEN: Immediate rewarming (No prick in the limb) ,Vascular surgery opinion taken and doppler done - Radial and ulnar artery signals normal .Suspicion of MIS –N ,Started on Enoxeparin – 0.75 mg/kg/day .Investigated for COVID Antibodies(positive), Inflammatory markers(raised CRP, ferrittin, D- dimer levels).Chest Xray showed features of ARDS.Clinical response within 6 hrs of IVIg,Marked decrease WOB – weaned off CPAP in next 12 hrs ,No further thrombotic/ embolic episodes were noted. On day 5 of life :No distress noted,OnDBF .No further thrombotic/ embolic events ,Hemodynamically stable ,Baby was discharged on oral aspirin for 4 week.

A RARE GENETIC VARIANT MUTATION - CASE REPORT ON EARLY ONSET DYSTONIA IN A CHILD

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Dystonia is one of the most frequent movement disorders in childhood. It is estimated to be the third most frequent movement disorder worldwide. It can impede normal motor development and cause significant motor disability. Dystonia can be focal, segmental, generalized, multifocal, hemi dystonia. The diagnostic evaluation of childhood dystonia is challenging due to the phenotypic variability and heterogeneous etiologies[1]. Dystonia is a clinically and genetically heterogeneous condition that occurs in isolation - isolated dystonia, in combination with other movement disorders -combined dystonia. Early onset dystonia(previously known as primary torsion dystonia) refers that begins in infancy and childhood(3-14 years) , many of these are genetic or idiopathic causes. It solely presents with focal dystonia (usually begins in legs)slowly progress to generalized dystonia ,there are no additional neurological ,laboratory or imagine abnormalities. Cognitive and intellectual abilities remain intact[2].

CASE REPORT: 7 year old female child ,2 order born to 2 degree consanguious marriage presented with the complaints of difficulty in walking ,not able to stand even with support & B/L stiffness in the lower limb since 2 years .There was no stiffness noted in the upper limb. Antenatal ,Perinatal history was uneventful,child attained developmental milestones as per age, no delay. No similar history/neurological manifestation in the family. Apart from the dystonic manifestations described above, no other central and peripheral nervous systems manifestations were present. The patient's cognitive status and brain& spine MRI was normal. Child was evaluated for Wilson disease with serum ceruplamin which was reported as normal. Trial of levodopa was given but child showed no improvement clinically .We carried out genetic testing by means of whole exome sequencing, which detected TOR 1A gene –dystonia -1 torsion.child was treated with deep brain stimulation.child responded well with the treatment.Currently is child is able to walk with support.

CONCLUSION: The DYT1 (TOR1A) form of hereditary dystonia is mainly a generalized dystonia, which is inherited by an autosomal dominant mode accounts for 40 to 65% of early onset dystonia TOR1A gene (also known as DYT1) covers an 11k bp region in chr9 and it is consisted of 5 exons[1]. Most mutation carriers do not express clinically apparent disease ,hence because of reduced penetrance ,DYT-TOR1A should be considered even with negative family history. However, TOR1A gene remains the most extensively studied and related to a variety of phenotypes.

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QUALITY OF LIFE IN A NONCOMPLIANT CHILD WITH PHENYLKETONURIA: CASE REPORT

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INTRODUCTION: Phenylketonuria (PKU) is autosomal recessive disorder caused by deficiency of phenylalanine hydroxylase(PAH), which converts phenylalanine to tyrosine. Global prevalence being 24,000. In severe PAH deficiency, plasma phenylalanine is >1200µmol/L, milder variants have 600-1200µmol/L. Phenylalanine restricted diet is required to prevent neurological damage. Normal levels being 20-150µmol/L. It's recommended to maintain level 120-360µmol/L in PKU patients.

CASE REPORT:
A 11 years boy, fourth born to third degree consanguineously married couple, comes with history of restlessness, lack of interest, shows no response when called or does not follow simple commands, engaged in self, lack of awareness to surrounding, points towards his need and is nonverbal. History of developmental delay, diagnosed with Phenylketonuria at 7 years of age, was advised PKU diet. Compliance to treatment was poor due to poor financial status and lack of dietary importance towards the disease.
Family History: His elder sister, also has mild intellectual disability with recent Serum Phenylalanine levels 1172.67µmol/L on non PKU diet since birth. Mother has history of 2 abortions and two still births. His first cousin was diagnosed with PKU at 5 months, on PKU diet, presently the child is 5years old and has mild language delay.
On Examination: Microcephaly, hypopigmented blonde hairs with light skin color, growth retardation, stereotypical movements seen. Child has no eye contact, does not respond to name or follow command, non-verbal. CNS: Increase tone, Hyperreflexia, spastic gait, Power >4/5, SMR stage I. Behavioral disorders (ADHD, ASD) present.

Laboratory:

Date	Sr Phenyl alanine (µmol/L)	Tyrosine (µmol/L)
5/12/2018	1370.92	41
31/7/2019	917.63	29
1/12/2022	973.93	42.39

DISCUSSION: Untreated PKU is associated with an abnormal phenotype including growth failure, microcephaly, seizures and intellectual impairment caused by the accumulation of toxic by-products of Phenylalanine metabolism. It is important to monitor vitamin mineral and essential fatty acid status, especially in those who do not consume sufficient amino acid formula.
CONCLUSION: Early diagnosis with strict dietary restriction helps in better neurological and behavioral outcome.

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RICKETTSIAL MENINGOENCEPHALITIS IN A CHILD – A CASE REPORT

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Introduction

Rickettsial infection usually presents with fever and rashes, presenting with CNS manifestations is rare. Severe central nervous system involvement has been reported in adults with Rickettsia infection but rarely in children. Rickettsial infection is a relatively under-diagnosed entity in children, probably due to low index of suspicion and the lack of definitive diagnostic facilities. It can be treated effectively with anti-microbials; if they remain undiagnosed and untreated, they are associated with significant morbidity and mortality.

Case report

A 12 year old child came with the complaints of fever since 7days, vomiting for 2days, stiffening of all 4 limbs on day4 of illness. CSF analysis was suggestive of viral or tubercular meningitis, hence broad-spectrum antibiotics with ATT was started in outside hospital. He was referred to our hospital i/v/o worsening GCS and persisting fever. On arrival, child had poor GCS, impending respiratory failure. On examination, there was raised ICP features which was managed with anti edema measures and antiepileptics. Chest X ray was showing left sided pleural effusion, USG chest was showing minimal effusion and diagnostic pleural tap was suggestive of exudative type of effusion and CBNAAT was negative. Suspecting Rickettsial infection as the area is endemic for Rickettsial fever and persisting fever spikes, (even though Rathi score was low) Weil Felix was sent, which was positive, hence Doxycycline was added and ATT was stopped as there was no evidence of Tubercular pathology. Child's sensorium improved, fever spikes reduced, extubated on day5. Child was discharged on day12.

Conclusion

As Rickettsial infection is on the rise in endemic areas and has varied presentation, the diagnosis should be largely based on high index of suspicion and careful clinical, laboratory and epidemiological evaluation supported by cost-effective tests like Weil Felix.

INFANTILE TREMOR SYNDROME – CASE REPORT

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INTRODUCTION

Infantile tremor syndrome (ITS) a clinical entity characterized by tremors, skin pigmentation, anemia, developmental and mental regression. It is most commonly found in Indian subcontinent and in children who are exclusively on breast feeding of vegetarian mother. Amongst all the etiological theories, nutritional theory is the most accepted one. They will have tremor of acute onset, prominent in distal limbs and involving head & disappeared during sleep. Treatment of nutritional deficiency includes vitamin B12, multivitamins, folic acid, iron, calcium, zinc, magnesium and high protein diet.

