

6TH EDITION OF
EURO-GLOBAL CONFERENCE ON

PEDIATRICS AND NEONATOLOGY

02-04 SEPTEMBER, 2024, MADRID, SPAIN

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02-04

6th Edition of Euro-Global Conference on

Pediatrics and Neonatology

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ABSTRACTS

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Hanna Alonim
The Mifne Center for Treatment
Research and Training, Israel



Heather Hanna
Imperial College London,
United Kingdom



Jeanne Magagna
Great Ormond Street Hospital for
Children, United Kingdom



Kate Tauber
Albany Medical Center,
United States



Peter Averkiou
Florida Atlantic University,
United States



Tomas Zaoral
University Hospital Ostrava,
Czech Republic



Zhenhuan Li
Nanhai Maternity and Children
Hospital Affiliated to Guangzhou
University of Chinese Medicine,
China



Ian Munro Rogers
AIMST University, Malaysia

*Thank You
All...*

Speakers



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Square Multidisciplinary Tertiary
Care Hospital, Bangladesh



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University of Thessaly, Greece



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Nemours Children's Health Care
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University of Washington, United
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Helgeland Hospital, Norway



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Hospital, United States



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Jenny Ly
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China



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Mary Anbarasi Johnson
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Mohsen Roshanpajouh
Iran University of Medical Sciences,
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Medical Sciences, Iran



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Santosh Kumar Mishra
SNDT Women's University, India



Sanja Knezevic
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W A S Saroja Weerakoon
University of Colombo, Sri Lanka



Xiang Hui
Chongqing Beibu Maternity Hospital,
China



Yong Xue
Yunyang County People's Hospital,
China



Zhongyou Tan
Three Gorges Hospital Affiliated to
Chongqing University, China

Thank You
All...

Welcome Message



Dr. Jeanne Magagna
Formerly Head of Psychotherapy Services,
Great Ormond Street Hospital in London, United Kingdom

Dear Congress Visitors,

As well as being involved in wonderful medical research and medical care for ill babies and children, their wish to live is often fragile. Creating a core team with a designated lead clinician in complex cases and providing reflective groups for professionals working with the child and their family is an important task for assisting the child in the wish to be resilient and fight to stay mentally and physically alive. Promoting and supporting parental-child bonds in the face of serious illness is a crucial task at a time when both parents and their infants are extremely distressed. I hope my presentations may promote your getting involved in preventing later mental health problems for staff, parents and their child. In particular infants in NICU are at risk of psychological difficulties as they grow up if they are not provided with good psychological care in hospital.

Welcome Message



Mrs Heather Hanna
Imperial College London, United Kingdom

Welcome to all of you to the 6th Edition of Euro-Global Conference on Paediatrics and Neonatology (EPN) 2024 hosted in Spain, this year. The theme of this year's conference is Innovations in Pediatric Healthcare: Shaping Bright Futures and we are considering the future advances that will improve the treatments and outcomes for our young patients.

The last few years have seen many exciting advances in healthcare as we consider therapies such as base editing in oncology settings for rare and previously incurable cancers as well as advances driven by research, such as considering the mental health of children and young people. We need to continually learn and develop as the world changes. We know that in recent times, the impact of Covid, which interrupted both schooling and face-to-face socialisation, and the ongoing challenges associated with social media have very much changed the landscape of childhood and these are areas that we need to proactively support children who are actively affected by these matters.

So welcome to this conference. We hope you enjoy learning and making connections to increase your personal networks and foster collaborations internationally.

Welcome Message



Dr. Hanna A Alonim

The Mifne Center for Treatment Research and Training, Israel


Dear Colleagues,

It is my pleasure to welcome you to this presentation on early autism detection in Infancy. Bridging the Gap Between Early Detection of Autism Prodrome in Infants: Detection, Assessment and Intervention. This is an important topic that touches the lives of many families and communities worldwide.

As we know, early infancy is a critical period for brain development, learning, and socialization. Throughout this presentation, we will explore the latest evidence-based practices, and strategies for early detection in the first year of life, to detect the prodrome symptoms, in order to support families in your community.

Thank you for participating and taking care to improve the lives of young infants at high risk for autism.

ABOUT MAGNUS GROUP



Magnus Group, a distinguished scientific event organizer, has been at the forefront of fostering knowledge exchange and collaboration since its inception in 2015. With a steadfast commitment to the ethos of Share, receive, grow, Magnus Group has successfully organized over 200 conferences spanning diverse fields, including Healthcare, Medical, Pharmaceuticals, Chemistry, Nursing, Agriculture, and Plant Sciences.

The core philosophy of Magnus Group revolves around creating dynamic platforms that facilitate the exchange of cutting-edge research, insights, and innovations within the global scientific community. By bringing together experts, scholars, and professionals from various disciplines, Magnus Group cultivates an environment conducive to intellectual discourse, networking, and interdisciplinary collaboration.

Magnus Group's unwavering dedication to organizing impactful scientific events has positioned it as a key player in the global scientific community. By adhering to the motto of Share, receive, grow, Magnus Group continues to contribute significantly to the advancement of knowledge and the development of innovative solutions in various scientific domains.

ABOUT EPN 2024



Welcome to the **6th Edition of Euro-Global Conference on Pediatrics and Neonatology (EPN 2024)**, held in **Madrid, Spain**, and **virtually from September 02-04, 2024**. This year's conference, themed *Innovations in Pediatric Healthcare: Shaping Bright Futures*, brings together a global community of researchers, healthcare professionals, and enthusiasts to explore the latest advancements in pediatric and neonatal care. Our comprehensive program features a range of sessions including keynote talks, oral and poster presentations, and interactive forums dedicated to young researchers.

As you peruse this abstract book, you'll find a collection of cutting-edge research and insights that reflect the diverse and dynamic nature of this year's conference. Each abstract highlights significant contributions to the field, offering a snapshot of the innovative work being done to advance pediatric healthcare. Whether attending in-person or virtually, participants will engage with leading experts and peers to exchange ideas and drive forward the future of pediatric medicine. We look forward to your participation in this pivotal event and the meaningful discussions that will shape the future of child healthcare healthcare.

ABOUT

CPD Accreditation



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Continuing Professional Development (CPD) credits are valuable for EPN 2024 attendees as they provide recognition and validation of their ongoing learning and professional development. The number of CPD credits that can be earned is typically based on the number of sessions attended. You have an opportunity to avail 1 CPD credit for each hour of Attendance. Some benefits of CPD credits include:

Career advancement: CPD credits demonstrate a commitment to ongoing learning and professional development, which can enhance one's reputation and increase chances of career advancement.

Maintenance of professional credentials: Many professions require a minimum number of CPD credits to maintain their certification or license.

Increased knowledge: Attending EPN 2024 and earning CPD credits can help attendees stay current with the latest developments and advancements in their field.

Networking opportunities: EPN 2024 Conference provide opportunities for attendees to network with peers and experts, expanding their professional network and building relationships with potential collaborators.

Note: Each conference attendee will receive 21 CPD credits.

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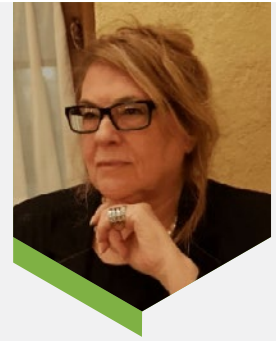
KEYNOTE FORUM

Bridging the gap between early detection of autism prodrome in infants: Assessment and intervention

The worldwide prevalence of autism points out of 2% of the population. Clinicians and researchers increasingly realize the importance of early intervention for autism. Very early intervention may minimize the severity of the phenotypic presentation of autism during infancy when neural connections are being developed. However, intervention is contingent upon a diagnosis of autism – which in most developed countries occurs above the age of 24 months – resulting in missing a critical therapeutic opportunity for early intervention. This study aimed to detect the prodromal variables at a very early stages during the first year of life, that may characterize significant risk for the later development of autism, in order to propose therapeutic strategies during this window of opportunities. The study examined 110 infants from various countries diagnosed with autism at age 2-3 years. Analysis was conducted of home videos recorded during the infants' first year of life. Data was collated and analysed in terms of individual variables and combinations of variables. Eight prodromal variables were exhibited among 89% of the infants participating in this study. Cluster analysis of combinations of variables was significant. The results of this study indicate that detecting the prodrome of autism depends primarily on the ability to identify various combinations of indicative symptoms. The variables elicited by this study provide the basis for an early assessment scale for prodromal variables associated with autism.

Audience Take Away Notes

- The main goal of this presentation is to raise awareness of early detection in autism. The audience will be exposed to the variables accompanied by videos, providing the basis for developing the Screening Scale in Infants, which is applied clinically for infants between 5-15 months. Effective application of this screening scale is of utility in bridging the time gap between early assessment and intervention, for infants who are at high risk for autism, during the crucial neurodevelopmental stages.



Alonim H^{1,2*}, Lieberman I.³, Tayar, D.^{1,4}, Scheingesicht, G.¹

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³Bar Ilan University, Department of Sociology & and Anthropology, Israel

⁴Ministry of Health, Israel

Biography

Dr. Hanna A. Alonim, is an expert and researcher in the Autism Spectrum and Mental Health in infancy. Founder and Head of the Mifne Center Israel, for Treatment, Training, and Research, since 1987. Head of the Therapists' Training School for Autism at the Bar Ilan University. She developed the ESPASSI © screening scale for the detection of autism prodrome in the first year of life, which was piloted at the Sourasky TLV Medical Center. Dr. Alonim is a committee member of the WHO ICF Core Set for ASD, Stockholm 2016.

Prevention is better than cure! Can we prevent eczema in babies at risk of cows milk protein allergy?

Cows milk protein allergy is a common cause of eczema in young babies and many attempts to prevent the development of eczema in atopic children have been made with little success to date. Eczema can be a difficult condition to control and requires a strong commitment from the parents to manage it successfully in some cases. In this presentation we explore the care of the child with cows milk protein allergy induced eczema, consider the preventative strategies that have been tried and look ahead to the possible methods of care for these children in the future.

Audience Take Away Notes

- An understanding of the presentation of eczema in children with cows milk protein allergy
- An exploration of the attempts thus far to prevent eczema in babies at risk of cows milk protein allergy
- An understanding of the challenges of caring for a child with food allergy induced eczema
- An insight into the use of creams and strategies to keep eczema under control
- Potential strategies for the future to prevent or control eczema



Mrs. Heather Hanna

Department of Infectious Disease, Imperial College, London, UK

Biography

Mrs. Heather Hanna studied at Great Ormond Street Hospital, London qualifying as a Registered General Nurse and a Registered Sick Children's Nurse in 1989. She also qualified as an RN in the State of Washington, practicing there for 3 years in Infant Intensive Care Unit and then as a Research Nurse at Children's Hospital, Seattle. Her career was mostly spent in Neonatal Intensive Care before she moved into Research at St Mary's Hospital Paddington where she also obtained her MSc in Allergy (dist.) from Imperial College London, before her move into Medical Education, obtaining her MEd from Imperial College. She currently works as a Senior Clinical Teaching Fellow both with Undergraduates (in the Medical Ethics and Law Team) and Postgraduates (on the online Applied Paediatrics MSc course), both at Imperial College London.

The cause of pyloric stenosis of infancy

There is no officially accepted explanation why Pyloric Stenosis of Infancy (PS) occurs. The clinical features which consist of male predominance; onset at 4 weeks; long term cure after temporary medical treatment; spontaneous long term cure if the baby survives more than 6 weeks; first-born predominance and frequent alkalosis—have all combined to make the cause almost impossible to deduce.

This author will provide evidence that the normal negative feed-back between gastrin and gastric acidity does not exist at birth and takes a few weeks to mature.

Viewed from this perspective that cause becomes quite easy to understand.

Normal development with a temporary absent negative feed-back requires that there will be peak acidity at the time when negative feed-back matures. With normal babies this serves to protect them from enteric infections. With a baby who inherits an acid secreting potential at the top of the range, this peak acidity at maturity becomes so intense that the pyloric sphincter contracts so often and so vigorously that the sphincter becomes hypertrophic and the gastric outlet is blocked.



Ian Munro Rogers FRCS, FRCP, PGCMEdu

Adjunct Faculty AIMST
University, Malaysia

Biography

I.M. Rogers is a retired surgeon with a long-standing interest in the cause. He made the earliest discovery of neonatal hypergastrinaemia and also was, as far as I know, to document hyperacidity in the Pyloric Stenosis (PS) baby. He first proposed an inherited primary hyperacidity as the cause and subsequently refined this theory in the light of evidence showing insensitivity of the negative feed-back between acid and gastrin in the early weeks. He is the author of *The Consequences and Cause of PS of Infancy with a survivor of PS-Dr. Fred. Vanderbom* available on AMAZON ISBN 978-3-659-52125-6 and has just finished another book *Pyloric stenosis of Infancy-the Great Mystery unravels-* again published by Amazon all profits to the Safe Water Trust. Available 2019. He is also the author of many papers on the subject of cause.

The silent scream: Mobilizing team reflections upon the body's narrative of love and loss

This presentation will describe critical issues to consider when a child is admitted and especially re-admitted to the paediatric ward. Clinical examples will be presented. These will include discussion of Pervasive Avoidance Withdrawal Syndrome (PAWS), fictitious illness. The essential creation of a multidisciplinary team to reflect upon the body's illness and the messages it conveys about the child's genes and relationships with the family and others is crucial to a well-functioning paediatric unit. There will be a delineation of some important interventions in various international paediatric teams. The shared training for the multidisciplinary team of doctors, psychologists and nurses from the Italian Hospital in Argentina and the Bristol Report regarding the importance of a coordinator of integrating specialist interventions with complex illnesses will be discussed. Non-negotiables for the child's hospitalisation alongside family observations will be described. Enabling an ill child to progress developmentally during long-stay hospitalisations will be described using experiences in Great Ormond Street Hospital for Children in London. The link between the psychiatric team and the paediatric team will also be considered.



Dr. Jeanne Magagna

Child, Adult and Family
Psychotherapist, United Kingdom

Biography

Dr. Jeanne Magagna, Tavistock trained child, adult and family psychotherapist, has worked with children and their parents as a nursery teacher, secondary and university teacher as well as subsequently being Head of

Psychotherapy Services at Great Ormond Street Hospital for Children for 24 years. She has also worked as a consultant to Family Futures Adoption and Fostering Consortium and previously Coordinator of Training at Centro Studi Martha Harris in Florence and Venice, Italy, where she now continues to teach. Throughout her professional life her aim is to help parents and professionals observe the deeper aspects of infants' personality in order that infants can be better understood and have more rights to good parenting. Her books *The Silent Child: Communication without Words* and *Being Present for Your Nursery Age Child* discuss how important it is to collaborate with parents to support and understand their children and parents have been involved in these writing projects. With the collaboration with Roz Read she has edited *Contemporary Child Psychotherapy*. Other collaboratively edited books include: *Psychotherapy with Families*, *Intimate Transformations*, *Creativity and Psychotic States* and *A Psychotherapeutic Understanding of Children and Young People*. Jeanne currently works on most continents teaching infant observation, discussing collaborative work with parents, and engaging in clinical discussions.

The impact of breast milk on neurodevelopment

The use of human breast milk has long been considered the standard for infant feeding and nutrition. The benefits of breastmilk have been shown to be especially valuable in the growth and development of preterm infants with decreased rates of necrotizing enterocolitis, decreased rates of late onset sepsis, and improved neurodevelopmental outcomes. In my presentation I will review the literature regarding breast milk intake and neurodevelopmental outcomes, the components of breast milk that likely contribute to these favorable results, and how the microbiome plays an important role in the gut-brain axis.



Kate Tauber

Albany Medical Center, United States

Biography

Kate Tauber MD, MA FAAP is an Associate Professor at The Bernard and Millie Duker Children's Hospital at Albany Medical Center in Albany NY. She is the Director of the Mother's Own Milk program in the NICU as well as the NeuroNICU. She is certified by the American Board of Pediatrics and its Sub-board of Neonatal-Perinatal Medicine. Dr. Tauber is actively involved in the clinical care of neonates, teaching and mentoring of medical students, residents, and fellows, and regularly conducts clinical research with a focus on nutrition and breastmilk. She has presented her work at regional and national meetings. Outside of work Dr. Tauber enjoys spending time with her family, skiing, traveling, and cooking.

Early clinical exposure in medical education: The newborn nursery clinical experience

The newborn nursery clinical experience is an innovative, early exposure for medical students to the hospital setting and family medicine. Early in their second year, our medical students are immersed into the Newborn Nursery, while also experiencing the Neonatal Intensive Care Unit (NICU) and attending obstetrical deliveries. They witness, first hand, the interprofessional and interdisciplinary workings of pediatricians, obstetricians, neonatologists, anesthesiologists, nurses and other professionals. The medical students are also instructed on how to read a medical chart and on proper medical documentation and its importance. They also interact with the mother of the patient, as well as other family members that are in attendance, and long-term continuity of integrated care and the focus on the personal patient/patient's guardian(s) - physician relationship is stressed. This experience is always well-received and highly evaluated by our medical students. It also helps to prepare them for their third year clinical rotations in family medicine, pediatrics and Ob/Gyn.



Peter Averkiou MD

Florida Atlantic University,
United States

Biography

Dr. Peter Averkiou is a pediatrician and an Associate Professor of Pediatrics at the Charles E. Schmidt College of Medicine at Florida Atlantic University. He is the Co-Director of the four Foundations of Medicine Courses, the Director of the Service Learning Projects, the Director of the Newborn Nursery Clinical Rotation and the Director of the Synthesis and Transition Course at the medical school.

Up to date options for extracorporeal blood purification methods in children- From history to the present

This presentation explores the advancements in Extracorporeal Blood Purification (ECBP) methods since the beginning with highlighting key historical milestones. It covers the evolution from early intermittent dialysis innovations to modern Continuous Renal Replacement Therapies (CRRT). Various ECBP methods are discussed focusing on children, including CRRT, peritoneal dialysis, and plasma exchange, immunoadsorption emphasizing the importance of quality vascular access, precise anticoagulation, and specialized pediatric devices. Findings from a recent European survey on CRRT and ECBP practices in pediatric intensive care units are summarized, showing current trends and the critical role of experienced medical staff.

The conclusion underscores the feasibility and necessity of tailored elimination therapies in pediatric care, highlighting the need for specialized training and readiness.

Audience Take Away Notes

- Audience could find out the fascinating history the evolution of the early beginnings of different kind of renal replacement therapy focusing on children and neonates
- They will be able to learn about the current possibilities of these methods and their use and indications in different clinical scenarios
- The questionnaire action shows the heterogeneity and inconsistency of the use of these methods across paediatric intensive care in sepsis in some European countries



Tomáš Zaoral

Pediatric intensive care unit, Dpt. of Pediatrics, University hospital Ostrava/Medical school Ostrava, Czech republic

Biography

Tomáš Zaoral has started to work after graduation at Dpt. Of Pediatrics at local Hospital in Ostrava, Czech republic Since 1996, He moved to the University Hospital in Ostrava where he began to specialize in adult and pediatric intensive care at mixed adult and pediatric Emergency, ICU. He had started to focus on different kind of renal replacement therapies in adults and children as well. Education, lectures: He is teaching medical students, activities and giving lectures for postgraduate students, doctors about Pediatric intensive care, ped.dialysis, RRT (Renal Replacement Therapy) and Acute Kidney injury. Participating in many clinical studies.

Neuroimaging by evaluation nerverenovate and neuroplasticity of acupuncture in children with cerebral palsy

Objective: To investigate the effect of and Acupuncture on brain plasticity and motor development in children with cerebral palsy. Investigate effect on mechanism of apoptosis of brain nerve cells, regulating the expression of neurotrophic factors, promoting the remodeling of nerve synaptic structure and motor development in young rats with cerebral palsy. Two: To evaluate the effect and mechanism of acupuncture on cerebral palsy. Three: The nerve repair effect of acupuncture on cerebral palsy.

Methods: In this study, 146 cases of brain injury and 1078 cases of cerebral palsy were included by randomized controlled study with ICF Gross motor function measure, Peabody fine motor function, Gesell, muscle tension, joint activity, activity of daily living transcranial doppler, skull B ultrasound, Brain Nuclear Magnetic Resonance Imaging MRI, Positron Emission Tomography SPECT, Diffusion tensor tractography evaluation method.

Results: the recovery rate of extracellular space (92.3%) was significantly higher than that of the control group (70.8%) ($P<0.05$), Transcranial Doppler, TCD total efficiency (79.3%) was significantly higher than that in the control group (51.8%) ($P<0.05$). Acupuncture to promoting the development of neurological and cognitive movement under 6 months children, effectively reduce the neurological sequelae. The total effective rate of the children with cerebral palsy was 87% in the acupuncture group, which was significantly higher than that of the control group ($P<0.01$). The total effective rate of Brain MRI was 59.55% in the acupuncture group and 13.25% higher than that in the control group ($P<0.01$). The total effective rate was 91.3% in the 1 year follow-up group, which was significantly higher than that in the control group ($P<0.01$). The FA value of white matter fiber bundle was significantly higher than that of acupuncture at 60 times ($P<0.05$). The recovery rate of ultrasonous brain injury (86.7%) in acupuncture group was significantly higher than that in control group (64.4%) ($P<0.05$). The recovery rate of brain SPECT in acupuncture group was 96.4%, which was significantly higher than that in the control group ($P<0.01$).

Conclusion: Acupuncture rehabilitation not only promote the development of white matter and gray matter in children with cerebral palsy, but also promote the brain function of children with cerebral palsy remodeling and compensation, and promote social adaptation, language and other cognitive function development, children with cerebral palsy movement and Fine motor function development and recovery, improve the children's self-care ability.

Keywords: Cerebral Palsy, Acupuncture, Nerve Repair, Remodeling, Motor Function.



Zhenhuan LIU

Nanhai Maternity and Children Hospital Affiliated to Guangzhou University of Chinese Medicine China

Biography

Zhenhuan LIU professor of pediatrics, Pediatric acupuncturist Ph.D. tutor. He has been engaged in pediatric clinical and child rehabilitation for 40 years. Led the rehabilitation team to treat more than 40,000 cases of children with intellectual disability, cerebral palsy and autism from China and more than 20 countries, More than 26800 childrens deformity returned to school and society and became self-sufficient. The rehabilitation effect ranks the international advanced level. Vice-chairman of Rehabilitation professional committe children with cerebral palsy, World Federation of Chinese Medicine Societies. Visiting Profassor of Chinese University of Hong Kong in recent 10 years. He is most famous pediatric neurological and rehabilitation specialists in integrated traditional Chinese and Western medicine in China. He has edited 10 books. He has published 268 papers in international and Chinese medical journals.

SEPT

02-04

6th Edition of Euro-Global Conference on

Pediatrics and Neonatology

WORKSHOP

The only way is ethics? Ethical decision making in pediatric practice

Pediatric Practice often presents us with ethical dilemmas which may be very nuanced. As practitioners we need to have an excellent understanding of ethics and ethical frameworks and an appreciation of how these considerations may color our decision-making process as we practice personalized family-centered care. We may see some of the ethical concepts in very different terms, colored by our previous experience, level of knowledge and education, cultural, religious and societal contexts and we must appreciate that other members of the multi-disciplinary team, parents and care-takers, legal representatives and society may differ in their approach for the same cases. This requires us to have some methodology that takes all of these aspects into account, together with legal considerations, when we make ethical decisions with our young patients and their families. This workshop will therefore explore these areas, giving participants practical and useful tools to help to guide and inform discussions to enable us to provide the best possible outcomes for our patients, under very challenging circumstances indeed.

Audience Take Away Notes

- An exploration of the range of understanding and approaches to ethical terms
- An understanding of the challenges of ethical decision making, via the mechanism of a case study
- An insight into the use of ethical decision-making tools and practice in the use of one of these
- A discussion on the multidisciplinary approaches to ethical decision making



Mrs. Heather Hanna

Department of Infectious Disease, Imperial College, London, UK

Biography

Mrs. Heather Hanna studied at Great Ormond Street Hospital, London qualifying as a Registered General Nurse and a Registered Sick Children's Nurse in 1989. She also qualified as an RN in the State of Washington, practicing there for 3 years in Infant Intensive Care Unit and then as a Research Nurse at Children's Hospital, Seattle. Her career was mostly spent in Neonatal Intensive Care before she moved into Research at St Mary's Hospital Paddington where she also obtained her MSc in Allergy (dist.) from Imperial College London, before her move into Medical Education, obtaining her MEd from Imperial College. She currently works as a Senior Clinical Teaching Fellow both with Undergraduates (in the Medical Ethics and Law Team) and Postgraduates (on the online Applied Paediatrics MSc course), both at Imperial College London.

SEPT

02-04

6th Edition of Euro-Global Conference on

Pediatrics and Neonatology

SPEAKERS



Aftab Yusuf Raj

Square Multidisciplinary Tertiary Care Hospital, Bangladesh

Role of Human Milk Oligosachharides (HMOS) on proper growth, immunity and tolarence in ensuring life long health for infants and toddlers

Human Milk Oligosaccharides (HMOs) contain numerous biomolecules. It is the third most abundant solid component of breast milk, after lactose and lipids, that plays an important role in infant growth and the development of life. Several studies have reported the health benefits of which include modulation of the intestinal adhesive effect against pathogens, modulation of the intestinal epithelial cell response, development of the immune system, increasing the intestinal barrier and so many health benefits can be achieved through the presence of HMOs in breast milk. Infant growth is indirectly directly on so many compounds of the biological and chemical composition of mother milk, HMOs are one of them. The genetic background of the mothers and the diversity of HMOs are determined and the non secretor mothers HMOs than secretor mothers. The breastfed infants of secretor mothers gain more health benefits than those of non secretor mothers. The study critically the role of HMOs in proper growth, immune system and development in the impact of infants at-1d toddlers. The study also focuses on current knowledge of the HMOs study and the beneficial effect of HMOs types and their importance to infant growth and protection against NEC. HMOs are applied now in infant to imitative nutrition composition of breast milk and their study and challenges are vastly discussed in a specific manner in the human study, In it is stated that supplementation of infant formula with 2'-FL LNnT is a promising innovation for infant nutrition.



Anastasios Christakis*, Konstantinos Tsaras, Dimitrios Papagiannis, Maria Saridi, Aikaterini Toska

Nursing Department, University of Thessaly, Larisa, Greece

Preschool children's screen exposure: Impacts on sleep and behavior

Background: The massive prevalence of children's screen exposure from a very young age is now a fact that cannot be ignored. The new digital environment, coupled with the abundance of user-friendly and accessible media devices, has contributed to this trend. The recent pandemic has exacerbated this situation. Excessive screen time during preschool years can lead to sleep disturbances and behavioural problems, which can have adverse effects on children's health and development.

Methods: The study aims to determine the average daily screen time of children aged 2 to 6 years, identify the factors influencing screen time, and investigate its potential effects on children's sleep and behaviour. A pilot survey was conducted on 42 parents of children aged 2-6 years by administering a questionnaire. This survey aimed to create a Greek version of the Screen time of children less than 6 years of age questionnaire. Additionally, the children's sleep habits and the preschool behaviour checklist were recorded.

Results: The average daily screen time for the sample is 51.6 (± 45.9) minutes. On weekends, there is a significantly higher screen time compared to weekdays (61.7 ± 68.4 and 47.6 ± 40.1 , respectively). Children aged 4-6 years have a considerably higher screen time (92.4 ± 39.1 minutes) compared to children aged 2-4 years (21.1 ± 18.6 minutes). Increased screen time seems to be linked to decreased sleep duration ($p=0.000$) and overall sleep quality ($p=0.013$) while is associated with the occurrence of psychosomatic disorders ($p=0.002$) in preschool children.

Conclusion: The excessive screen time for preschool children can negatively impact the duration and quality of their sleep, ultimately affecting their health and development. It is essential to promote initiatives aimed at informing and raising awareness among parents and early childhood education and care providers.

Audience Take Away Notes

- The importance of investigating preschool children's screen exposure.
- The recommended screen use guidelines for children of different ages.
- Factors that influence children's screen time exposure.
- The effects of prolonged screen time on children's sleep and behavior.
- What information does healthcare professionals, preschool teachers, and parents need to be aware of?

Biography

Anastasios Christakis is a data scientist specializing in the health sector. He is currently a Ph.D. candidate at the Department of Nursing at the University of Thessaly, where he is studying the effects of screen exposure on preschool children. He has extensive experience as a senior advisor in public health, higher education, and agriculture. He has published numerous articles in international scientific journals and regularly writes informative articles for the Greek press.



Magdy W. Attia MD, FAAP, FACEP; Arezoo Zomorodi*, MD, FAAP

Emergency Medicine, Department of Pediatrics Nemours Children's Health System, Wilmington, Delaware. USA



A pediatric emergency department's experience with quality improvement of the care of a common pediatric condition

Background: Quality improvement methodology has enabled application of research based clinical recommendations to patient care to standardize management and curtail cost. Utilizing Acute Otitis Media (AOM) AAP guidelines, we describe one healthcare system's strategy of using data feedback at the provider level and electronic health record integration to achieve antimicrobial stewardship. Prior to the QI initiative, AOM management varied widely between disciplines and between providers in the same discipline. The initiative focused on Treatment Duration (TD).

Methods: Electronic health records were queried on quarterly bases from 1/21-12/23 for ICD 10 diagnoses of AOM prior to the initiative and after implementation. Providers in one emergency department were instructed on appropriate TD based on age. Aggregate and individual data was shared anonymously, and ongoing education was provided. Statistical Process Control (P) chart was utilized to monitor performance.