CASE REPORT

A case of 10 months old female child fully immunized and exclusively breastfed till 8 months presented with history of tremors in upper limbs and rapidly progressing to whole body. On examination child had knuckle pigmentation with pallor, dry lustrous and scanty hair and developmental delay. Systemic examinations including RS, CVS and PA showed no abnormality. CNS examination showed hypotonia and coarse tremors. CBC and PS was suggestive of macrocytic anemia hence vitamin B12 level w done which showed 112.5 pg/ml. Child was treated with vitamin B12 @1000mcg IM OD for 1 week, alternate day for 1week, twice a week for 1 month, once a week for 1 month, monthly twice for 1 month, monthly once for 3 months and other supplements like folic acid, vitamin A, multivitamins was given. Child developed tremors after giving 2nd dose of B12 which disappeared during sleep. Tremors initially increased in intensity, which is quite normal and parents were reassured however general activity and alertness increased. Child was discharged on Vit B 12 injection after 1 week.

CONCLUSIONS

ITS is common in infants of Indian mothers who are Vegan, this might infer that antenatal supplementation of all mothers with Vitamin B12 along with IFA tablets is essential , to prevent ITS in infants.

INITIATION OF HIGH DOSE STEROID THERAPY BEFORE STARTING HIGH DOSE ACTH IN WEST SYNDROME

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Background :
Infantile spasms (IS), or West syndrome, is an epileptic syndrome characterized by epileptic spasms, hypsarrhythmia on electroencephalography (EEG), and high risk of neurodevelopmental regression. Its one of the commonest causes of epilepsy in infants and young children and is a significant contributor to neurodevelopmental morbidity. Multiple regimens for treatment are in use. Diagnosis should be based on clinical recognition of spasms and presence of hypsarrhythmia or its variants on electroencephalography. A magnetic resonance imaging of the brain is the preferred neuroimaging modality. Other investigations such as genetic and metabolic testing should be planned as per clinico-radiological findings.

CASE STUDY :
A 2year 2month old male toddler first born to non consanguinous married couple with significant birth history of perinatal hyoxic ischemic insult and no significant family history, completely immunised as per schedule with global developmental delay, history of poor visual tracking noted since birth came with c/o seizures since 1year of age and on polytherapy refractory to medicines .On examination – vitals stable, microcephaly (-1 to -2D), spasticity of all 4 limbs. Relevant investigaions were done and MRI suggestive of perinatal hypoxic ischemic insult of moderate severity. EEG was done which showed high amplitute , chaotic background with hysarrhythmia pattern and opthalmology evaluation showed corical vision impairement.

During the hospital stay child was treated with course of IV methylprednisolone 500mg pulse for 5days and antiepileptics doses were adjusted.
Results: As the high dose steroid therapy was started the seizure interval decreased from 10-15 episodes/day to 3-4episode/day and gradually regressed within week of starting the sterroid therapy.

Conclusion:
Adrenocorticotropic hormone (ACTH) or high steroids remains the first line of treatment in west syndrome. Both ACTH and high dose steroids have similar efficacy and adverse effects in west syndrome. High dose steroids therapy can be initiated before starting high dose ACTH, in response to therapy can continue steroids and taper it in few weeks. In case of non responders can change to high dose ACTH and then continue and incase of non responders of both therapy can change to second line – vigabatrin and other antiepileptics.

Case of Peroxisomal disorder

AUTHOR: DR YASHODA, DR AKS, DR BALAJI

INTRODUCTION

Peroxisomal disorders,
These are rare autosomal recessive disorders, that fail to form peroxisomes or defective protein function in peroxisomes. This leads to accumulation of various substances. Incidence is 1 in 50, 000 live births.

Case Presentation

6 months old male infant, third born to a non consanguinously married couple, with family history of spontaneous abortion and unexplained death of elder sibling in its infancy and past history of recurrent respiratory tract infection and history suggestive neuro degeneration, now admitted to hospital with complaints of fever, cough since two days, presented with tachypnea, subcostal and intercostal retractions. Treated with antibiotics and other supportive treatment. On examination, hypotonia, high forehead and cortical thumb was present, further evaluated and found to be having elevated plasma very long chain fatty acids suggestive of Peroxisomal disorder.

Conclusion:

Peroxisomal disorders can be mild, moderate, severe in presentation.
Zellweger syndrome is severe type and death occurs in infancy itself.
Above mentioned case has increased plasma very long chain fatty acids and it was severe in its presentation, hence likely to be zellweger syndrome.

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A CASE REVIEW OF SICKLE CELL WITH BETA THALASSEMIA

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KEYWORDS: Sickle cell anemia, Beta thalassemia, pediatric age group

ABSTRACT

Interaction of Hb S with beta thalassaemia is a very rare case,that has been reported in our institution. Sickle cell disease (SCD) is caused by a mutation in the sixth codon of the -globin gene on chromosome 11. which result in to a single amino acid substitution (β6 glu→val). In India, the Hb S is prevalent in the central part, in the eastern, western and southern tribal belt regions and among the tea tribe communities of Assam. Sickle-thalassemia is a rare variant of sickle cell disease (delta-beta thalassemia occurring in association with sickle hemoglobin, HbS), sparsely reported in literature. We describe a patient who presented with fever and abdominal pain with a negative family history for sickle cell disease. The HPLC report of the patient showed Compound heterozygous for Hb S- β thalassaemia. As this is a rare variant of SCD with potential complications, it is important to establish diagnosis towards planning comprehensive care.

INTRODUCTION

Sickle Cell Disease is a multisystem disease. Which is associatedwith multiple episodes of acute illness and progressive organ damage. It is the one of the most common severe monogenic disorders worldwide. We report a case of Sicilian (δβ)0-thalassemia, which is a rare variant of Sickle Cell Disease. HbS.β thalassemia is a double heterozygote state of HbS and β thalassemia. Clinical features and hematologic findings are determined by β thalassemia gene. Clinical pictures are resembles that of thalassemia intermedia. Like mild growth retardation, pallor, splenomegaly, vasoocclusive crises, leg ulcers and aseptic necrosis of femoral heads. Peripheral smear shows microcytic hypochromic RBC, basophilic stippling and target cells. MCV and MCH are decreased. There is increase in Hb F and Hb S levels. Prognosis Is better than that of thalassemia majoror sickle cell anemia.

CASE PRESENTATION

A 4 yrs old male patient, 1st issue of 2nd degree consanguinity, admitted at Dr. DY Patil Medical college, Kolhapur, Maharashtra, India,with following complaints.

Fever since 4 days, high grade with chills, no diurnal variation, temporarily relieved by medication , fever became mild since last night.

Abdominal pain since 3 days. Gradual onset mild vague pain in the left hypochondrial region. Associated with loss of appetite.

On examination:-

Severe pallor+, mild ictreus+

Frontal bossing+, flat nasal bridge+

Hr 126/min

Rr 28/min

PP Well felt

Bp 100/60 mmhg (in btw 50th and 90th percentile)

Systemic examination:-

Per Abdomen:

Soft, nontender, liver just palpable, spleen palpable 7cm below LCM

Other system are within normal limit.

We sent CBC which show Hb 8.1g/dl,Tlc 8300/mcrl, Tec 3400000/mcrl

PCV 26.5%, MCV fl, MCH 23.6pg, MCHC 30.6gm/dl. RDWCV 22.2%. Peripheral smear shows 97% Nucleated RBC. So the bloodparameters are in favor of thalassemia intermedia. So we sent sample for high-performance liquid chromatography (HPLC). The result shows

Foetal Haemoglobin (HbF) 22.5 % , Haemoglobin A0 (Hb A0) 3.6 % 94%, Haemoglobin A2 (HbA2) 4.0 % , Haemoglobin S (HbS) 69.9%. Surprisingly this reports are suggestive of Sickle Cell Disease (? Homozygous HbS) (? HbS - Beta Thalassaemia). To confirm this we did parental HPLC.