Results: There were 1331 visits in the pre-implementation (1/21-12/21) and 4327 in the post-intervention (2/22-12/23) periods. Percent compliance with TD rose from 61% to 95% (Fig. 1). Steady improvement and sustained desired performance were achieved leading to a total of 8,200 antibiotic days avoided.

Conclusion: QI tools including learnings from Plan-Do-Study-Act (PDSA) cycles and frequent data sharing can powerfully lead to adoption of national guidelines for a ubiquitous pediatric diagnosis. Limitation of antibiotic use to recommended durations allows for antimicrobial stewardship. PDSA cycles were utilized to scale the success to multiple care settings across several states at an enterprise level. This is being analyzed.

Audience Take Away Notes

- Quality improvement methodology to standardize care for a common diagnosis with wide variation in management resulting in sustained compliance with published guidelines
- The importance of provider level data sharing in achieving desired results
- The importance of PDSA cycles to scale learnings to an enterprise-level in a large hospital system

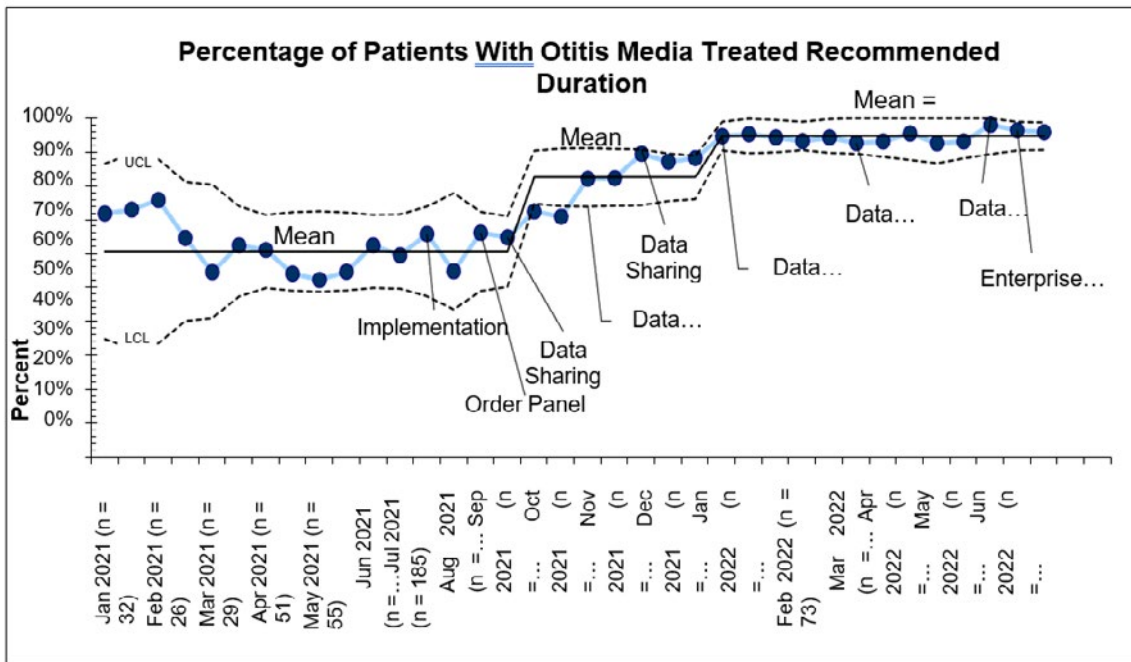


Figure 1: Statistical Process Control Chart (p)

Biography

Magdy W. Attia, MD trained in pediatrics and pediatric emergency medicine at New York University medical center from 1987-1992. He has served as a pediatric emergency Medicine physician at Nemours Children’s Health system for over 30 years. He is a professor of Pediatrics at Sidney Kimmel Medical College of the Thomas Jefferson University, in Philadelphia, PA.

Arezoo Zomorodi, MD graduated from the University of Pittsburgh Medical School in 2002, completed her Pediatrics Residency at the Children’s Hospital of Pittsburgh in 2005, and finished her Pediatric Emergency Medicine training at the Nemours Children’s Hospital, DE in 2010. She served as the Medical Director of Emergency Department Process Improvement and is now both the Vice Chair of Quality Improvement for the Department of Pediatrics and the Medical Director of the Clinical Pathways Department. Her scope of work encompasses clinical standardization and stewardship efforts leading to better patient outcomes.



Berkeley L. Bennett^{1*} MD, MS; Rekha Voruganti² MBOE, LSSBB; Tahje Brown² MBA; Laura Rust³ MD, MPH; Gerd McGwire⁴ MD, PhD; Dana Noffsinger⁵ CPNP-AC; Tara Dinh² BS; Roopali Bapat⁶ MD, MSHQS; Ryan Bode⁷ MD, MBOE

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Pediatric emergency medicine clinical pathway development and dissemination: A mechanism for widespread education

Background: The mission of the clinical pathways program is to provide easily accessible guidance for evidence-based care for every child. Facilitating access to Clinical Pathways (CPs) within our institution and to providers outside our institution is a mechanism for providing high quality education about diseases encountered in the emergency department.

Methods: A standardized process is utilized for Clinical Pathway development. A multidisciplinary team determines evidence-based recommendations that are integrated with expert consensus for a specific disease process. The patient population, signs and symptoms of the disease, and differential diagnoses are determined so that providers can ensure they are using the correct Clinical Pathway for the patient. An algorithm is created to illustrate a stepwise approach to evaluation and treatment, with links to additional information embedded within the algorithm. CPs are reviewed by a multidisciplinary committee of providers in the emergency department and urgent care to ensure the content and organization is optimized for that setting. A hospital-wide committee ensures that the content is valid and easy to understand. CPs are subsequently posted on the hospital intranet and externally on the internet to facilitate broad access to the information. CPs are revised when new clinical recommendations are available or every 3 years.

Results: Between January 2022-January 2024, thirty new CPs were created for the Pediatric Emergency Department (PED). CPs have been formally shared with other children's hospitals, regional adult hospitals and the Society for Pediatric Urgent Care. PED pathways are accessed from within our institution an average of 4,800 times per month, consistently increasing to > 7000 times per month in the past 5 months. Externally facing pathways have been accessed by 46 states within the United States and 68 international regions.

Conclusion: Using a standardized process, thirty new clinical pathways have quickly been developed and disseminated, providing evidence-based recommendations for disease processes encountered in the Emergency Department. Formal sharing of CPs and dissemination through internal and external access is a mechanism for providing quality education to a broad range of medical providers.

Audience Take Away Notes

- A standardized process can be utilized to quickly develop evidence-based clinical pathways tailored to the emergency department setting.
- A review process including providers in the emergency departments and urgent cares ensures that the content and organization is optimal for those care settings. Hospital-wide review ensures the content is valid and easy to understand.
- Formal sharing of clinical pathways facilitates education with pediatric and adult hospitals.
- Dissemination of clinical pathways via the intranet and internet is a mechanism for providing quality education to a broad range of medical providers.

Biography

Dr. Bennett graduated from Loma Linda Medical School in California in 1999. She completed her Pediatric Residency in Dallas Texas. Dr. Bennett completed a Pediatric Emergency Medicine (PEM) Fellowship and obtained her MS in Clinical Investigation from Baylor College of Medicine in Houston, Texas. In 2006, Dr. Bennett became PEM faculty at Cincinnati Children's Hospital Medical Center in Cincinnati, Ohio. In 2018, Dr. Bennett continued her career in PEM at Nationwide Children's Hospital (NCH) in Columbus, Ohio, as Director of Performance Improvement. In 2022, Dr. Bennett became a Co-Medical Director for the NCH Clinical Pathways Program.



Borah Hong MD

University of Washington/Seattle Children's Hospital, Division of Pediatric Cardiology, Seattle, Washington, USA

Management of pediatric heart failure

Pediatric heart failure is a rare but highly morbid condition that can have a huge impact on a child's long term survival. Given the rarity of pediatric heart transplantation, medical management of pediatric heart failure is vital to improving outcomes in this fragile patient population. Much of the medical therapies to treat pediatric heart failure are extrapolated from adult clinical trials but given the paucity of large scale, multi-center prospective studies in pediatric heart failure, it is up to the clinician to consider use of newer heart failure medications. Our center's philosophy is to treat pediatric heart with all Guideline Directed Medical Therapies (GDMT), and we embarked on utilizing Sodium Glucose Co-Transport 2 Inhibitors (SGLT2i) since 2020. Since that time, our center has amassed the largest experience of using SGLT2i in pediatric heart failure patients, both congenital heart disease and cardiomyopathy, with low adverse events and improved clinical outcomes including improved functional status, biomarkers, and echocardiographic parameters of systolic function. We concluded that SGLT2i, when added to a background of guideline-directed medical therapy, appears well tolerated in children with heart failure.

Audience Take Away Notes

- Review of guideline directed medical therapies for pediatric heart failure
- The audience will learn the pathways to target treatment of pediatric heart failure
- This is a broad topic that physicians, nurses, and staff can all learn in managing pediatric heart failure
- Will discuss new innovations in medical management of pediatric heart failure

Biography

Dr. Hong completed her pediatric residency at the University of Washington/Seattle Children's Hospital in 2007, followed by completing her pediatric cardiology fellowship at Baylor College of Medicine/Texas Children's Hospital in Houston, Texas. She has been a faculty member at the University of Washington School of Medicine since 2014 and her clinical work includes caring for children with heart failure, cardiomyopathy or heart transplantation. She has over 30 publications related to her area of expertise. She is the current associate director of the heart failure/cardiomyopathy/transplant program and also serves as the pediatric cardiology fellowship program director.

**Chandra Sekhar Devulapalli MD PhD**

Senior Paediatrician, Department of Medicine, Helgeland Hospital, Sandnessjoen, Norway

Vitamin D status in children adhering to vegan and vegetarian diets

Background: Concerns exist about whether plant-based diets provide enough essential micronutrients like vitamin D. A systematic review indicated a high risk of vitamin D deficiency in poorly planned vegan diets. The use of vitamin D supplements among vegetarian and vegan children varies, likely due to differences in knowledge and supplementation needs.

Aim: This study aimed to evaluate research on dietary intake, 25-Hydroxyvitamin D (25(OH)D) levels, and anthropometry in children following vegetarian and vegan diets.

Methods: A review of current literature examining the vitamin D status of children aged 1-18 years was conducted by systematically searching PubMed, Google Scholar, and Scopus databases from January 1, 2000, to December 31, 2023.

Results: The review included nine studies from 2000 to 2023. Five studies found lower dietary intake of vitamin D in children on vegetarian and vegan diets. Three of six studies reported lower 25(OH)D levels in vegetarian and vegan children. One study showed lower levels in vegans compared to omnivores, another in vegetarians and vegans not taking supplements, and a third in Asian children aged 3-4.5 years compared to Caucasian children. The remaining three studies found no significant differences between diet groups. Three studies on anthropometry showed vegetarians had similar body weight and height as omnivores.

Conclusion: Children on vegan and vegetarian diets often have insufficient dietary intake and lower 25(OH)D levels, highlighting the need for increased vitamin D supplements and fortified foods. While a well-planned plant-based diet can meet nutritional requirements, vegetarians, especially vegans, should include vitamin D supplements or fortified foods.

Biography

Chandra Sekhar Devulapalli is a certified pediatrician with expertise in pediatric gastroenterology, nutrition, and pulmonology. He earned his Ph.D. in pediatric pulmonology from the University of Oslo in 2008. He has published more than 35 scientific articles in peer-reviewed reputed international medical journals like Thorax, New England Journal of Medicine, Archives of Disease in Childhood, European Respiratory Journal and has been reviewer for some of top scientific medical journals (eg. BMJ and Lancet). Presently working as a senior pediatrician consultant, outpatient pediatric polyclinic, Medical Department, Helgeland Hospital, Sandnessjoen, Norway.



Dr. Darazel Perez^{1*}, Pranav Jani^{1,2}, Rajesh Maheshwari^{1,2}, Dharmesh Shah^{1,2}

¹Department of Neonatology, Westmead Hospital, Sydney, Australia

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Thyroid function in infants born to women with hypothyroidism: An observational study at an Australian tertiary perinatal centre

Objective: Concerns have been raised regarding thyroid dysfunction in infants born to women with hypothyroidism including those with autoimmune hypothyroidism. This concern has led to the practice of thyroid function testing in the early neonatal period. We evaluated the practice of performing a routine thyroid function test around 2 weeks of age in all healthy full-term infants (≥ 37 weeks gestation) born to women with hypothyroidism to identify thyroid dysfunction.

Design, patients, and measurements: This retrospective, observational single centre study included full-term infants born to women with hypothyroidism, including non-Graves' autoimmune hypothyroidism, over a 3-year period. Preterm infants and those born to women with Graves' disease or thyroidectomy were excluded.

Results: Of the 790 mother-infant dyads, 780 infants (99%) had normal thyroid function. Only 10 infants (1%) had Thyroid Stimulating Hormone (TSH) levels >10 mIU/L at 2 weeks of age (range 10.25-106.37 mU/L). Of these, follow-up thyroid function normalized in nine infants within 2 weeks. A routine newborn screening test identified congenital hypothyroidism in one infant. No infant born to women with known presence of anti-thyroid antibodies had TSH levels ≥ 10 mIU/L. Thyroid function was normal for most infants where maternal anti-thyroid antibodies were not known (125/133, 94%).

Conclusions: Infants born to women with hypothyroidism (including autoimmune hypothyroidism) had normal thyroid function in the early neonatal period. A small proportion of infants may develop TSH levels >10 mU/L that normalizes by 4 weeks of age. The practice of routine thyroid function testing for this cohort in addition to newborn screening test offers no additional benefit.

Audience Take Away Notes

- Outcome of thyroid function test of infants born to women with hypothyroidism at 2 weeks of age.
- May have implications on monitoring practice in some centers who still repeat TFT at 2 weeks, which can result in better utilization of hospital resources.
- May provide further research ideas.

Biography

Dr. Perez is a dual-trained paediatrician and neonatologist. She studied Bachelor of Science in Pharmacy at the University of the Philippines and Doctor of Medicine at St Lukes' College of Medicine in 2008. She completed her pediatric residency training at St. Luke's Medical Center and served as chief resident in 2012. Dr. Perez completed further pediatric training at the Children's Hospital at Westmead, Australia and became a fellow of the Royal Australasian College of Physicians in Paediatrics and Child Health. She pursued post fellowship training in neonatology and is currently working as a neonatologist in Grace Centre for Newborn Intensive Care at The Children's Hospital at Westmead, Sydney, Australia.