HPLC report of father shows Foetal Haemoglobin (HbF) 0.3 % Haemoglobin A0 (Hb A0) 55.7 % Haemoglobin A2 (HbA2) 3.2 % Haemoglobin S (HbS) 40.8 % which Suggestive of Sickle Cell Trait.

HPLC report of mother shows Foetal Haemoglobin (HbF) 0.4 % Haemoglobin A0 (Hb A0) 95 % Haemoglobin A2 (HbA2) 4.6 %which Suggestive of Beta Thalassaemia Trait.So the both parentel report suggestive of Father is sickle trait and mother is thal trait so Patient is double heterozygous, that is Sickle thalassemia.

DISCUSSION

δβ-thalassemia is characterized by decreased or absent synthesis of the delta- and beta-globin chains with a compensatory increase in expression of fetal gamma-chain synthesis. The condition is found in many ethnic groups but is most common in Greece, Italy, Middle east and India.

Homozygotes for δβ-thalassemia have 100% HbF and,because of the increased synthesis of HbF, may have thalassemia intermedia rather than thalassemia major. The heterozygous form of the condition phenotypically resembles B thalassemia trait but HbA2 is often normal while HbF is elevated varying from 5% to 20%.

Since homozygous -thalassemia presents an identical HPLC finding as homozygotes of hereditary persistence of fetal hemoglobin of 100% HbF, the clinical findings of mild hemolytic anemia rule in favor of -thalassemia rather than HPFH . Family studies also play a role in eliciting the correct diagnosis (thalassemic features Sicilian (δβ)0-thalassemia presents a deletion of 13,379-bp spanning δ-IVS2 to a region located 3′ from the β-globin gene within an L1 repeat.

Sickle-(δβ)0-thalassemia is a rare Sickle Cel Disease. variant that has been sparsely reported worldwide . These cases were described to have mild microcytic anemia, as well as Sickle Cell Disease complication which include multiple episodes of VOC (in some cases this occurred prior to diagnosis), osteomyelitis, multifocal avascular necrosis, cholelithiasis, and osteonecrosis.

In our case also the patient had severe anaemia, weakness and complained of abdominal pain. On physical examination hepatosplenomegally was observed in the patient. Only after our diagnosis report, th parents of the patient became aware abou their Hb variant carrier state.

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INDIA COMHAD 2022

ABSTRACTS

Paper

ACUTE NECROTIZING ENCEPHALOPATHY OF CHILDHOOD (ANEC)

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BACKGROUND AND AIM :

ANEC is a fatal condition that was first described by Mizuguchi et al. in the year 1997. He also gave the criteria for the diagnosis of the same. ANEC is mainly diagnosed based on clinical & typical MRI findings.

Indian data of ANEC is primitive and hence this study was planned. We hereby report a series of 5 cases of ANEC that presented to us between August 2019 to September 2022.

The aim of this case series is to analyze & summarize the clinical picture, laboratory & MRI findings in ANEC.

METHODS:

ANEC was suspected based on clinical and radiological characteristics and diagnosis was made based on diagnostic criteria proposed by Mizuguchi et al.

In this study we included 5 children who met the criteria as described by Mizuguchi et al.Retrospective review of cases at Department of Paediatrics, ESICMC & PGIMSR,Bangalore between August 2019 to September 2022 were done after taking parents consent & were analyzed.

The children included in this study were ranging from the age of 9- months to 16 years-All of them underwent Pre & post contrast MRI brain. The MRI Images were reported by experienced radiologists-Relevant blood investigations & CSF analysis were done & analyzed.

RESULTS:

Total 5 cases were analysed.

Sex distribution –All the children were female

All cases had precedent viral illnesses and had fever, coryza, diarrhoea.

The initial neurological symptoms included seizures and status epilepticus (n=4), altered sensorium (n=5), posturing (n=4),features of raised ICT (n=5)

MRI brain revealed characteristic thalamus involvement with varied involvement of midbrain, pons, medulla (n=5).

CSF analysis showed normal in majority children, liver enzymes elevated in 4 children and one child with JE igM antibodies –positive,dengue NS1 antigen positive in one child.

In all 5cases CSF viral panel was negative.

4 out of 5 cases survived, responded to physiotherapy and rehabilitation.

1 children had complete recovery with disability in 3 cases.

CONCLUSIONS:

ANEC is a clinico-radiological syndrome. Early detection and appropriate treatment improve outcome in ANEC.

Keywords : ANEC(ACUTE NECROTIZING ENCEPHALOPATHY OF CHILDHOOD)

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DIAGNOSTIC CRITERIA OF ANEC PROPOSED BY MIZUGUCHI

S. no.	Diagnostic criteria
1	Acute encephalopathy following viral disease, with seizures and deterioration of consciousness.
2	Absence of CSF pleocytosis, CSF protein is commonly increased.
3	Neuroimaging findings of symmetric, multifocal brain lesions involving the bilateral thalami, upper brain stem tegmentum, periventricular white matter, internal capsule, putamen and cerebellum.
4	Elevation of serum aminotransferase level to a variable degree. No increase in blood ammonia.
5	Exclusion of any resembling disease.
5A	Clinical differential diagnosis; toxic shock syndrome, haemolytic uremic syndrome, Reye syndrome, hemorrhagic shock and encephalopathy syndrome, and heat stroke.
5B	Radiological (or pathological) differential diagnosis; Leigh encephalopathy, glutaric acidemia, methyl malronic aciduria, infantile bilateral strial necrosis, Wernicke encephalopathy, carbon monoxide poisoning, acute disseminated encephalomyelitis, acute hemorrhagic leukoencephalitis, arterial or venous infarct, severer hypoxic or traumatic injury.

Behavioral problems in children with asthma and their association – A cross sectional study

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Background: Asthma is a chronic illness involving the airways in the lungs and children are more susceptible. A strong link between asthma and psychiatric illnesses has been established. Hence, psychological factors govern its management.

Objective: The objective of the study was to assess the self-esteem and behavior of asthmatic children.

Materials and Methods: The cross-sectional study was conducted at the Department of Pediatrics of a Tertiary Hospital of South India. Asthmatic children between 6 and 16 years of age, diagnosed as mild to moderate, visiting the asthma clinic were included in the study. The respondents could either answer the questionnaire or point out their choices or indicate them verbally. Culture-Free Self-Esteem Inventory (CFSEI) by Battle (1981) was used for the study. Child Behavior Checklist by Achenback and Ederirock (1983) is designed to record in a standardized format the behavioral problems and social competencies of children, as reported by parents/guardians.

Results: A total of 70 children were enrolled in the study. There were 30 children each in the case and control group, with regular follow-ups to the clinic. The majority of the children belonged to the age group of 10–13 years (63.3%) in the case and 10–14 years (63.03%) in the control group. Among the cases, about 50% had at least 3 wheezing episodes. Among the number of inpatient admissions, 14 were admitted once, four were admitted twice, and one child had three admissions. The school absenteeism in case varied from 1 to 6 weeks per academic year. Mean self-esteem scales for boys were 10.36 in case and 13.05 in control ($p<0.05$) and the results were statistically significant. Parental self-esteem showed significant differences between the two groups. Mean self-esteem scales for girlswere 2.273 in general self-esteem and 0.132 in social self-esteem. These results had a highly significant correlation. Asthmatic children were found to have low self-esteem and those with chronic diseases had both higher depression score and low self-esteem.

Conclusion: Exacerbations in asthmatic children has to be minimized. The treating physicians should identify the associated psychological issues in asthmatic cases and address them with early identification, counselling, and therapy. Parents and the school teachers need to be educated regarding this aspect.

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Effectiveness of task-oriented approach on gross motor function and balance in children with cerebral palsy – A Narrative Review

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ABSTRACT

Background – A major problem for children with cerebral palsy is impaired motor skills. Previous studies show evidence in favour of task-oriented training in adults, concluding training is more effective when related to task. However, there is dearth in literature regarding effectiveness of TOT in paediatric populations

Objective – To understand effectiveness of task-oriented approach on gross motor function and balance in children with cerebral palsy using appropriate outcome measures, a narrative review

Methods – Studies published between 2012 and 2022 were screened on PubMed, Cochrane and Google Scholar databases using the keywords “cerebral palsy”, “task-oriented training”, “task-based approach”, “gross motor function”, “balance”

Result – A total of thirty-five relevant articles were retrieved, out of which ten were included in this study (excluded if data not available, not meeting inclusion criteria of children with cerebral palsy, below 18 years), of which six were randomized control trials and four were experimental trials. These studies showed positive statistical changes in outcomes of gross motor and balance functions in children with cerebral palsy using measures such as GMFM-88 (4), GMPM (1), BOT-2 (1), TUG (1), PBS (1), BBS (1)

Conclusion – Five studies showed clinical changes in both standing and walking/running/jumping components of GMFM-88. One study showed clinical changes in scores of TUG. Two studies showed clinical changes in scores of PBS and BBS each. Functional tasks such as sit-to-stand and stepping exercises, walking while crossing various obstacles, walking on balance beam and maintaining positions on sway board, etc were given during each study

Keywords – “cerebral palsy”; “task-oriented training”; “task-based training”; “gross motor function”; “mobility function”; “balance”

TO STUDY THE NEURODEVELOPMENTAL OUTCOME AT 1 YEAR OF LIFE AMONG THE NEONATES OF HYPOXIC ISCHEMIC ENCEPHALOPATHY TREATED WITH THERAPEUTIC HYPOTHERMIA USING BAYLEYS SCALE OF INFANT DEVELOPMENT

AUTHORS :-

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INTRODUCTION :-

Perinatal hypoxic-ischemic encephalopathy (HIE) remains a frequent cause of cerebral palsy, mental retardation, learning disability, and epilepsy. Neonatal encephalopathy (NE) in term or late preterm infant is ‘a clinically defined syndrome of disturbed neurological function in the earliest days of life manifested by difficulty with initiating and maintaining respiration, depression of tone and reflexes, subnormal level of consciousness and often by seizures. NE is estimated to occur in 2 to 5 of every 1000 live term births.

Up to one-quarter of these infants experience moderate to severe cerebral injury. Between 10 and 40% of affected infants will not survive and as many as 30% will exhibit significant long-term neurodevelopmental disability.

In developing countries, it is likely that the incidence is even higher, with fewer intact survivors. The financial, medical and social burdens of NE are poorly quantified, but undoubtedly substantial. Therapeutic hypothermia (TH) is a well-established neuroprotective therapy applied in (near) term asphyxiated infants. Hypothermia therapy for moderate to severe HIE has reduced significantly death or disability at 18 to 24 months of age.

Neonatal therapeutic hypothermia is a relatively new treatment option for oxygen deprivation at birth. Therapeutic hypothermia involves lowering an infant’s body temperature shortly after birth. This is done in order to reduce the chances of severe brain damage and slow down disease progression. While research is on going, many medical experts are advocates for this treatment and feel the benefits outweigh any risks.

Many experimental animal models and systematic reviews of randomised controlled trials have shown that both whole-body hypothermia and selective head cooling has a neuroprotective effect. It modifies the cells programmed for apoptosis leading to their survival.

Hypothermia may also protect neurons by reducing cerebral metabolic rate. Therapeutic hypothermia aims to lower the temperature of the vulnerable deep brain structures to 33-34° C. Hypothermia is not without risk and thus it is important to manage the patient safely during induction and maintenance of hypothermia and during the rewarming process.

1) To Assess the neurodevelopmental outcome using Bayley's scale of infant development III at age of 1 year among the neonates with moderate to severe hypoxic ischemic encephalopathy treated with therapeutic hypothermia.

2) To correlate the predictive value of MRI done at day 7 of life in the neurodevelopmental outcome among these neonates of HIE who received Therapeutic hypothermia

MATERIALS AND METHODS:

Source of Data

Study Group: The study will be conducted in neonates admitted to NICU of RRMCH in view of hypoxic ischemic encephalopathy receiving ther

apeutic hypothermia as the treatment. Cases will be selected based on inclusion and exclusion criteria admitted in - RRMCH BENGALURU.

Sample size- based on hospital based convenient sampling.

Study design: PROSPECTIVE STUDY

Study group: All neonates admitted to NICU at RRMCH with neonatal encephalopathy receiving therapeutic hypothermia as the treatment modality.

INCLUSION CRITERIA FOR THERAPEUTIC HYPOTHERMIA

A)	INBORN :- 1) Gestational age >/= 35 weeks	B)	OUTBORN 1) Gestational age >/= 35 weeks
2)	PHYSIOLOGICAL CRITERIA – ANY 1 OF THE FOLLOWING	2)	PHYSIOLOGICAL CRITERIA –
a)	ABG (UC/ 1ST postnatal hour) pH < 7.0 or ABE > -12	a)	Babies who did not cry immediately after birth
b)	APGAR score </=5 at 10 min	b)	Babies who required resuscitation
c)	Ventilation requires for at least 10 min	c)	Babies with APGAR score </=5 at 10 mins (if available)
3)	NEUROLOGICAL CRITERIA – Seizures or evidence of moderate or severe encephalopathy	3)	NEUROLOGICAL CRITERIA –
4)	Weight of >/ = 1.8 kg	a)	Seizures
		b)	Any evidence of neonatal encephalopathy
		4)	Weight of the baby > / = 1800 gms

Exclusion criteria:

1) Inability to start cooling the baby by 6 hours of life

2) Chromosomal abnormality

3) Major congenital anomaly

4) FiO2 requirement >80%

5) Fixed and dilated pupils

CONCLUSION :-

Our study shows the majority of neonates with HIE treated with Therapeutic hypothermia with MRI changes had mild to moderate language delay, both expressive and receptive language delay was noted. The 2nd domain to be affected was the cognitive development, about 50% of neonates had cognitive impairment , motor development was the least to be affected , about 30% of infants had delay in both fine and gross motor delay.

None of the infants had severe developmental delay in any of the domains

The introduction of therapeutic hypothermia as the treatment protocol in moderate to severe HIE has better neurodevelopmental outcomes. However further more studies and larger sample size with control group would be needed to conclude the neuroprotective effect of therapeutic hypothermia.

BACTERIOLOGICAL PROFILE AND ANTIBIOGRAM OF NEONATAL SEPSIS IN A TERTIARY NEONATAL INTENSIVE CARE UNIT IN NORTH KARNATAKA: A RETROSPECTIVE STUDY

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ABSTRACT:

Introduction:

Neonatal sepsis is one of the most important causes of mortality among neonates admitted to neonatal intensive care units worldwide. Antibiotic resistance is on the rise among neonatal population due to abuse of antibiotics. Data on the antibiotics susceptibility pattern is lacking and needs further studies.Objectives was to find out bacteriological profile and antibiogram of neonatal sepsis in tertiary neonatal intensive care unit in North Karnataka.

Method:

We retrospectively reviewed positive blood cultures obtained in the neonatal intensive care unit at Hanagal Shri Kumareshwara Hospital Bagalkot in North Karnataka between 1stJanuary 2020 and 31stOctober 2022 after obtaining informed consent and institutional ethical committee clearance among those who fulfilled the inclusion and exclusion criteria. All neonates, either born at the tertiary hospital or transferred from referral units, regardless of diagnosis, who had a positive blood culture, were included.The BACTEC instrument was used for organism identification and for ascertaining antibiotic susceptibility of recovered organisms.