Deanna Dahl Grove M.D

UHRainbow Babies and Children's Hospital, Cleveland, OH 44106, United States

Creating a pediatric disaster center of excellence - Lessons and tools from one center in the United States

Region V for Kids (originally known as Eastern Great Lakes Consortium for Disaster Response) is one of United States (US) Administration for Strategic Preparedness and Response (ASPR) funded Pediatric Disaster Centers of Excellence (PCOE), serving nearly 12 million children and families in a six state region of the United States. The original goals set forth were: develop a coordinated pediatric disaster care capability, strengthen pediatric disaster preparedness plans and coordination, enhance state and regional medical pediatric surge capacity, increase healthcare professional educational competency and enhance situational awareness of pediatric disaster care across the spectrum.

The COVID-19 pandemic occurred shortly after original funding and caused a pivot from preparation to response for the partners, enhancing the collaboration and coordination for the region. Creating stronger partnerships with federal agencies around situational awareness and considering social and physical determinants of health that affect children and families has been instrumental. The COVID response and the fall 2022 respiratory surge taught us valuable lessons in this regard. The PCOE has created and disseminated many tools and products, including educational tools, behavioral health training and tools, virtual exercises, and quality improvement projects, with the help of partnerships with state agencies and other key participants. The best practices and ongoing projects highlight how to improve coordinated care for children and families within a region and is an example for beyond the United States. There are also challenges to coordinated preparedness due to jurisdictional barriers and these are as important to highlight and create mitigation strategies.

The US supported PCOE are examples of creating regional disaster networks to mitigate and prepare for response concentrating on the needs of children and families in the larger disaster cycle.

Audience Take Away Notes

- Understand how a regional group focused on children addressed issues within disaster preparedness
- Explore how to create a regional approach to pediatric within the disaster cycle
- Identify one method or tool to be adapted or modified to implement within your healthcare jurisdiction

Biography

Deanna Dahl Grove, MD, FAAP, is a pediatric emergency physician in the Division of Emergency Medicine at University Hospitals Rainbow Babies & Children's Hospital. She is Professor, Pediatrics, Case Western Reserve University School of Medicine. Dr. Dahl Grove is board certified in pediatrics and Pediatric Emergency Medicine (PEM) and certified in advanced pediatric life support and advanced trauma life support. Her special interest is pediatric disaster medicine. Dr. Dahl Grove has authored and coauthored articles in peer-reviewed pediatric and emergency medicine publications and books. She is serving as disaster dominion co-lead for the Emergency Medical Services for Children Innovation and Improvement Center. Dr. Dahl Grove is a Fellow of the American Academy of Pediatrics (AAP) she a member of the executive committee for AAP Committee on Children and Disasters. Dr. Dahl Grove co-PI for ASPR Pediatric Center of Excellence for Region V for Kids, leading the many projects to meet the goals of setting best practices for regional disaster preparedness for children and families (2019- current). She is serving as disaster dominion co-lead for the Emergency Medical Services for Children Innovation and Improvement Center. In addition she is a Hub site PI for the HRSA Pediatric Pandemic Network (2021- current).



Kipiani E

School of Health Sciences, University of Georgia, Health Research Union, Tbilisi, Georgia, Clinic NeoLab, Tbilisi, Georgia

Study of risk factors affecting HBV vaccine efficiency among children in Georgia

Background: The goal of this study is to evaluate the effectiveness of hepatitis B vaccine and risk factors associated to absence or weak immune response to HBV vaccination among children in Georgia. In the conditions of mass vaccination of hepatitis B, all over the world, including in Georgia, in the vaccinated population, the number of those individuals who could not develop Anti-HBs are growing every day. According to the literature, the main reason for the ineffective vaccination of hepatitis B is considered to be an increase in the prevalence of express mutants among the hepatitis B virus population, which is of a similar intensity throughout the world. In parallel with a detailed analysis of literature sources, the scientific article for the first time studied the seroprevalence of Anti-HBs in the population of Georgian vaccinated children.

Methods: Studies were carried out on 300 vaccinated children. Their age ranged from one month to 17 years. They turned into pediatric clinics for one reason or another, and needed one or another analysis of the venous blood. The study of the seroprevalence of Anti-HBs was carried out by the enzyme immunoassay. In those patients who, after vaccination, could not develop Anti-HBs, HbsAg and HBV concentration were determined by Polymerase Chain Reaction (PCR).

Results: Among 300 immunized children anti-HBs was not developed in 14%. All of them were tested for HBsAg and positive test result was found in only one individual. The study showed that the production of antibodies after hepatitis B vaccination is not influenced by age, gender, or type of disease, because the difference in the data obtained for age or nosological groups is statistically unreliable ($P > 0.05$). By bivariate analysis statistically significant association was found between the development of anti-HBs and ethnicity of a child 87% of children of Georgian ethnicity developed anti HBs vs to 68% of children of other ethnicities; ($p < 0.05$). Besides, higher proportion of children who were immunized on-time according to National Immunization Calendar (90%) developed anti-HBs compared to children whose HBV immunization was postponed (82%) and this association was statistically significant ($p < 0.05$).

Conclusions: According to our Study, it can be noted that the effectiveness of vaccination against hepatitis B virus in Georgia does not differ from other countries of the world. Mutations of the hepatitis B virus and postponing HBV vaccination are considered the main reason for ineffective vaccination.



Dr. Eki-Udoko Fidelis Ewenitie* (FNMC), Prof. Sadoh Ayabo (FWACP), Prof. Ibadin Micheal Okegualo (FNMC), (Rip), Prof. Omoigberale Augustine.I (FWACP)

Department of child health, University of Benin Teaching Hospital P.M.B 1111,
Benin-City, Edo State, Nigeria

Placental malaria histological features and the burden of congenital malaria among HIV/malaria co-infected mothers in Benin city, Edo State

Background: It is well documented that Sub-Saharan Africa bears the highest burden of both malaria and HIV. This pathologic effect of malaria on the placental has led to the staging of placental malaria histology. These pathologic features may reflect different levels in the breach of the integrity of the placenta which may predispose to transmission of congenital malaria and possibly HIV. But few if any have examined the association of maternal placental malaria histology stages in HIV positive and negative mothers and the effects of these on their newborns (congenital malaria).

Methods: Subjects were 162 newborns of HIV/malaria co-infected mothers and Controls were 162 newborns of HIV negative malaria infected mothers. Blood film for malaria parasites was done on cord blood and peripheral blood on days 1, 3 and 7 in the newborns. Maternal peripheral blood film for malaria parasite was done at delivery and placental tissue was obtained for confirmation of placental malaria by histology. Diagnosis of malaria in blood films was by light microscopy.

Results: The placental malaria histology in HIV positive mothers were predominantly the chronic type (51.9%) and past type (54.6%) in HIV negative mothers respectively. Congenital malaria was significantly more in chronic types of placental malaria histology irrespective of maternal HIV status ($p=0.017$ in subjects and 0.000 in controls respectively).

Conclusion: Babies born to mothers are at increased risk for congenital malaria if their placental malaria histology is of the chronic type compared to the other types (active and past) irrespective of maternal HIV status.

Funding: None.

Conflict of Interest: None to declare.

Keywords: Placental Malaria Histology, HIV, Congenital Malaria, HIV/Malaria Co-Infected Mothers, Benin-City, Nigeria.

Audience Take Away Notes

- Placental malaria histologic pattern in mothers with HIV/malaria co-infection
- Placental malaria histologic pattern in HIV naive mothers with malaria
- The association of placental malaria histologic type and the concomitant risk of congenital malaria in their newborns

- This placental malaria histologic pattern has provided an insight as to the risk of newborns having congenital malaria when delivered to HIV positive mothers who are co-infected with malaria. The knowledge gap is having a high index of suspicion when handling such babies and including malaria in both the screening and treatment for congenital malaria that has the potential of mortality if not properly evaluated

Biography

Dr. Fidelis E. Eki-Udoko graduated from University of Benin with MBBS in 2003. He became member of the General Medical Council United Kingdom in 2006 and of the West African College of Physical in 2009. He received a postgraduate fellowship at the National Postgraduate College of Nigeria in paediatrics residency training in 2014 where he also has a Masters Degree in Health Planning and Management in 2017. He is Coordinator of Postgraduate Training at the University of Benin Teaching Hospital. He is a Senior Lecturer at Igbinedion University Okada and has over 25 published research articles in medical journals.



Gamal Al-Saied

Professor of Pediatric Surgery, Al-Azhar University, Cairo Egypt

Incidental finding of heterotopic adrenocortical rest along spermatic cord in children: Surgical significance and implication

Heterotopic Adrenocortical Rests (HACR) found incidentally along the spermatic cord in children with undescended testicles are probably not very rare congenital anomaly as previously reported.

Because of the migratory nature of the adrenal cortex and medulla during early embryogenesis, the extra-adrenal tissue (adrenocortical rests) can be found anywhere in the abdomen, but typically are located along the anatomic derivatives of the urogenital ridge.

Here, we present 8 cases of heterotopic adrenocortical rest found incidentally along spermatic cord during orchiopexy in children. The embryogenesis and pathophysiology as well as the surgical significance and implication are briefly discussed.

Keywords: Heterotopic Adrenocortical Rest, Undescended Testis, Ectopic Adrenocortical Tissue.

Biography

Professor Gamal Al-Saied had been graduated from Al-Azhar University with Bachelor's Degree in Medicine and Surgery with a general grade very good with honor. His rank was the 9th in the top 10 graduate list of Faculty of Medicine Al-Azhar University Cairo, Egypt. In 1991, He has been completed his Master's Degree (MSc) in pediatric surgery (1st part, thesis, and 2nd part). Then, he was appointed as a demonstrator of pediatric surgery in 1992, then, an assistant lecturer of pediatric surgery in 1993 at the Pediatric Surgery Department. In 1998, he has been accredited with a Doctorate Degree in Pediatric Surgery (M.D). Then, he was promoted to a lecturer of pediatric surgery at the Pediatric Surgery Department. In 2004, he was promoted to assistant professor of pediatric surgery at Pediatric Surgical department at Al-Azhar University Hospitals. In 2008, he was certified a Fellowship of European Board in Pediatric Surgery (FEBPS), Glasgow, Scotland. In 2009, he was promoted to a full professor of pediatric surgery at Pediatric Surgical department by Al-Azhar University Hospitals. In 2022, he is certified as a Fellowship of American College of Surgeons (FACS) USA. He had two published theses (MSc and M.D) and he supervised many thesis of a Master's Degree and Doctorate Degree. Also, he has published 37 international researches in international journals of pediatric surgery and one chapter in international text book (CURRENT CONCEPTS OF URETHROPLASTY) Edited by Donkov I. 2011, pp 35-42. He has been invited as an international speaker and chairperson in many international conferences on pediatric surgery. Currently, He is an Editor-in- Chief for two international pediatric surgery journals and editor of thirteen international pediatric surgery journals. He is also reviewer for many international pediatric surgery journals. In 2003, he was the founder and head of pediatric surgery unit at King Abdul Aziz Specialist Hospital Taif, Saudi Arabia. He has a great and long term experience in neonatal and pediatric surgery field (open and laparoscopic). Recently, in the era of COVID-19 and afterwards, he has been invited as an international keynote speaker to many international pediatric surgery webinars.

HaiQiang Ma

Chongqing Shapingba District People's Hospital, China

Association of tic disorders with airway allergic disease-to construct a prediction model of co-morbidity based on changes in lung function

Background and Objective: Tic Disorder (TD) is a common neuropsychiatric disorder in children and adolescents. Its clinical manifestations are vocal tic and motor tic, and its etiological mechanism is not completely clear. At present, the co-morbidity of TD and allergic diseases continues to rise, especially airway allergic diseases. This study aims to analyze the correlation between TD and airway allergic diseases, explore the risk factors of TD, and construct the nomogram prediction model of TD combined with airway allergic diseases, so as to help clinical better identify patients with TD combined with allergic diseases.

Methods: We retrospectively analyzed the clinical data and pulmonary function of 187 children with TD who attended the pediatrics outpatient clinic of XX Hospital from January 1, 2015 to December 31, 2023. According to whether the children with TD had airway allergic diseases, they were divided into TD group (124 cases) and CON group (63 cases). The basic information, past history, family history, treatment and related lung function data of the two groups were recorded and compared. Basic information, past history, family history, treatment, and relevant pulmonary function data were recorded and compared between the two groups. The differences in 13 indicators, including gender, age, history of respiratory tract infection, family history and lung function, were analyzed by one-way logistic regression analysis, and the statistically significant risk factors selected as predictors were analyzed by multifactorial logistic stepwise regression analysis. Then, based on the results of the multifactorial logistic regression analysis, we constructed a line graph prediction model for TD co-infected with airway allergic diseases and evaluated its predictive efficacy.

Results: Univariate logistic analysis showed that sex, FVC, FEV1, FEV1/FVC, PEF, emotional state, co-morbid ADHD or OCD, family history of Tourette's syndrome, recurrent respiratory infections, and prognosis of anti-allergy treatment were not associated with TD co-morbid airway allergic disease. In contrast, age, changes in small airway function, and having a history of allergy were significantly associated with TD co-morbid airway allergic disease ($P < 0.05$). Further multifactorial logistic stepwise regression analysis also showed that age, changes in small airway function, and a history of allergy were independent risk factors for TD co-morbid airway allergic disease. Further analysis suggested that the model was optimized by retaining the minimum Akaike information criterion (AIC) for the three variables of age, changes in small airway function, and having a history of allergy. We constructed and internally validated a column-line graph for predicting the risk of TD co-morbid airway allergic disease, and the results showed that the C-index was 0.882, and the calibration curve showed that the predicted risk of TD co-morbidity was basically the same as the actual risk of TD co-morbidity.

Conclusion: TD co-morbidity with allergic diseases is associated with, changes in small airway function, and a history of allergy. The TD co-morbid airway allergic disease risk column-line graph prediction model we constructed initially realized the visualization of the research results, which was readable, well calibrated, with a fair degree of differentiation, and has practical application for predicting TD co-morbid airway allergic disease.

Key words: Tic Disorder, Airway Allergic Disease, Lung Function, Nomogram, Children.



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Suitability of standard skinfold measurements in children with spina bifida

The aim of this study is to demonstrate that standardized skinfold measurement tables for healthy children do not yield accurate results in monitoring the growth of children with spina bifida and to propose a new measurement site providing more precise results.

Introduction: Spina Bifida (SB) is a congenital neural tube defect resulting in an open spine that fails to close properly. It affects 3 out of 1000 children in Turkey, ranking second in prevalence among congenital diseases after Down Syndrome. Ambulation levels and the presence of scoliosis and kyphosis vary among SB children, affecting anthropometric measurements, especially skinfold measurements.

Method: The study included 413 SB patients aged 0-18, comprising 222 girls and 191 boys. Skinfold measurements were taken from subscapular, biceps, triceps, and the suggested new region, the suprailiac region. Evaluations were based on skinfold percentile curves for healthy children aged 3 months to 5 years by the World Health Organization, as specific percentile studies for SB children were lacking.