Results:

Among 2607 neonates admitted during the study period, 2104 specimens were sent for culture and sensitivity. Bacteria were isolated from 535/2104 (25.42%) specimens. Among 535, Gram negative bacteria constituted of 54% (n = 190), of which Klebsiella spp was the most predominant, 71/535 (13.2%). Most common isolates were Coagulase negative Staphylococcus aureus 91/535(17%), followed by Klebsiella Spp and Acinetobacter spp 40/535(7.47%). Both Gram positive and Gram negative bacteria isolated showed high susceptibility to Tigecycline and Trimethoprim-Sulfamethoxazole. Gram Negative bacteria showed high susceptibility to Colistin and Carbapenems. Gram Positive Bacteria showed high resistance to Oxacillin, Piperacillin-Tazobactum and High susceptibility to Linezolid and Vancomycin

Conclusion:

Curbing the antibiotics resistance without compromising the effective care against sepsis is the need of the hour. Updated knowledge of the antibiotics susceptibility and resistance pattern of the local setting is paramount step in the path to curb both antibiotic resistance and neonatal mortality as well.

Breastfeeding Readiness among preterm and term infants - Pilot study

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Abstract

Introduction: Preterm infants often encounter difficulties in the transition to breastfeeding. Feeding requires neurodevelopmental maturation, physiological stability, tone control, behavioural state organization, and coordinated sucking, swallowing, and breathing. Early Feeding Skill (EFS) assessment scale is to assess observable feeding skills.

Aim: To compare breastfeeding readiness among preterm and term infants using EFS assessment scale.

Study design: Observational- Pilot study

Method: A total of 10 infants were included, 5 preterm infants born at a gestational age (30-36) weeks and 5 term infants (37-40) weeks, who were admitted to a tertiary neonatal unit between September 2022 and November 2022. Infants who were weaned from the ventilator, recovered from respiratory distress, and were ready for trial breastfeeding after the clinician's reference were included whereas infants who had any congenital/ chromosomal disease, underwent surgical intervention, bronchopulmonary dysplasia, cleft palate deformity were excluded. Demographic characteristics (Gestational age (GA), birth weight, diagnosis, any associated problems, and APGAR score) of participating infants were recorded.

Neonates were screened and assessed using the EFS assessment scale for the readiness of breastfeeding during the handling of the baby or before nursing. Scoring was recorded every alternate day from the initiation of breastfeeding till the day of discharge.

Result: 5 preterm infants mean (GA 32.6 ± 2.33weeks), EFS showed a mean score of 38 ± 2.6 (immature feeding skills) on day-1, day-3 and on day-5 mean score 43.6 ± 3.38 and 46.2 ± 4.44 (emerging feeding skill) respectively. 5-term infants, mean (GA 38.6 ± 1.01 weeks) EFS showed a mean score of 53.2 ± 2.22 (mature feeding skill) on the 1 day of assessment.

Conclusion: The EFS assessment scale showed a mature response among term infants compared to a skill-emerging response among preterm infants. EFS tool is able to differentiate breastfeeding skills among preterm and term infants.

STUDY TO COMPARE THE EARLY OUTCOME(HIE) OF PERINATAL ASPHYXIA IN RELATION TO PLACE OF DELIVERY

Dr. Srinidhi Nayak S, Dr. Prakash K Wari

Background:
According to World Health Organization, Birth asphyxia is the failure of new born to initiate and sustain breathing at birth. Birth asphyxia is a preventable cause of neonatal brain injury and neonatal mortality Worldwide with neurodevelopmental impairments like intellectual disability, Cerebral palsy(CP), hydrocephalus and seizures in approximately 50% of the survivors. Motor disabilities and long term cognitive neuropsychological, poor scholastic performance and behavioural problems being common in neoates with moderate to severe Hypoxic insult. Despite best improvement in perinatal-neonatal care in India Birth asphyxia accounts for overall 20% of all neonatal deaths. This study aims at comparing the outcomes of Birth asphyxia in inborn and out born setting so that necessary measures can be implemented to improve skills and early referrals depending upon the outcomes of this study.
Materials and methods: This is a prospective and descriptive study involving 56 term babies in each limb ie: delivered inborn and referred from peripheries to Tertiary care center in Hubballi Karnataka who meet the criteria consistent with perinatal asphyxia between February 2021 to January 2022. Detailed Antenatal and Intrapartum history will be taken and categorised newborns will be categorised into HIE stages according to Sarnat and Sarnat staging. Complete haemogram, blood sugars, calcium, serum electrolytes, renal function tests will be done in all cases. Attempt will be made to look for the facilities, skills of Peripheral centers from where maximum referrals are noted.

Results:
Among the babies admitted to inborn care(n= 56),37 (66.1%) babies had HIE 1, 16 (28.6%) babies had HIE 2, 1 (1.8%) baby had HIE 3 and 2 (3.6%) babies expired. Among the babies admitted in outborn setting (n=56), 23 (41.1%) babies had HIE 1, 21 (37.5%) babies had HIE 2, 6 (10.7%) babies had HIE 3 and 6 (10.7%) babies expired. Greater number of babies deteriorated to stage 2 and stage 3 from outborn setting (21 and 6 respectively) when compared to those admitted in inborn care (16 and 1 respectively). (p=0.02). In this study, secondary outcomes in the form of abnormal coagulation profile (n=2/5 in inborn v/s n=6/13 in outborn expired)($p<0.001$), impaired renal function(n=2/7 in inborn v/s n=6/20 in outborn expired)($p<0.001$) and impaired liver function (n=2/5 in inborn v/s n= 5/11 in outborn expired)($p<0.001$) were also considered.

Conclusion:
Birth asphyxia is a major cause for neonatal mortality. Early referral and timely intervention can reduce morbidity and mortality. Foetal distress at the time of referral, maternal weight gain, need for resuscitation and assisted ventilation beyond 10minutes and initial neurological examination determines the early outcome in asphyxiated neonates

Prevalence of Behavioural Problems in Children with Chronic Physical Illness using Behaviour Assessment System for Children, third edition (BASC scale)

AUTHOR NAMES- Dr. KPS Chandana, Dr. Meghana Kashyap, Dr. Usha B.K., Dr. Sanjay K.S.

AFFILIATIONS- Department of Neurodevelopmental and Behavioral Pediatrics, IGICH, Bangalore. (RGUHS)

OBJECTIVE - To understand psycho-social consequences of chronic physical illness in children aged 2-18 years, attending the out-patient department at IGICH, Bangalore.

RESULTS- Of the 54 children with chronic illnesses enrolled in the study, 57.4% (n=31) had acceptable behavior, requiring no active intervention, while 42.6% (n=23) had behavioral problems requiring intervention. Of the children with behavioral problems, 31.4% (n=17) were categorized as "caution" and 11.2% (n=6) were categorized as "extreme caution".

MAIN BODY- When caring for a child with a chronic illness the care giver's, physician's and other medical personnel's primary focus is the treatment of the medical illness. The mental wellness and coping of the child and the family is often overlooked in comparison to the medical management of the disorder . A review of recent studies showed that the prevalence of mental health problems in school going children in India varies from 6.33% to 43.1%. Children with chronic health conditions have to deal not only with demands of the illness but also other stressors such as permanent physical deficits, parental overconcern and anxiety or lack of concern, and physical symptoms such as pain, fatigue. They need regular treatment, may have illness flares or frequent hospitalizations that result in school absenteeism, which contribute to socio-emotional and hence behavioral problems in these children.

METHODS- Children with various chronic physical illnesses were enrolled in the study, after obtaining consent of the parents and the assent of the children included in the study, BASC-3 PRS (Behavioral Assessment System for Children- third edition-Parent Rating Scale) questionnaire was administered to know the prevalence of behavioral problems in these children. Data was collected through stratified sampling.