Results: Among 222 girls, scoliosis was observed in 30, kyphosis in 10, both in 6, hemimetameric shift in 1, and spondyloptosis in 1. Among 191 boys, scoliosis was observed in 30, kyphosis in 7, and both in 6. Vertebral deformity was recorded in 21.6% of girls and 22.5% of boys, totaling 22% across the study group.

Conclusion: Examination of subscapular and triceps skinfold measurements based on WHO percentile curves revealed discrepancies due to ambulation level variations and existing deformities in SB patients. A significant portion of SB patients are plejic, using arm crutches or wheelchairs, which affects triceps and biceps measurements. Subscapular measurement is also affected by the high incidence of scoliosis and kyphosis. Thus, a new measurement site unaffected by ambulation levels, the suprailiac region, is proposed for more accurate assessments.

Audience Take Away Notes

- They will understand the prevalence of spina bifida in Turkey and its impact on anthropometric measurements, including skinfold measurements. The methodology employed in the study, including the inclusion of SB patients aged 0-18 and the evaluation based on skinfold percentile curves, will be highlighted. The results section will provide insights into the prevalence of scoliosis, kyphosis, and vertebral deformities among SB patients, emphasizing the discrepancies observed in skinfold measurements due to ambulation level variations and existing deformities. Finally, the presentation will propose a new measurement site, the suprailiac region, as a more accurate alternative for assessing growth in children with spina bifida.

Biography

İbrahim Alataş, a pediatric neurosurgeon and fetal surgeon, He works at the Spina Bifida Fetal Surgery Center and Istanbul Istinye University Gaziosmanpaşa Medicalpark Hospital Spina Bifida Center.



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The investigation of the relationship between meningocele and MMP-9, TIMP-1, and TGFβ-1 levels

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Biography

İbrahim Alataş, a pediatric neurosurgeon and fetal surgeon, He works at the Spina Bifida Fetal Surgery Center and Istanbul Istinye University Gaziosmanpaşa Medicalpark Hospital Spina Bifida Center.



James St. Louis MD

Augusta University, United States

2023 American Association for thoracic surgery expert consensus document—recommendation for the care of children with trisomy 13 or trisomy 18 and a congenital heart defect

Expert consensus documents are critical to the practice of medicine when peer-reviewed data are insufficient to create clinical practice guidelines. The management of infants with trisomy 13 or trisomy 18 who have an associated congenital heart defect lacks consistency. The variability in practice leads to discontent and distrust among parents and clinicians and to potentially suboptimal patient care. The American Association of Thoracic Surgery (AATS) has supported the creation of an expert consensus document addressing many of the controversial issues surrounding the indications for correction of a congenital heart defect in this population. Input from a group of experts in this field, to include genetists, ethicists, pediatric cardiologists, pedaitric pulmonologist, pediatric cardaic surgeons, and intensvie care specialists, joined to create and adjustfy nine recommendations to address the indications for repair of a congenital heart defect in child with trisomy 13 or 18. This document will provide information that may be used by both are caretakers and families to support these decsions and management of this complex group of pateints.

Biography

Dr. James St. Louis currently holds the J. Harold Harrison Endowed Chair of Surgery at the Augusta University, University of Georgia Health System. He serves as the Chief of Pediatric and Congenital Heart Surgery at the Children's Hospital of Georgia and Co-director of the Pediatric and Congenital Heart Program. After completing medical school at Georgetown University School of Medicine, he accepted a cardiothoracic residency at Duke University under Dr. David Sabiston.. He has been a practicing congenital heart surgery for the last twenty year. His clinical expertise has focused on optimizing surgical outcomes with neonatal heart defects. Dr. St. Louis's most recent academic efforts have focused on international outcomes of congenital heart surgery.



Dr. Jeanne Magagna

Child, Adult and Family Psychotherapist Former Head of Psychotherapy Services, Great Ormond Street Hospital, United Kingdom

Enhancing trust in the NICU unit

The establishment of epistemic trust in the NICU Unit is essential in creating the best relationships between the baby in the NICU unit and the caregivers. Preservation from death is linked with fostering empathic, attuned links between the NICU baby and the caregivers (the parents, nurses and doctors). A child psychotherapist is very useful to support the nurse- parents-child relationships. In particular, the child psychotherapist who has studied the Bick Method of baby observation taught at the Tavistock Clinic is extremely well equipped to enlist the parents, nurse and paediatricians to form a core team to promote physical and emotional connectedness with the caregivers. Being present as much as possible to quietly observe the baby's state of mind and provide encouragement to two key nurses and the parents to emotionally and physically attune to the baby is crucial. Such emotional and physical presence promotes the baby's wish to live and struggle to stay alive.

Therapeutic endeavors with Siamese twins and other twins will also be discussed. The therapeutic work in the NICU can be crucial to preventing emotional difficulties and defences inhibiting the child's emotional development later in life.

Biography

Dr. Jeanne Magagna, Tavistock trained child, adult and family psychotherapist, has worked with children and their parents as a nursery teacher, secondary and university teacher as well as subsequently being Head of Psychotherapy Services at Great Ormond Street Hospital for Children for 24 years. She has also worked as a consultant to Family Futures Adoption and Fostering Consortium and previously Coordinator of Training at Centro Studi Martha Harris in Florence and Venice, Italy, where she now continues to teach. Throughout her professional life her aim is to help parents and professionals observe the deeper aspects of infants' personality in order that infants can be better understood and have more rights to good parenting. Her books *The Silent Child: Communication without Words* and *Being Present for Your Nursery Age Child* discuss how important it is to collaborate with parents to support and understand their children and parents have been involved in these writing projects. With the collaboration with Roz Read she has edited *Contemporary Child Psychotherapy*. Other collaboratively edited books include: *Psychotherapy with Families*, *Intimate Transformations*, *Creativity and Psychotic States* and *A Psychotherapeutic Understanding of Children and Young People*. Jeanne currently works on most continents teaching infant observation, discussing collaborative work with parents, and engaging in clinical discussions.



Jenny Ly^{1*} PhD, Anna Sosa², Matthew Heidman³, Susan M Dallabrida¹ PhD

¹SPRIM PRO, Boston, MA, USA

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Reliability of caregiver derived anthropometric measurements for infant growth monitoring studies

Background: Historically, to capture infant formula Growth Monitoring Study (GMS) endpoints (weight, length, Head Circumference (HC)), caregivers have been required to visit study sites with their infant. To address the burden of site visits, a Decentralized Clinical Trial (DCT) approach for GMS would enable caregivers to capture endpoints in real time via teleconference with study staff. Given the inherent concern with non-clinical personnel conducting measurements, this study aims to demonstrate reliability between measurements taken among clinically trained personnel and telehealth guided infant caregivers as a direct indicator of data quality.

Methods: Four silicone, non-vinyl dolls with anthropometrics representative of infants were measured. In a crossover design, each doll was issued to three arms of study participants to complete anthropometric measurements (weight (kg), length (cm) and HC (cm)): 1) individuals with no healthcare training (Caregivers; n=7) who were guided via telehealth call with study staff; 2) board certified pediatric health care professionals (HCPs; n=7); and 3) study staff board certified pediatric registered nurses to provide measurement gold scores (n=3). Inter- and intra-observer Technical Error of Measurement (TEM), average bias relative to the gold standard, and coefficient of reliability were calculated.

Results: Inter and intra-observed TEM estimates for caregivers were below the maximum allowed error based on the gold standard (2xTEM Gold Standard) with 95% precision margin, for all measurements. For HCPs, only the intra-observer TEM for length measurement and inter-observer TEM for HC and length measurements were within twice the gold standard TEM. There was no evidence of bias for either the caregivers' or HCPs' measurements compared with the gold standard. Coefficients of reliability were greater than 0.96 for all three measurements.

Conclusion: This study demonstrates telehealth led caregivers can capture accurate and reliable anthropometric measurements, supporting the confidence in and utilization of a DCT approach for infant formula GMS.

Audience Take Away Notes

- Will help individuals understand the shifting state of the infant formula growth and monitoring study space and how it is shifting, in tandem with the FDA, toward higher quality, more efficient, and lower cost clinical trial, through DCT designs enabling increased number of players in the space, thus pushing the standard infant formula quality.

Biography

Jenny Ly is a clinical psychologist with a specialization in neuropsychology and has over 10 years of experience in the design and management of clinical research. Dr. Ly has extensive experience with optimizing data quality through rater, participant, and caregiver training as well as providing central monitoring and rating services. She also consults on the planning and implementation of eClinical technology for decentralized, hybrid, and traditional trials among different populations and therapeutic areas. She has authored over 15 manuscripts and taught statistical methods courses.



Kim Siarkowski Amer Phd, RN

Associate Professor and Director DePaul University College of Science and Health
School of Nursing Chicago, Illinois, USA

Self perception of school age children with chronic illness

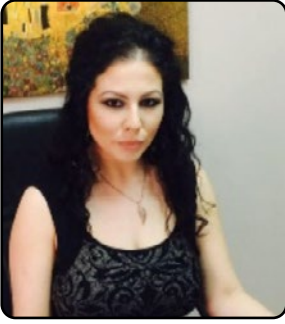
A Risk and Resistance Framework is used to describe the factors that influence a child's adaptation to chronic illness. Self Perception is a critical measure used to assess the adaptation to chronic illness in school age children. Children are resilient and adaptable, however, if there are risk factors associated with the environment, the child may not develop a positive self perception. When the illness is evident physically there may be even more of a challenge. In school age children ages 8-13 years, the peer perceptions and social interactions become very important. When coping strategies are developed and nurtured children are more likely to thrive. In this study the self perception profile for children was used to evaluate children with type 1 diabetes and short stature. The research question was, do children with different conditions have different self perceptions? The Self Perception Profile for Children developed by Susan Harter was used to explore the question. There are six sub constructs in the multidimensional tool. (Harter 2012) The specific domains are; 1. Scholastic Competence 2. Social Competence 3. Athletic Competence 4. Physical Appearance 5. Behavioral Conduct 6. Global Self- Worth. The results will be shared at the conference.

Audience Take Away Notes

- The audience will learn how to assess a child's adaptation using a risk and resistance framework. They will also identify the elements that make up a multidimensional instrument, the Harter SPPC. Looking at a full profile of the child assists providers in establishing needed referrals or resources.
- The audience will also have knowledge about a risk and resistance framework to guide practice and research. Recognizing risk and resistance factors is critical, even when they are not all measured. Providing a rich context to the profile of the child and family can help provide maximum positive care.

Biography

Kim Siarkowski Amer is the director and an associate professor in the School of Nursing. She has taught at DePaul University since 1991. She has a PhD in Maternal Child Nursing from University of Illinois at Chicago. Her Bachelor of Science degree in Nursing is from St. Mary's College, Notre Dame, Indiana. Prior to joining the faculty at DePaul she was a clinical nurse specialist in Pediatric Endocrinology, Metabolism, and Nutrition at Loyola University Medical Center in Maywood, Illinois. She was a staff nurse at Children's Memorial Hospital in Chicago in the emergency room and the hematology oncology unit. Her research is focused on children and families coping with chronic illness. She has authored many articles focused on child and family adaptation to type 1 diabetes. In addition, she has a research focus on safety and quality in nursing and has a book entitled Quality and Safety for Transformational Nursing: Core Competencies. Dr. Siarkowski Amer has been a director, and the only nurse, on the board of the Genentech Foundation for Growth and Development, President of the Pediatric Endocrinology Nursing Society, and she was the director of the School of Nursing at DePaul in 2011-2012 and 2019-2020 and is once again the director.



Kristina Dimitrijevic^{1*}, Nadica Mitreska²

¹University clinic of pulmonology and allergology-Skopje, N.Macedonia

²University institute of radiology- Medical faculty, Skopje, N.Macedonia

The use of the bhalla score system in the detection of pulmonary parenchymal changes in patients with cystic fibrosis detected on high-resolution CT

Introduction: Cystic Fibrosis (CF), caused by a mutation in the Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) gene, is an inherited, chronic, progressive, and fatal disease. It mainly involves the lungs and pancreas, but also the upper airways, liver, intestine, and reproductive organs.

The aim of our study is to evaluate one of the most used scoring systems, the Bhalla scoring system, in the detection of lung impairment in patients with cystic fibrosis.

Material and Methods: A total of 32 patients diagnosed with CF came to our University clinic of pulmonology and allergology-Skopje to perform HRCT for the first time and to detect the degree of the disease. Clinical data, age at application, deep throat and sputum cultures were obtained from medical records Moj Termin. High-Resolution Computed Tomography (HRCT) was performed on a 128-slice PHILIPS INCISIVE CT scanner, using 1 mm slices and a high spatial resolution image reconstruction algorithm using Bhaala score system.

Results: A total of 66% of patients have mild severity of bronchiectasis, 53% of all have mild peribronchial thickening, 41% of all have from 1 to 5 extent of the bronchiectasis and 53% of all have from 1 to 5 extend of mucus plugs as a dominant HRCT findings. Sputum was positive in 44 % of patients.

Conclusion: High resolution computed tomography (HRCT) is well-established and is the current gold standard method for monitoring lung anatomical changes in patients with CF. Bhalla HRCT scoring system is useful for pulmonary evaluation of children with CF.

The specialists who deal with this issue can benefit the most from this lecture, where the presence of parenchymal changes in patients with cystic fibrosis can be detected at the earliest stage using high-resolution CT. Taking into account that we are talking about relatively young patients, it is best to use special CT protocols as well as low-dose imaging in certain cases.

Biography

Dr. Kristina Dimitrijevic studied Medicine at Medical faculty st. Cyril and Methodius University- Skopje and graduated as doctor of medicine in 2012. Then she joined her radiology residency at the same University at Institute of Radiology- Skopje, where she finished her specialization in 2017 and gained her title radiology specialist. In 2015 she applied for PhD studies where she still works on her doctoral thesis title: Radiologic evaluation of interstitial lung diseases detected on high-resolution computed tomography and their correlation with clinical symptomatology. In 2018 she defended her master thesis: Current costs management and investments for promotion of the health services within a tertiary health institution and gained with the title master of science in economics- health and pharmaceutical management. In 2020 she obtained the position of an Associated Professor at UCLO University- Bitola, N. Macedonia. Starting 2023 she obtained the position assistant professor at first ranked University in N.Macedonia St. Cyril and Methodius, Skopje. She has published couple of research articles in SCI journals. She currently works at University Clinic for Pulmonology and allergology-Skopje.



Dr. Laresh N. Mistry

Department of Pediatric and Preventive Dentistry, Bharati Vidyapeeth (Deemed to be) University Dental College and Hospital, Navi Mumbai, Maharashtra, India
M.D.S. (Pedodontics and Preventive Dentistry), F.O.W.I. (Barcelona, Spain), Cert. ADL (UK)

Pediatric (Ians and Dentists): Bridging the gap: Fostering collaboration to improve child health

The collaboration between pediatricians and dentists plays a pivotal role in delivering evidence-based, comprehensive care for children. This abstract delves into the empirical significance of bridging the gap between these two disciplines and explores evidence-based strategies to enhance collaboration for the betterment of child health.