CONCLUSION- Children with chronic illness are more prone to problematic behaviors and psychological illness. The present study conducted supports this, where the prevalence of behavioral problems was found to be 42.6%. Behavioral problems when left untreated might have deleterious effects. Early identification and intervention are essential to improve the quality of life in these children.

Developmental trajectory of fine motor skills (FMS)and grip strength in children with Down syndrome(DS): A scoping review

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Background: DS affects growth development and social participation through the lifespan. FMS is essential for daily living, social, emotional, academic, and cognitive activities. There are different aspects of hand function and the objective of the review is to summarise current literature on fine motor skills and grip strength in children with DS.

Methods: A comprehensive electronic literature search was conducted through PubMed and google scholar. The search was limited to articles written in English and published between 2007 to 2022. Additionally, books were referred for a better understanding of the fine motor skills and grip strength in DS. The Preferred Reporting Items for Systematic Review and Meta-Analysis extension for scoping reviews (PRISMA- ScR) and Arksey and O'Malley was adopted to develop the protocol.

Results: From 20 articles meeting inclusion/exclusion criteria and more than 70% on JBI critical appraisal, data from 654 children with DS and 535 children without DS were extracted. Literature reports that infants with DS were slow to reach accurately and lacked adjustments during reaching and lower percentage of hand adjustments in relation to TDI. Children with DS had 60% less grip strength, 33% less palmar pinch strength ,20% less key pinch strength, and poor manual dexterity compared to TD children.In-hand manipulation skills have not been assessed in children with DS.

Conclusion: This scoping review, concluded that infants and children with Down syndrome are said to learn basic motor skills in about the same order as their typical counterparts, although at many later ages. Fine motor coordination in DS requires attention from early developmental stages, which in turn points to the need to address this issue early on to avoid functional and academic difficulties later in life. Further studies are required with larger sample size and assessment of in-hand manipulation skills in children with DS.

Keywords: Down syndrome, hand function, fine motor skills.

COMPARATIVE STUDY OF THE OUTCOME OF NON-INVASIVE VENTILATION AND BUBBLE CONTINUOUS POSITIVE AIRWAY PRESSURE IN CASE OF RESPIRATORY DISTRESS IN PRETERM NEWBORNS

DR. AKHILA PARVEEN [1],DR.DAKSHAYINI .[2] DR.UDAYKUMAR S.[3],DR.PUSHPALATHA K.[4]

1 - JUNIOR RESIDENT, 2-SENIOR RESIDENT , 3 - PROFESSOR, 4 – PROFESSOR AND HOD.

INTRODUCTION

Respiratory distress syndrome is the most common condition among preterm neonates requiring NICU admission. Conventionally, invasive ventilation with artificial surfactant administration was the standard of treatment for RDS. Non invasive ventilatory strategies have improved the outcome and reduce the duration of therapy. Bubble CPAP is an inexpensive and a simple mode for delivering CPAP.CPAP will help to establish the functional residual capacity and promote the release of surfactant, thereby creating and maintaining an adequate air-liquid interface in the lung that facilitates gas exchange.Non-invasive Ventilation (NIV) in neonates has mainly been used to maintain effective breathing post extubation and to avoid extubation failure. There has also been a recent trend to use NIV as primary mode of ventilation for early management of RDS as an alternative to intubation and ventilation

METHODOLOGY

The source of data for the study are all the case files and reports of all the eligible preterm infants with Respiratory distress at birth admitted to NICU, Department of Paediatrics, ESIC Medical College, PGIMSR Rajajinagar Bangalore during the period January 2020 to June 2021.

RESULTS

112 preterm neonates were included . 57(50.9%) were initiated on CPAP and 55(49.1%) on NIV. Mean gestational age was 31.3, 32.2 in CPAP and NIV group respectively . Mean birth weight was 1.6 in both groups. Mean APGAR score at 1st minute was 6.6 in both groups. The most common indication for preterm delivery was pre-eclampsia. The mean SA improvement was equal, 1.3, for both groups. Only 19(33.4%) in CPAP and 13(23.6%) in NIV required surfactant. The mean of the duration of respiratory support was lower for NIV group(5.5). 8(14.1%) babies in CPAP group and 5(9.1%) in the NIV group required invasive ventilation.

CONCLUSION

The morbidity and mortality associated with preterm RDS can be prevented by early initiation of treatment and choosing an effective mode of ventilation. NIV reduces the risk of VILI and reduces duration of respiratory support.

Keywords : Respiratory distress syndrome; CPAP; Mechanical ventilator; surfactant; preterm neonates.

SEVERITY OF CHILDHOOD ASTHMA AMONG NORMAL, OVERWEIGHT AND OBESE CHILDREN - A COMPARATIVE STUDY

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INTRODUCTION

Asthma is a global health problem with growing incidence in most countries, particularly among children. It is a chronic inflammatory disorder of the airways caused by many cells and cellular elements. The chronic inflammation results in airway hyper responsiveness that leads to repeated episodes of breathlessness, wheezing, chest tightness, and/or coughing. These episodes are often characterized by widespread, variable, and reversible (either spontaneously or with treatment) airflow obstruction within the lung.1

Overweight and obesity have become increasingly common in children around the world. Additionally, the physical activity levels in this age group have declined due to easy access to various modern conveniences. Obesity, along with a sedentary lifestyle can affect multiple organ systems within the body negatively. There are accumulating data which indicate that the respiratory system is also affected. The role of weight gain and sedentary activity level on lung disease may be larger than ever.2

Obesity and asthma are complex disorders related to gene-environment interactions and various lifestyle factors. Obesity is associated with an increased risk of developing new cases of objectively defined asthma. Greater symptom burden and reduced response to therapy are the phenotypic findings most consistent and specific to obese asthmatic children.2 However; there are conflicting results in the studies available on the subject. Hence, this study was undertaken to compare the severity of asthma among normal, overweight and obese children.

OBJECTIVES OF THE STUDY:

1. To determine the severity of asthma among asthmatic children with

a) Normal BMI,

b) Overweight and Obesity.

2. To compare the severity of asthma among children with normal BMI, overweight and obesity.

EFFECTS OF DELAYED CORD CLAMPING ON NEONATAL JAUNDICE, PHOTOTHERAPY AND EARLY HAEMATOLOGICAL STATUS IN TERM NEONATES BORN BY C SECTION

Dr Ravi Badnur[1], Dr B C Yelamali[2], Dr Ashok Badakali[3]

BACKGROUND: Neonatal iron deficiency anaemia (IDA) is an important problem that has multiple sequelae to long-term cognitive, emotion, and behaviour development of new-borns. Delayed cord clamping (DCC) can protect against neonatal IDA in neonates by transferring residual blood in the placenta. This practice is easy, effective and without cost. Hyperbilirubinemia is considered a potential disadvantage of DCC, while in practice, it does not appear to be associated with increased phototherapeutic demand. This study was conducted to observe the haematological improvement like Haemoglobin And haematocrit levels in a term neonate who underwent delayed cord clamping without requirement of phototherapy for neonatal jaundice.

Methods: Randomised control study was performed in a tertiary care HSK hospital Bagalkot between January 2021 and May 2022 after obtaining informed consent and institutional ethical committee clearance among those who fulfilled the inclusion and exclusion criteria. Patient were the term neonates born by caesarean section in OBG department, HSK hospital based on inclusion/exclusion criteria.

Venous samples were tested for haematocrit and haemoglobin at 48hrs of life. Transcutaneous bilirubin (TcB) screening levels were estimated who were found clinically icteric on day 3 of life, if TcB levels were high, venous sample for serum bilirubin level were estimated.

Results: Mean haematocrit in DCC group was higher than in ECC group [58.9(5.5) vs 47.14(5.8) $P<0.05$]. Mean haemoglobin in DCC was higher than in ECC group [19.59(1.41) vs 16.7(1.3) $P<0.05$]. Rate of phototherapy was 13.5%in ECC and 11.8% in DCC group. DCC at 30-60 seconds resulted in the higher neonatal haemoglobin level on day 3 without a higher rate of phototherapy (P value >0.05).