Decades of research have demonstrated the intricate interplay between oral health and overall well-being in children. Poor oral health not only affects a child's ability to eat, sleep, and speak but also has systemic implications, contributing to conditions such as cardiovascular disease and diabetes. Moreover, dental caries, one of the most prevalent chronic childhood diseases, remains a significant public health concern worldwide, with profound implications for children's quality of life.

In this context, collaborative efforts between pediatricians and dentists have shown promising outcomes in improving child health. Interdisciplinary interventions, such as co-located medical-dental clinics and integrated health records, have been associated with enhanced preventive care, increased utilization of dental services, and improved oral health outcomes among children. Moreover, studies have highlighted the cost-effectiveness of integrated care models, underscoring the economic benefits of collaboration for healthcare systems and society at large.

This presentation will not only underscore the empirical basis for collaborative care but also address pragmatic strategies for overcoming existing barriers. By strong participation of both sets of healthcare providers, healthy engagement practices, and adopting innovative approaches, stakeholders can facilitate the seamless integration of medical and dental services, ultimately optimizing child health outcomes.

In conclusion, evidence-based collaboration between pediatricians and dentists is essential for addressing the complex health needs of children. By building on empirical research and implementing effective strategies, we can bridge the gap between disciplines and ensure that every child receives the comprehensive, high-quality care they deserve, setting the stage for healthier futures.

Audience Take Away Notes

- The presentation focuses on conditions identifiable by all pediatric healthcare providers.
- Emphasis on early intervention and referral to pediatric dentists.
- Emphasis on oral assessment as part of routine examinations.
- Controversies of care resolved by evidence based strategies.

Biography

Dr. Laresh N. Mistry is an astute clinician adept at all clinical pediatric dental procedures, maintains academic interest in teaching postgraduate students and inclined to research interest in systematic reviews and clinical topics in pediatric dentistry. He has multiple international and national papers to his credit. He has published scientific papers including systematic reviews, original studies and case reports in PubMed and Scopus indexed journals. Presently, he is a full time postgraduate teacher and researcher associated with Bharati Vidyapeeth Dental College and Hospital, Navi Mumbai, India. He maintains his consulting pediatric practice in Navi Mumbai and Thane in Maharashtra, India. He has a fellowship from Orthodontic World Institute, Barcelona, Spain, and has certificate training in Advanced Dental Leadership from United Kingdom, and has undergoing advanced research training through series of courses from Indian Council of Medical Research (ICMR). His areas of interest include Pediatric Restorative Dentistry and Endodontics and Orofacial Development and therapy.



Roxane Coquoz¹, Camille Pellaton², Riccardo Pfister³, Alessio De Santo², Laura Rio^{1*}

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³Neonatology at the University Hospitals of Geneva University of Geneva, Geneva, Switzerland

A mobile application to support parents of premature infants in the Neonatal Intensive Care Unit (NICU) from admission to home

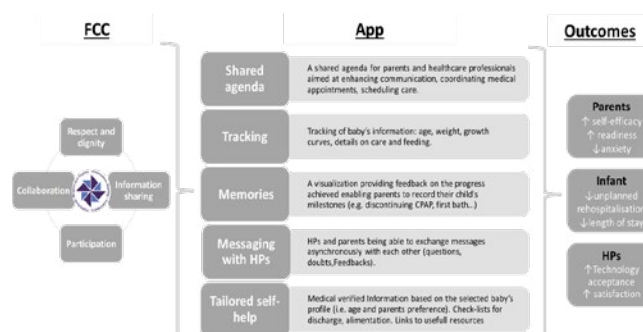
Every year, an estimated 15 million infants are born preterm (more than 1 in 10) worldwide, and this number is rising. Compared to term infants, preterm have a higher risk of mortality, morbidity, and handicap and their parents are at higher risk of experiencing emotional distress, anxiety and depression that can result in altered parenting patterns upon discharge home.

Support provided in the NICU and transition to home has demonstrated positive and clinically meaningful effects in in both parental and neonatal outcomes. Recommendation and guidelines for discharge have been published but are not always implemented.

Innovative, tailored, and cost-efficient way to deliver intervention to parents are via smartphone applications (apps). Exploration and assessment (quality, evidence-based content, and data protection levels) of existing accessible apps showed that none was adapted or transferable to the Swiss or European context. Indeed, most accessible apps lacked in quality and were designed for US context with many cultural and practical content that was not adapted to our target population.

Thus, we are designing a new app that will be accessible and culturally adapted to Swiss parents. It follows a user centered and iterative approach, involving parents and healthcare professionals from the early stage of design to the clinical testing. Our intervention is designed with a theoretical underpinning using the Bandura’s Self-Efficacy theory within a Family-Centred Care (FCC) approach adapted to the NICU environment.

Here we would present the results of the first study aimed at defining the digital intervention. It included designing a paper prototype of the app according to evidence-based content and guidelines and collection of the needs and feedback from 18 parents and 18 healthcare professionals to establish a list of app functional requirements. Five main features of the app will be shared agenda, tracking, memories, messaging with HPs, and Tailored self-help and are presented in the figure below. Next steps are app acceptability and clinical testing in a randomized clinical trial in which the impact on app use on parental and neonatal outcomes will be measured.



Audience Take Away Notes

- The process to evaluate existing mHealth apps in their fields with appropriate tools and techniques.
- How to build an mHealth app with a user experience approach (app requirements)
- Iterative approach to going from low-fidelity prototype to a high-fidelity prototype and clinical mHealth app.
- Designing of digital solutions is becoming more and more prevalent, and needs have been accentuated during the COVID-19 pandemic. Knowing how to evaluate existing apps and how to develop a new one will be helpful for researchers, clinicians and teachers in the field.

Biography

Prof. Rio is an Assistant Professor in digital health at HE-Arc since 2022. Between 2015-2021, as a Research Associate at the Lausanne University Hospital, she investigated how new technologies could help parents and their children in the neonatology and pediatric context. In particular, she focused on the parental challenges and needs in the NICU and showed that despite parents feeling mostly ready to go home they expressed a lack of support around during the NICU period and when transitioning home and showed high rates of rehospitalization. She has published more than 10 peer-reviewed articles that include new technologies.



Simeng Wei, Mi Xiao, Yuxin Hu, Xiaoying Cai, Li Liu*

Department of Neonatology, The First Affiliated Hospital of Xi'an Jiaotong University, Xi'an, Shaanxi, China

New findings of the synergistic regulation of circRNA and lncRNA in the preterm brain injury

Maternal inflammation can lead to premature birth and fetal brain damage. In this study, Pregnant mice were intraperitoneally injected with Lipopolysaccharide (LPS) to establish a preterm brain injury model induced by inflammation in mice. Lentivirus-mediated circ_19038 overexpression vector (LV-circ_19038) and LV-lnc-AK016022 were administered alone or jointly. H&E staining and electron microscopy were used to analyze structural damage in cerebral white matter of neonatal mice, immunofluorescence and RT-qPCR were used to explore glial activation and inflammatory factor expression, and immunohistochemistry was conducted to detect the expression of Myelin Basic Protein (MBP). Behavioral tests were carried out to evaluate the long-term cognitive and motor functions of mice. We found that the expression levels of circ_19038 and lnc-AK016022 in the brain tissues of preterm mice were significantly lower than those of full-term healthy mice. Overexpression of circ_19038 or/and lnc-AK016022 promoted remyelination and alleviated white matter structural damage, neuroinflammation, and long-term cognitive and motor deficits in preterm mice, and the combined effect of circ_19038 and lnc-AK016022 showed better results.

Audience Take Away Notes

- We have revealed the synergistic regulation of circRNA and lncRNA in the preterm brain injury, which provided a new reference for exploring the mechanism of brain injury.

Biography

Dr. Liu studied Medicine at Xi 'an Jiaotong University, China and graduated as MM in 2002. She then joined the research group of Prof. Zheng and received her DE degree in 2009 at Xi 'an Jiaotong University. After several years of work, she obtained the position of an Associate Professor at the First Affiliated Hospital of Xi 'an Jiaotong University in 2000 and then obtained the position of an Full Professor in 2005 at the same institution. She has published more than 20 research articles in SCI(E) journals.



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Cranial ultrasound characteristics and new reference values of cerebral parameters in hospitalized neonates

Background: We aim to investigate the incidence and perinatal risk factors of Cranial Ultrasound (CUS) abnormalities in hospitalized neonates, build new reference values of cerebral parameters in newborns.

Methods: All CUS data of newborns hospitalized in the First Affiliated Hospital of Xi'an Jiaotong University from January 2019 to June 2022 were collected. Univariate analysis and multinomial logistic regression were used to evaluate the influence of different variables on cranial performance.

Results: Abnormal CUS images were found in 728/1728 hospitalized infants (42%), which mainly included intraventricular hemorrhage (25%), periventricular white matter echogenicity (11.4%) and choroid plexus cyst (4.2%). Small gestational age, in vitro fertilization and embryo transfer, Apgar \leq 7, congenital heart disease, neonatal respiratory distress syndrome and hypothyroidism of mother were related to abnormal cranial performance. 1000 normal cranial data were used to plot the reference range curves of frontal lobe thickness, transverse cerebral diameter and hemodynamics parameters of 24-42 weeks' gestation. With the increase of gestational age, frontal lobe thickness, transverse cerebral diameter increased significantly and hemodynamics parameters tended to level off.

Conclusion: We recommend the new reference criteria for brain volume parameters and hemodynamics for hospitalized newborns. CUS monitor in early stage is critical for infants with high-risk factors, which promotes the timely detection of abnormalities and the reduction of neonatal mortality.

Audience Take Away Notes

- This large sample study firstly investigated the occurrence characteristics of cranial ultrasound screening abnormalities in hospitalized newborns in Northwest China.
- We established new reference ranges for early postnatal cerebral measurements and hemodynamics in neonates of different gestational ages, which can be applied and improved in other areas.

Biography

Dr. Liu studied Medicine at Xi 'an Jiaotong University, China and graduated as MM in 2002. She then joined the research group of Prof. Zheng and received her DE degree in 2009 at Xi 'an Jiaotong University. After several years of work, she obtained the position of an Associate Professor at the First Affiliated Hospital of Xi 'an Jiaotong University in 2000 and then obtained the position of an Full Professor in 2005 at the same institution. She has published more than 20 research articles in SCI(E) journals.



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²Paediatric Consultant, General Paediatric Department, Mid-Yorks Hospitals, Wakefield, West Yorkshire, UK

Assessing the competence of junior paediatric doctors in dealing with paediatric diabetic keto acidosis? An exploration in UK paediatric care units

The abstract highlights the crucial need for junior paediatricians to attain proficiency in managing paediatric emergencies, particularly DKA. Literature review indicates extensive studies on DKA knowledge among healthcare professionals, spanning various cultures and specialties. Common challenges like inadequate standardized protocols and training emerge across centres. The research proposal aims to thematically analyse UK paediatric trainees' DKA management competence across clinical settings. The objective is to evaluate their proficiency level and propose strategies to enhance DKA training effectively.

Audience Take Away Notes

- The audience will gain a broad comprehension of the proficiency of junior doctors in handling pediatric DKA in the UK.
- The practical solutions proposed in this paper for junior doctors in the UK can be applied in other regions to enhance the overall approach to managing emergency pediatric endocrinological cases.
- This approach can be mirrored in other healthcare settings where junior practitioners are required to meet specific standards in patient management, showcasing a commitment to delivering high-quality care.

Biography

Dr. Mai studied Medicine at the Khartoum University, Sudan and graduated as MBBS in 2011. She then joined the paediatric training programme in West Yorkshire Deanery in UK. She has a strong research background with many publications in paediatric Endocrinology in various journals. She received a clinical Education Diploma from Edinburgh University and working on her Master degree from Leeds University.



Marlene Fabiola Escobedo-Monge^{1*}, Enrique Barrado², Joaquín Parodi-Román³, María Antonieta Escobedo-Monge⁴, Marianela Marcos-Temprano⁵, José Manuel Marugán-Miguelsanz^{1,6}

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⁵Pediatric Service, University Clinical Hospital of Valladolid

⁶Department of Pediatrics of the Faculty of Medicine, Valladolid University; Section of Gastroenterology and Pediatric Nutrition, University Clinical Hospital of Valladolid

Magnesium status and calcium/magnesium ratios in a series of cystic fibrosis patients

Magnesium is the second most abundant intracellular cation, which participates in various enzymatic reactions that regulate vital biological functions. The main goal of this cross-sectional study was to assess magnesium status and its relationship with nutritional biomarkers in seventeen cystic fibrosis patients. The serum magnesium and calcium concentrations were determined using standardized methods, and the survey of dietary magnesium and calcium intake was a prospective 72-hour study (including one of the weekend days). Cut-off points for regular serum magnesium levels were 0.7 to 0.95 mmol/L, and adequate dietary magnesium intake was 80% to 120% of the Dietary Reference Intake (DRI). The mean serum calcium (2.45 mmol/L) and magnesium (0.82 mmol/L) had regular levels, and the mean dietary calcium (127 %DRI) and magnesium (125 %DRI) intake were high. No patients had hypocalcemia. A total of 47% of the subjects had hypomagnesemia, and 12% had deficient magnesium eating. Only one individual had a serum magnesium deficiency and inadequate magnesium intake. A total of 47 and 82% of our patients had a high serum Calcium/Magnesium (Ca/Mg) ratio of >4.70 (mean 4.89) and a low Ca/Mg intake ratio of <1.70 (mean 1.10), respectively. The likelihood of a high Ca/Mg ratio was 49 times higher in patients with a serum magnesium deficiency than in those with regular serum magnesium levels. Both Ca/Mg ratios were associated with the risk of developing cardiovascular disease, type 2 diabetes, metabolic syndrome, and even several cancers. Consequently, 53% of the cystic fibrosis patients were at high risk of a magnesium deficiency and developing other chronic diseases.

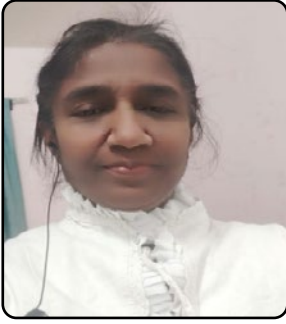
Audience Take Away Notes

- The audience will be able to apply what they learned in this presentation because it is foremost to know magnesium as an essential nutrient for the growth and development of children and adolescents, especially those who suffer from chronic diseases, such as patients with cystic fibrosis.
- The knowledge they acquire will make them more aware of the needs of people with chronic diseases, not just patients with cystic fibrosis.
- This presentation will help the audience in their work, improving their knowledge of the topic at issue. Inspire other researchers or pediatricians to develop projects related to calcium/magnesium ratios.
- This research provides a first step to recognizing the problem, which in this case is magnesium deficiency in the population with cystic fibrosis, and at once can serve as a guide to develop research.
- The design of this cross-sectional study is an important key to be aware of when considering repeating this research on serum and dietary calcium/magnesium ratios on the nutritional status of subjects with chronic diseases.