Conclusion: In caesarean section, delayed cord clamping for 30-60s improved the early haematological status of term neonates without the enhanced requirement of phototherapy for neonatal jaundice. DCC at 30-60sec is simple, effective and safe procedure that can be recommended in term C-section.

Keywords: Anaemia, Caesarean section, Delayed cord clamping, Early cord clamping, Neonatal jaundice, Phototherapy.

NEWBORN HEARING SCREENING-ERODE RURAL MODEL

AUTHORS:

DR.A.R.SOMASHEKAR,DR.R.SELVAN, MRS.VAISHNAVI MATTI, DR.P.SIVARAMAN, DR. MADHU

OBJECTIVE: To determine the incidence of newborn hearing loss in a rural place and to know the feasibility and effectiveness in implementing the hearing screen in a rural place with emphasis on the acceptance and compliance on the follow up.

Congenital hearing loss is the most curable childhood handicap with an incidence of 1to 6 per thousand. Early detection is essential for optimal linguistic, social and cognitive development for the affected child. Newborn hearing screen is still at an early level in India .This was a non-randomized retrospective study done by sri samarthanam early intervention centre,erode. All well newborn babies delivered in and around erode district in private hospitals were screened after taking the verbal consent. The dpoae was done using the natus screen in a two step method. The first step was to screen al the well babies at the bed side before they were discharged from the hospital by trained personal. The second step was to screen the babies which did not pass the step 1 and reported as refer when the babies came for follow up for immunization .A total of 14,443 well babies were screened from jan.2021 to oct.2022. 108 of the total babies failed the step 1.Only 53 of the babies came for doing the step 2 during follow up with a drop-out rate of almost 50%.The 53 babies underwent step 2 retest with the oae and 32 passed the test. The 21 babies underwent a diagnostic BERA and 16 babies had an abnormal BERA. We observed that the incidence of hearing loss was around 1.1 per thousand babies.

A two stage hearing screen can be done at a rural place by trained staff. The acceptance was good if the pediatrician and obstetrician were updated on the challenges of hearing impairment, the low cost involved and the ease of doing at the bedside in the hospital with the mother. There was a low compliance if called for follow up with a high dropout rate.

PREVALENCE AND RISK FACTORS OF HEARING IMPAIRMENT AMONG HIGH-RISK NEONATES BORN IN A TERTIARY CARE HOSPITAL IN NORTH KARNATAKA

Dr Vijay B[1],Dr Ramesh pol[2],Dr Ashok Badakali[3]

Background: Hearing is necessary for the proper mental, social,speech and language development of a new-born child. Delay indiagnosis leads to improperdevelopment ofsocial, language and mental skills. There are multiple maternal and intrapartum risk factors associated with hearing impairment. Most of the causes are preventable. The objectives of the study is to find out the prevalence of hearing impairment in high-riskneonates born in a tertiary care hospital in north Karnataka.

Methods: This case series study was performed in a tertiary care hospital at Hanagal shri kumareswar hospital Bagalkot in North Karnataka between June 2021 and May2022 after obtaining informed consent and institutional ethical committee clearance among those who fulfilled the inclusion and exclusion criteria. All the high-risk new-born were subjected to Otoacoustic examination(OAE) during the NICU stay,Those who did not pass the first OAE were subjected to second OAE before the discharge. Those who did not pass in the secondOAE were subjected to BERA at 3 months of age. Those high-risk children who did not pass the BERA were considered havinghearing impairment and were subjected to further investigation and appropriate management.

Results: 470 high risk neonates were subjected to 1st OAE screening,out of which 179 were subjected to 2nd OAE, among 179 neonates 70 cases were subjected to BERA.Out of which 40 (8.5%) cases showed hearing impairment. Common risk factors for hearing impairment noted were, babies onMechanical ventilation >5days (17.46%),Family history of hearing loss(14.29%),Maternal co morbidities (11.11%),Birth asphyxia (9.72%), Child on ototoxic medication (9.66%),Preterm (8.74%), low birth weight (8.03%) and Hyper bilirubinaemia (5.30%), These risk factor did not show a statistically significant influence on hearing impairment except hyperbilirubinemia (P value <0.05).

Conclusions: Newborns infants admitted to the NICU are at higher risk for hearing impairment due to exposure to multiple risk factors. The two staged screening protocols with BERA is useful protocol for detecting hearing impairment in newborns and can be implemented as national program. Early detection of hearing impairment will reduce the problem associated with that such as mental, social, speech and language development of the child.

Keywords: BERA, Early hearing impairment, High risk neonates, OAE, Prevalence, Risk factors.

Prevalence of Risk of Developmental Delay in Infants Born to COVID-19 Positive Mothers in a Tertiary Care Hospital

Dr. Tejaswi

Background: The Perinatal health of the mothers have reported to play an important role in the optimal development of their infants. Maternal and infant bonding during the first 2 years is considered to contribute significantly to the long-term social and emotional wellbeing of the child.

Evidence states that infected mothers may produce more cytokines in response to the stress during and after the pregnancy, which could have indirect consequences on the neurodevelopment of the infant.

Social distancing measures adopted during COVID-19 pandemic have caused a major impact on both the mother and child. Hence there is a need to screen these infants born to COVID-19 positive mothers and observe if they are at any risk of developmental delay.

Objective: The objective of this study aims to estimate the prevalence of risk of developmental delay in the infants born to the COVID-19 positive mothers in a tertiary care hospital.

Methods:

The Mothers who were tested positive for COVID-19 from June 2020 to May 2021 in a tertiary care hospital were screened for this study. This is a cross-sectional study, in which the required data inputs of 45 infants who met the inclusion criteria were collected. Their parent's informed consent was taken through google forms before the data collection exercise. Developmental screening was done using ASQ. Scoring was done based on the cut-off scores given by the questionnaire.

Results: The overall percentage of risk of developmental delay noted in the study population was 28.8%. Gross motor domain was most affected in preterm infants whereas problem solving domain was affected in term infants.

Interpretation and conclusion: There is a risk of developmental delay noted in the infant's born to COVID-19 positive mothers. Therefore, it is recommended to screen and assess these infants on a regular Basis.

Future recommendations: Since this was a cross sectional study where infants were evaluated at one point time frame, a longitudinal study across time periods must be done for better results. In this study a developmental screening was done to observe risk of developmental delay, further studies can focus on performing a comprehensive developmental assessment.

Keywords: Developmental delay; COVID-19 positive mothers; Infant's neurodevelopment,

A Study To Assess The Neuro Behavioural Pattern In Term Neonates

Authors : Dr. Aks Thariani, Dr. Yashoda, Dr. Manjunath

Background :

The examination of newborn neurobehavioral can be considered as a potential sentinel of future behaviour and cognitive functioning, gives a unique opportunity to recognise prenatal influences on mental functioning before postnatal

factors alter risk trajectories. The prevalence of neurobehavioral disorder was found to be 5.8% in a study by Jing lu et al.

Objectives :

1. To compare the neurobehavioral profiles between term AGA infants and term SGA.

2. To analyze the risk factors that have contributed to the neurobehavioral profiles.

METHODS:

This is a study with prospective data collection carried out at tertiary centre, KIMS hospital Bangalore between December 2019 to June 2021. Term newborn babies were divided into SGA and AGA babies based on birth weight(<10th centile on WHO scale were considered as SGA). Maternal data on socio-demography, medical conditions and non-medical factors were collected along with neonatal data like anthropometry and medical conditions. Neuro behaviour pattern assessment was done using NNNS scale and was compared between SGA and AGA babies.

RESULTS:

In this study it was found that neurobehaviour pattern of SGA babies was abnormal compare to AGA babies. And risk factors like maternal medical conditions, maternal stress and neonatal medical conditions had negative influence on neurobehaviour pattern of both AGA and SGA babies.

CONCLUSION:

SGA newborn infants exhibited a greater number of abnormal neurobehavioural pattern compared to AGA newborns. It is possible that intrauterine growth restriction causes different cortical growth and organization changes during intrauterine life, which would explain the neurobehavioral differences observed in AGA and SGA newborns during their first days of life

TO STUDY THE NEURODEVELOPMENTAL OUTCOME AT 1 YEAR OF LIFE AMONG THE NEONATES OF HYPOXIC ISCHEMIC ENCEPHALOPATHY TREATED WITH THERAPEUTIC HYPOTHERMIA USING BAYLEYS SCALE OF INFANT DEVELOPMENT

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INTRODUCTION

Moderate to severe hypoxic-ischemic encephalopathy (HIE) after perinatal asphyxia is a major cause of morbidity and mortality in neonates, despite important progress in obstetric and neonatal care during the last decades. Incidence is 0.5 to 1 per 1000 live births in developed countries with numbers much higher in developing countries . About 10% to 60% of affected infants die, and at least 25% of survivors have long-term neurodevelopmental sequels. Modalities for treating neonatal encephalopathy after perinatal asphyxia have to be based on the understanding of the mechanisms of neuronal damage and loss following hypoxic-ischemic brain injury. In developing countries different additional factors can play a role, malnutrition of mothers, infections, under developed maternal care. Initial hypoxic-ischemic insult brings immediate cell loss of varying degrees, but delayed impairment in energy metabolism leads to more significant cell loss by apoptotic cell death. Hypothermia is currently the only recognized beneficial therapy. The potential mechanisms of neuroprotection with hypothermia include inhibition of glutamate release, reduction of cerebral metabolism, which in turn preserves high energy phosphates, decrease in intracellular acidosis and lactic acid accumulation, preservation of endogenous antioxidants, reduction of nitric oxide production, prevention of protein kinase inhibition, improvement of protein synthesis, reduction of leukotriene production, prevention of blood-brain barrier disruption and brain edema, and inhibition of apoptosis . Children who survive neonatal HIE are at great risk of severe disability, but even those without major disability are at increased risk for long-term intellectual, verbal, and motor deficits. In infants with hypoxic-ischemic encephalopathy, moderate hypothermia is associated with a consistent reduction in death and neurological impairment at 18 months. There is evidence from trials that induced hypothermia helps to improve survival and development at 18 to 24 months for term and late preterm newborn babies at risk of brain damage.

OBJECTIVE :-

1) To Assess the neurodevelopmental outcome using Bayley's scale of infant development III at age of 1 year among the neonates with moderate to severe hypoxic ischemic encephalopathy treated with therapeutic hypothermia.

2) To correlate the predictive value of MRI done at day 7 of life in the neurodevelopmental outcome among these neonates of HIE who received Therapeutic hypothermia

MATERIALS AND METHODS:

Source of Data

Study Group: The study will be conducted in neonates admitted to NICU of RRMCH in view of hypoxic ischemic encephalopathy receiving therapeutic hypothermia as the treatment. Cases will be selected based on inclusion and exclusion criteria admitted in -RRMCH BENGALURU.

Sample size- based on hospital based convenient sampling.

Study design: PROSPECTIVE STUDY

Study group: All neonates admitted to NICU at RRMCH with neonatal encephalopathy receiving therapeutic hypothermia as the treatment modality.

A CLINICAL STUDY OF COGNITIVE FUNCTION IN CHILDREN WITH IRON DEFICIENCY STATUS AGED 6 MONTHS TO 2 YEARS

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Background : Iron deficiency is the most prevalent nutritional disorder in the world. The most worrying consequences of it is the alteration of behaviour and cognitive performance such as reduced attention span, reduced emotional responsiveness and low scores on tests of intelligence. There is a wealth of research that shows that iron deficiency anaemia can exert a direct deleterious effect on the brain but we strive to see if this also happens with iron deficiency status.

Objective: To assess the role of iron deficiency status and iron deficiency anaemia on cognitive function in children aged 6 months to 2 years.

Design: Case control prospective study

Setting: Tertiary care hospital in Bangalore, Karnataka.

Participants: Total of 150 children between age of 6 months and 2 years who fulfilled the inclusion criteria.

Intervention: Clinical history was taken, physical examination and assessment of the cognitive function was done following which they were all subjected to blood investigations. The cognitive function was assessed using Vineland social maturity scale. 50 children diagnosed with iron deficiency anaemia and 50 children with iron deficiency status constituted the case group and 50 children who did not have anaemia constituted the control group.

Results: There were significant differences in the intellectual level in the three groups. It showed that iron deficiency anaemia group had lower mean intellectual score when compared to iron deficiency status ($p=0.002$) and control groups ($p<0.001$) and similarly, the mean intellectual score was lower for iron deficiency status group when compared to control group ($p=0.001$).

Conclusion: Cognitive dysfunction in iron deficient children starts at the period of iron deficiency status itself making early recognition and intervention of paramount importance before these effects become irreversible.

MINI RESEARCH PROPOSAL

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1. Title of the Study

A study on the psycho social efficacy of the adolescent girls club (Varnakood) of ICDS on adolescent girls

2. Introduction: The Integrated child development scheme (ICDS) was formally mandated by government of India. It is recognised as the largest and unique community based outreach programme for the women and children development in the world. It is established with an integrated approach to provide early childhood services including of supplementary nutrition, immunization, health check-up, medical referral service, health education for women and pregnant and nursing mother and non-formal education for child up to the age six.

Adolescent girls are another important target group of ICDS, as they demand special attention in their health and nutritional care. Apart from that this life cycle stages has been important from the preventive invention point of view, as any intervention in this stage will have lasting impact on the life cycle of an individual.

The adolescent girls scheme of ICDS was introduced to bring positive changes in the life of adolescent girls especially the school drop out girls in the country. Varnakood is an adolescent girls club, designed for the overall development and empowerment of adolescent girls. There are 33115 in the state, Varnakood is functioning in the concerned Aganavadies with the help of aganavadies workers an psycho social school workers. This club explores the curricular and extracurricular activities, introduces awareness classes, forming libraries for developing reading habits. Palliative care is also included for developing compassion and service mind.

3. Statement of the Problem: Human resource is the wealth of the country. ICDS programme is one of the initiatives taken by the government to provide a package of six services such as supplementary nutrition immunization, health check-up, medical referral service, health education for women and pregnant and nursing mother and adolescent girls through anganwadi centres. This is the time to make adolescent aware of and informed about various facets of life in order to promote a healthy way of living. Awareness of health, nutrition, life style related behaviour and adolescent reproductive and sexual health need to be positioned easier transitions to women hood. Going beyond this adolescent girls needs to be viewed not just in terms of their needs but even as individuals who would become productive members of society in future. ICDS its opportunity for early childhood development seeks to reduce both social economic gender inequality. In this context a study is needed to understand the accessibility and utilization of schemes and services for adolescent girls implemented and proposed by government through ICDS.

4. Objectives

1. Assists the psycho social efficacy of Varnakood

5. Hypothesis

1. Varnakood is effective in improving the psycho social status of adolescent girls.

2. Varnakood is not effective in improving the psycho social status of adolescent girls.

6. Universe of study

Adolescent girls who are state holders of Varnakood of different anganwadies in Kerala.

7. Sample

Secondary data of the sample size of fifty registered adolescent girls was selected from ten anganwadies in Kannur district.

8. Tools for data collection

9.Data Analysis

10. Tables

11.Chapter Plan

1. Introduction

2. Review of Literature

3. Methodology

4. Result and Discussion