- This study is crucial because of the possibility of applying this design to other chronic diseases where magnesium deficiency could be prevalent.

Biography

Marlene F. Escobedo Monge is a pediatrician and Doctor of Medicine for the Faculty of Medicine of the University of Valladolid. She has a doctorate in health sciences research, a master's degree in clinical nutrition, and another in biological aspects of nutrition and microbiota. Marlene is very interested in food safety and biofortification, especially in studies on micronutrients and their bioavailability, considering the interrelationship between macro and micronutrients in the food chain. Additionally, as part of a research team, she is primarily concerned with the nutritional status of patients with malnutrition and chronic diseases, such as patients with cystic fibrosis.



Dr. Mary Anbarasi Johnson

Professor and Head, Pediatric Nursing Department, College of Nursing, CMC Vellore

Trends in pediatric nursing

Pediatric nursing is growing with many trends in terms of education, practice research. Pediatric nurses need to be updated with the current trends in order to translate the knowledge in to practice. Some of the trends in pediatric nursing are discussed in the presentation. **Technology Integration:** The integration of technology in pediatric nursing continues to advance, with the use of Electronic Health Records (EHRs), telehealth, and mobile health applications. These technologies enhance communication, streamline documentation, and improve patient care. **Specialized Pediatric Nursing Certification,** Pediatric nurses are increasingly obtaining specialized certifications to enhance their knowledge and skills in specific areas such as pediatric critical care, pediatric oncology, and pediatric emergency nursing. **Family-Centered Care:** There is a growing emphasis on family-centered care in pediatric nursing. This approach involves collaboration between healthcare providers and families to make decisions that impact the child's health and well-being. **Cultural Competence in Pediatric Nursing:** Pediatric nurses are recognizing the importance of cultural competence to provide care that respects and addresses the diverse needs of children and their families. **Research and Evidence-Based Practice:** Pediatric nursing is increasingly focused on evidence-based practice, with nurses engaging in research to improve outcomes for pediatric patients. This involves applying the best available evidence to inform clinical decision-making.

Biography

Mary Anbarasi Johnson is a dedicated professional currently serving as a Professor and Head in the Pediatric Nursing Department at CMC, Vellore. With a rich background, Mary Anbarasi has previously worked for three years as an Assistant Professor in the USA and also held the position of Assistant Director of Nursing in Saudi Arabia. Her passion for scholarly activities is evident through her extensive contributions, including the publication of articles in 70 national and international journals, presentations at approximately 30 national and international conferences, and the contribution of four book chapters. Mary Anbarasi has also served as a valuable member of the Institutional Research Board at CMC Vellore for a term of four years. Her commitment to advancing research is further demonstrated by her role as a reviewer, editorial member, or advisory member in around 40 international journals.



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Development of a small and sick newborn clinical audit tool and its implementation guide using a human-centred design approach

Background: Newborn mortality remains high in Kenya with a majority of the deaths occurring due to preventable conditions. Health workers can learn from these deaths to improve their care quality and prevent subsequent deaths from similar causes. Clinical audits are a quality improvement intervention that enables health workers to systematically reflect on their practice and identify and act on modifiable gaps in the care provided. For effectiveness, the clinical audit must use a structured tool that comprehensively covers the continuum of newborn care. There were no identified audit tools designed to audit the in-hospital care of the SSNBs beyond the period of immediate resuscitation. Therefore, the aim was to codesign a newborn clinical audit tool and its implementation guide that considers the health workers' basic needs, capabilities, and limitations by applying the key principles of a Human-Centred Design (HCD) approach.

Study Methods: A three-step HCD approach was employed and situated in two high-volume public hospital NBUs in Kenya with newborn care workers as the study participants. The first step involved understanding the context, the users, and the available audit tools through literature, focus group discussions and a consensus meeting that led to the development of a prototype audit tool and its implementation guide. The second step was a cognitive walkthrough. This involved continuous iteration through a cyclic process of evaluating the usability of the prototype audit tool with the end users on real cases in the newborn unit and refining this based on their feedback. The final prototype tool and the implementation guide were then tested in the two newborn units to determine their usability. The outcomes of interest were a comprehensive and usable SSNB audit tool and a context-sensitive implementation guide.

Results: A SSNB audit tool that considered (i) human factors that influenced interaction with the tool such as reduced free text for ease of filling, (ii) usability which catered for the comprehensiveness of the tool and, (iii) user experiences such as length of the tool. An implementation guide that ensured a favourable learning environment, gave guidance on the frequency of the meetings, the number and selection of cases for each meeting, and guidance on implementing action plans.

Conclusion: The Human-Centred Design approach enabled the development of a high-quality audit tool and implementation guide that can achieve its intended goals with efficiency, effectiveness and satisfaction while considering the capabilities and limitations of the end-users within their context.

Audience Take Away Notes

- This will provide a solution to the design of quality improvement innovations that are usable, context-sensitive, and acceptable to health workers.
- The audit tool was designed to cover all the aspects of newborn care and is therefore adaptable to settings with a high burden of preventable newborn morbidity and mortality. The implementation

guide is also suitable for busy settings with health workforce shortages.

- In several countries, the maternal and perinatal death review process has improved the quality of care and subsequently reduced maternal mortality. There is, however, evidence that the perinatal aspects of the reviews are not given as much attention as the maternal aspects. This newborn clinical audit complements the existing perinatal review processes to strengthen the audit of newborn care.
- The newborn clinical audit will enable the health workers to use a systems approach to identify the underlying factors influencing newborn quality of care. This will ensure that the health workers strengthen the gaps that weaken the health system.
- Both the clinical audit and the human-centred design approaches strengthen teamwork and communication, therefore, building more resilient and effective teams.
- This will demonstrate the importance of supportive leadership in improving newborn care quality and encourage the leaders in the audience to be advocates for newborn care.
- Yes. This can be incorporated into quality improvement curricula.
- Yes. The design approach used is practical, cost-effective and utilizes the available resources.
- In health care, the culture has largely been to train health workers to adapt to poorly designed interventions that are not sensitive to the context. The methods used in the design benefit from the end user's knowledge and designing interventions to suit people's needs.
- End users understand where the real gaps are, therefore, involving them in the design focuses on designing an innovation that solves the right problem.
- The use of real cases in the design of a quality improvement initiative for a complex system provides more accurate and detailed information about the experiences and problems that can occur.
 - The audit tool was designed as an electronic tool allowing for hybrid meetings.
 - Properly conducted newborn clinical audits can reduce preventable newborn mortality as evidenced by the role maternal audits played in reducing maternal mortality.

Biography

Dr. Muthoni graduated with a bachelor's in medicine and surgery in 2010 from the University of Nairobi. She later completed a master's degree in Paediatrics and Child Health from the same institution and practised as a Paediatrician in one of the busiest newborn units in Kenya. Dr. Muthoni then embarked on a PhD in implementation science, focusing on quality improvement of newborn care through clinical audits. She received her PhD in 2023 from the University of Nairobi. She continues paediatric practice and postdoctoral research activities with the KEMRI Wellcome Trust Research Programme.



Nino Siradze*, Sohio Tsertsvadze

Pediatric department, Miashvili's Children Central Hospital, Tbilisi, Georgia

Antibiotic effectiveness for PANDA

Introduction: Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections (PANDAS) syndrome is a rare pediatric disorder consisting of a sudden onset of Obsessive–Compulsive Disorder (OCD) and/or tics after a Group A Streptococcus (GAS) infection.

Objective: Reduce the morbidity associated with a late diagnosis.

Clinical Case: A 5-year-old boy was admitted to the clinic due to refusal to eat. He had scarlet fever 2 months before and then recurrent fever episodes. He was depressed, and had obvious eye-blinking tics, increased urinary frequency; behavior changes, With child's uncle was diagnosed OCD. In the hospital treatment, a clinical history was identified with PANS-PANDAS diagnostic criteria. She exhibited a relapsing-remitting clinical course, as described in the literature, with poor response to first-line treatments.

Conclusion: Although there are over years of research of the PANDAS syndrome, there is still a stringent need to a better definition of clinical manifestations, precise biological markers and neuroimaging tests in order to establish a therapeutic protocol following correctly drawn.

Keywords: Pediatric Autoimmune Neuropsychiatric Disorders, Group A Streptococcus (GAS) Infection, Obsessive–Compulsive Disorder (OCD).

Audience Take Away Notes

- Sharing information will help us manage children, which is important both for personal experience and for the clinic
- Raising awareness to recognize the disease, since it is still an illness that often goes unnoticed by many health professionals

Biography

Dr. Nino Siradze specialist of infectious Disease in Children studied Pediatrics in Tbilisi State Medical University 2000–2007, Then finished residency in Tbilisi Medical Academy 2007–2011, was licensed as Pediatrics 2011 and as Infection disease specialist 2018. Is a communication and membership department officer of Georgian Respiratory Association from 2008. Works as pediatrics and infection disease specialist at Miashvili's Children Central Hospital since 2012. Has published 20 articles.

**Professor Paddy Dewan**

Oceania University of Medicine, Melbourne Campus, Victoria Australia

The clinical implications of redefining the anatomy of congenital posterior urethra obstruction

The term used for congenital obstruction of the posterior urethra is posterior urethral valves. That term stemmed from the work of Hugh Hampton Young, who published the results in a journal he founded in 1917, two years after the first edition. The classification was a 6-part classification from 12 patients. Over the last three decades, the ability to see and record the endoscopic features of urethral obstruction has improved, leading to the understanding that posterior urethral obstruction is due to a membrane with a hole in the posterior aspect, with reinforcements that run to the verumontanum and, most importantly

Biography

Dr. Paddy, as his patients call him, is a Paediatric Urologist and a Paediatric General Surgeon offering care to children and families, and advice to adults, affected by congenital conditions, particularly those of the urinary tract and bowel. Dr. Paddy has a passion for making healthCARE safer. Dr. Paddy Dewan completed his undergraduate training in The University of Melbourne in 1979, graduating in Paediatric Surgery in 1988 then completing Fellowships in Paediatric Urology in Ireland and England. His clinical skills are supplemented by the knowledge gained through his dedication to research and by providing pro bono teaching and clinical care to 21 different developing countries. His particular interests include Fetal Hydronephrosis, Wetting and urinary tract infection, Vesicoureteric Reflux, Obstructive urinary disease, Hypospadias, Anorectal anomalies and General Paediatric Surgery.



Dr. Pramila Menon*, Renuka M, Shailaja Mane

Department Paediatrics, Dr. D Y Patil Medical College Hospital & Research Centre, Pune, Maharashtra, India

Study of parental empowerment by using mother child protection card for holistic child development

Equitable early childhood policies and programmes are crucial for meeting global Sustainable Development Goals (SDG). Early childhood offers a critical window of opportunity to shape the trajectory of a child's holistic development and build a foundation for their future. The Mother and Child Protection card was introduced for functionaries of National Health Rural Health Mission (NRHM) and Integrated Child Development Service (ICDS) in April 2010 (2). MCP card and Home-Based Young Child Care (HBYC) developed by Government of India in 2018 is an effective tool to empower health care workers in contributing to holistic development of child. We used MCP card and HBYC JOBAID for mother empowerment as a sustainable solution for holistic child development and child safety tips in medical college. We assessed knowledge of mothers about the child development and safety for prevention of accidents and educated and created awareness amongst parents about developmental milestones. The study also made an effort to assess and determine the effectiveness of picture cards in educating parents and caregivers. This is a prospective cross sectional study at Dr. D.Y Patil Medical College, Hospital and Research Centre, Pune, India. The study is approved by Institutional ethical committee clearance and voluntary informed consent was obtained from the parents before enrolling in the study. The study group included parents and healthy children between 0-2 years age group. We excluded sick children, children with congenital anomalies, premature babies. A prevalidated semi structural proforma in vernacular language (Marathi) is used for data collection and picture tool of HBYC jobaid, MCP card, Ministry of health and family welfare, Government of India. Data analysis was done in percentages and thematic analysis was done for qualitative questions. The data analysis showed more than 80% mothers agreed the utility of picture card as a health education tool. It helped to build the confidence in 80% mothers. Only less than 50% got parenting tips about child development. Our study brought the picture tools are the good options for educating the parents about child development as a sustainable solution of ECD.

Audience Take Away Notes

- The audience will learn about the mother empowerment techniques which will help them in practice. The audience will learn to integrate early child development in health system.
- The audience will be able to use these techniques in their practice of child health.
- Community health workers can use in their job. Doctors can do hand holding. Medical schools can replicate the techniques for undergraduate teaching and explore further in research. This provide a practical solution to a problem of early detection of developmental delay in children and early treatment. The picture tools the best solutions for parent teaching and empowerment. It is simple and easy to understand.

Biography

Dr. Pramila Menon is Associate Professor in Pediatrics at Dr. D Y Patil Medical College, Hospital & Research Centre, Pune, India. She studied Pediatrics from Shivaji University Kolhapur Maharashtra, India and completed PhD from Maharashtra University of Health Sciences (MUHS) India. She is FAIMER Fellow 2009 from GSMC KEM Mumbai. She contributed to the medical education department as a faculty and was part of developing OSCE, Communication skills, Structured Oral Viva. She is a passionate Community Pediatrician and contributes to UNICEF as a Consultant by supporting a government initiative in child health Nutrition. She trains doctors, nurses and community health workers. She has published 30 research articles.



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Nutritional epigenetics education improves diet and attitude of parents of children with autism or attention deficit/hyperactivity disorder

Background: Unhealthy maternal diet leads to heavy metal exposures from the consumption of ultra-processed foods that may impact gene behavior across generations, creating conditions for the neurodevelopmental disorders known as autism and Attention Deficit/Hyperactivity Disorder (ADHD). Children with these disorders have difficulty metabolizing and excreting heavy metals from their bloodstream, and the severity of their symptoms correlates with the heavy metal levels measured in their blood. Pediatricians may play a key role in helping parents reduce their ultra-processed food and dietary heavy metal intake by providing access to effective nutritional epigenetics education.

Aim: To test the efficacy of nutritional epigenetics instruction in reducing parental ultra-processed food intake.

Methods: The study utilized a semi-randomized test and control group pretest-posttest pilot study design with participants recruited from parents having a learning-disabled child with autism or ADHD. Twenty-two parents who met the inclusion criteria were randomly selected to serve in the test ($n=11$) or control ($n=11$) group. The test group participated in the six-week online nutritional epigenetics tutorial, while the control group did not. The efficacy of the nutritional epigenetics instruction was determined by measuring changes in parent diet and attitude using data derived from an online diet survey administered to the participants during the pre and post intervention periods. Diet intake scores were derived for both ultra-processed and whole/organic foods. Paired sample t-tests were conducted to determine any differences in mean diet scores within each group.

Results: There was a significant difference in the diet scores of the test group between the pre- and post-intervention periods. The parents in the test group significantly reduced their intake of ultra-processed foods with a pre-intervention diet score of 70 (mean=5.385, SD=2.534) and a post-intervention diet score of 113 (mean=8.692, SD=1.750) and the paired t-test analysis showing a significance of $P<0.001$. The test group also significantly increased their consumption of whole and/or organic foods with a pre-intervention diet score of 100 (mean=5.882, SD=2.472) and post-intervention diet score of 121 (mean=7.118, SD=2.390) and the paired t-test analysis showing a significance of $P<0.05$.

Conclusion: Here we show nutritional epigenetics education can be used to reduce ultra-processed food intake and improve attitude among parents having learning-disabled children with autism or ADHD.

Audience Take Away Notes

- Audience will learn the results of a clinical trial that involved the use of nutritional epigenetics curriculum to successfully teach parents of children with autism and ADHD about the problem of heavy metal residues in the food supply and how these metals may impact gene behavior leading to the development of autism or ADHD across generations
- Audience may be inspired to teach parents how to avoid dietary heavy metal exposures by adopting a healthy diet
- Physicians will become aware of the efficacy of available nutritional epigenetics curriculum in changing parent diet and attitudes about the role food plays in their children's behavior
- Researchers may see the value of using nutritional epigenetics education as an intervention tool when designing clinical trials to determine how ultra-processed food consumption leads to the development of different disease conditions

Biography

Dr. Dufault completed her PhD at A.T. Still University. She retired early from her position as a US Public Health Service officer at the Food and Drug Administration (FDA) to publish her findings of mercury in high fructose corn syrup. As an FDA whistleblower, she could not find employment as a researcher, so she founded the non-profit Food Ingredient and Health Research Institute where she works as a volunteer. She supplements her income working as a licensed special education teacher. Dr. D is considered a leader in the field of nutritional epigenetics with 784 citations according to Google Scholar.



Dr. Rohit Kumar

NICU, James Cook Hospital, Cleveland, England

What do we do: Dilemmas of managing congenital cytomegalovirus infection?

CMV is the most frequent congenital infection and has a UK incidence of around 3-4/1000 live births. Around 10-15% of these infants will be symptomatic, of whom up to 90% will develop long term sequelae usually in the form of sensorineural hearing loss, visual impairment, or developmental delay. Some 13% of asymptomatic infants also develop long term problems. Despite such morbidity, decisions of whom to treat, and for how long, remain controversial.

Audience Take Away Notes

- Whilst there is some support for treating infants with CNS symptoms, there is a paucity of high-level evidence for treating infants with other organ involvement. In addition, the adverse effects of treatment are not inconsiderable. Thus the talk will aim to address these dilemmas and help the participants develop an evidence-based management approach.

Biography

Rohit Kumar is a consultant neonatologist working at a tertiary referral center. He serves as the clinical lead for risk management and infectious disease. He is also a neonatal representative at the regional transfusion medicine committee and Intrapartum Care Group. He has previously presented in various international conferences and published in reputed peer reviewed journals.



Dr. Santosh Kumar Mishra

Independent Researcher (Scholar): Retired from Population Education Resource Centre, Department of Life Long Learning and Extension, S. N. D. T. Women's University, 1, Nathibai Thackersey Road, Mumbai-400020, Maharashtra, India

Childhood obesity: Common causes and consequences

Childhood obesity is a complex and chronic condition wherein children are above a healthy weight for their age, height and sex assigned at birth. It is chronic and complex in terms of its long-term consequences. The objective of this paper is present discussion on causes and consequences of childhood obesity. The author has used secondary data (collected from books, books chapter, journal articles, as well as publications of inter-governmental organizations). The used data are primarily 'qualitative' in nature. The method of data analysis is descriptive.

In terms of causes, obesity among children is caused by multiple of factors description of which is presented below:

- a) **Diet:** Regularly eating high-calorie foods (such as fast foods, baked food goods and vending machine snacks) can cause children to gain weight.
- b) **Lack of Physical Activity:** Physical inactivity is negatively correlated with the risk of obesity. Findings of several studies indicate the potential benefits of physical activities (like walking, cycling, wheeling, sports, active recreation, and play) in preventing obesity, besides having positive effects on mental health. Physical activity has the potential to increase school performance among children.
- c) **Lack of Exercise:** Children who don't exercise much are more likely to gain weight. This happens because of the fact that they don't burn as enough (required) calories. In today's world situation, it is worrisome to note that too much time spent in sedentary activities (involving a lot of sitting down; not active) adds to unhealthy food practices which is responsible for obesity among children. Sedentary activities include watching television, playing video games, use of internet and social media platforms, and interacting with peers and friends through mobile technology.
- d) **Family Factors:** If the child comes from a family of overweight people, he or she may be more likely to put on weight.
- e) **Psychological Factors:** It has been found that personal, parental and family stress can increase a child's risk of obesity. Some children overeat to cope with problems or to deal with emotions, such as stress, or to fight boredom. Their parents might have similar tendencies.
- f) **Socio-Economic Factors:** children who live in lower income neighbourhoods might not have access to a safe place to do exercise or engage in physical activities.

With regard to consequences, childhood obesity is a serious medical condition. Implications are reflected in the form of diabetes, high blood pressure, and high cholesterol. Also, it can lead to poor self-esteem and depression, including complications in physical, social and emotional well-being. More specifically, in terms of social and emotional complications, children who have obesity may experience teasing or bullying by their peers. Some of the physical complications of childhood obesity include:

- a) type-2 diabetes (too high blood sugar)
- b) high cholesterol, and high blood pressure
- c) joint pain (extra weight causes extra stress on hips and knees) and
- d) breathing problems

In conclusion, one of the best strategies to reduce childhood obesity is to improve the eating and exercise habits. Prevention strategies help protect children's health, now and in the future.

Audience Take Away Notes

- The audience will understand the conceptual framework of obesity, in general, and child obesity, in particular.
- This presentation will facilitate the audience get meaningful insight into common causes and consequences among children during childhood period.
- Interested researchers and academicians can use key findings of this paper to undertake further research studies on childhood obesity.

Biography

Dr. Santosh Kumar Mishra (Ph. D.) | He is Independent Researcher (Scholar), retired from Population Education Resource Centre, Department of Lifelong Learning & Extension, S.N.D.T. Women's University, Mumbai, India. He underwent training in demography and acquired Ph. D. Dr. Mishra has authored 5 booklets, 4 books, 23 book chapters, 101 journal articles, 2 monographs, 7 research studies, & 56 papers for national & international conferences. He has been awarded with Certificate of Excellence in Reviewing for 2017, 2018, 2021 & 2022. He had been conferred with Excellence of Research Award for outstanding contribution in the field of agriculture in 2021.



Dr. Santosh Kumar Mishra

Independent Researcher (Scholar): Retired from Population Education Resource Centre, Department of Life Long Learning and Extension, S. N. D. T. Women's University, 1, Nathibai Thackersey Road, Mumbai-400020, Maharashtra, India

Short-term and long-term effects of child sexual abuse

Child Sexual Abuse (CSA: also termed as child molestation, is considered as a form of child abuse in which an adult or older person uses a child for sexual pleasure (stimulation). Forms of CSA include engaging in sexual activities with a child (whether by asking or pressuring, or by other means), indecent exposure, child grooming, and child sexual exploitation, such as using a child to produce child pornography. CSA has both short-term and long-term implications. The author of this work argues that counselling is the best way to help and prevent the harmful effects of CSA. It is pertinent to note that if an abused child does not get professional help, he/she is twice more likely to abuse others as an adult; besides being an easy target for abusers.

Prime objective of this research work is to present description on short-term long-term consequences of CSA. The author has used secondary data (collected from books, books chapter, journal articles, as well as publications of inter-governmental organizations). The used data are primarily 'qualitative' in nature. The method of data analysis is 'descriptive'.

Analysis of data indicate that (immediate) psychological impacts of CSA may involve painful and disturbed emotions, Reflections of short-term consequences include: (a) post-traumatic stress disorder, and (b) distracted mood. Short-term effects include:

1. fear, anxiety, guilt, shame, and depression;
2. acting out in violence and anger;
3. physical harm in the form of injury to genitals;
4. painful urination;
5. stomach aches;
6. sexually transmitted diseases (STs);
7. pregnancy (in case if female CSA);
8. low self-esteem;
9. sleep disorders;
10. disturbed sexual behaviour;
11. poor social function (interaction);
12. lack of desire to be people around;
13. poor academic performance; and
14. tendency to skip from classes during school, and college days.

Long-term consequences of CSA, on the other hand, are manifested in the form of tendency to run away from home, extreme aggressive behaviour, and hurting other people. Other long-term implications are:

1. alcohol and drug abuse, including smoking;
2. low self-esteem, depression, and suicidal tendency during later stages of life;
3. less sexually active;

4. unhealthy attitudes about sex; and
5. not being able to trust themselves, friends, and other adults during life span.

CSA is a growing problem, with far-reaching implications for the victims. It is prevalent across class, race, and ethnicity, across the regions and continents of the globe. With both short-term and long-term impacts, CSA involves an interaction between the abuser and the child. The child is the focus of the sexual stimulation of the offender, with minor being often silenced with threat. Another important consideration of CSA is that children are victims in almost every social setting and location: at home, schools, roads, and social gatherings.

This paper briefly concludes that the victims of CSA respond in diverse ways which can be changed over time with adequate preventive measures. How a child was harmed, for how long, by whom, age, and relationship with others have implications on how a child reacts to abuse.

Audience Take Away Notes

- The audience will understand the conceptual framework of CSA.
- This presentation will facilitate the audience get meaningful insight into short-term and long-term effects of CSA.
- The audience will understand the significance of counselling in prevention of CSA.

Biography

Dr. Santosh Kumar Mishra (Ph. D.) | He is Independent Researcher (Scholar), retired from Population Education Resource Centre, Department of Lifelong Learning & Extension, S.N.D.T. Women's University, Mumbai, India. He underwent training in demography and acquired Ph. D. Dr. Mishra has authored 5 booklets, 4 books, 23 book chapters, 101 journal articles, 2 monographs, 7 research studies, & 56 papers for national & international conferences. He has been awarded with Certificate of Excellence in Reviewing for 2017, 2018, 2021 & 2022. He had been conferred with Excellence of Research Award for outstanding contribution in the field of agriculture in 2021.

Sanja Knezevic

Universiti of Kragujevac Srbija, Serbia

Ductal size indexed to body weight and body surface area correlates with early prediction of morbidity and mortality in preterm infants

Introduction: Persistent Ductus Arteriosus (PDA) is the most common cardiac anomaly in premature infants and is a significant cause of early and late morbidity and mortality.

Material and Methods: The study was conducted on 163 prematurely born children with a body weight of less than 1500 g and a gestational age of less than 32 weeks of gestation. Children with hz PDA were selected based on the transverse diameter of the PDA ≥ 1 mm and were examined echocardiographically in the first 72 hours. Children from the examined group were divided into two subgroups: premature children with Extremely Low Birth Weight (ELBW) up to 1000 g and Very Low Birth Weight (VLBW) of 1001-1500 g.

Results: The frequency of hemodynamically significant PDA (HsPDA) is inversely proportional to the gestational age of premature babies. Gestational age, BW, as well as the absolute diameter of the PDA are not reliable parameters for predicting spontaneous closure or pharmacotreatment of PDA. The mean absolute diameter of the ductus was 2.14 ± 0.05 mm in ELBW children and 2.05 ± 0.72 mm in VLBW children. Indexing the ductus size according to body weight showed a higher value in ELBW than VLBW children (3.05 ± 0.35 mm/kg vs. 2.35 ± 0.65 mm/kg).

Conclusion: Our results confirmed that HsPDA can develop in the presence of a ductus >1.85 mm as an absolute value or >1.65 mm/kg indexed by body weight or >1.55 mm/BSA indexed by body surface area. Ductal diameter indexed to body surface area or body weight in preterm infants with VLBW and ELBW may more accurately predict spontaneous closure or the need for pharmacotherapy, compared to the absolute value of ductal diameter. Indexing according to weight showed a slightly higher sensitivity and specificity in both examined groups. This could facilitate the prediction of morbidity and mortality of premature children with hz PDA and prevent short-term or long-term consequences.

Key words: Ductus Arteriosus, Premature Children, Medical Treatment of Hemodynamically Significant PDA, Mortality, Ductal Shunt Indexing According to Body Surface Area and Body Weight.



Dr. W.A.S. Saroja Weerakoon^{1*}, T.P. Hendavitharana²

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Ayurveda management on Attention Deficit Hyperactivity Disorder [ADHD] in children- A series of case studies

Attention Deficit Hyperactivity Disorder (ADHD) is the most common psycho neurological disorder in childhood. Though the disease ADHD is not mentioned in Ayurveda its psychopathology can be understood by applying the basic concepts of disease genesis in Ayurveda. The clinical presentation of the disease with the three cardinal symptoms of Inattention, Hyperactivity and impulsivity points towards the abnormality of behaviors due to defects in the volitional powers of the mind. The present series of case studies was conducted to evaluate the efficacy of a special Ayurveda treatment regimen for the management of ADHD-affected children. The five children were assessed using DSM-IV criteria before and after the treatment regimen. Selected children of both sexes aged 6–12 years received 3 rounds of Ayurvedic internal and external treatment with a two-month gap. Every rotation the given treatment regimen was found to be effective in gradually decreasing the signs and symptoms associated with ADHD children. This study concluded that the treatment regimen used in the management of ADHD had notable outcomes in terms of symptomatic alleviation. Further research with the broad study group is necessary, to generalize the outcome to additional patients.

Audience Take Away Notes

- The audience will update their knowledge of available Ayurvedic concepts and the management of Attention Deficit Hyperactivity Disorder (ADHD) in children

Biography

Dr. W.A.S. Saroja Weerakoon, Grade I Senior Lecturer in Ayurveda Pediatrics, Faculty of Indigenous Medicine (IIM), University of Colombo, Sri Lanka and Ayurvedic Consultant Pediatrician in National Ayurveda Teaching Hospital, Colombo, Sri Lanka. She has completed her Master's Degree in Ayurveda Pediatrics, University of Colombo and her PhD Degree in the Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka. Her research interests include bioactivities of indigenous medicines and pediatric-related disorders such as Cerebral Palsy, Autism, Attention Deficit Hyperactivity disorders and Muscular dystrophies. Current research and consulting areas are research on Pediatric behavioral disorders and muscular dystrophies.



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Taking control of one's own life from the perspective of parents with a child with a life-limiting or life-threatening illness: A qualitative study

In healthcare, the emphasis is on stimulating one's own strength, the ability to adapt to a changing health condition or circumstances and increasing control over one's own life. Since 2015, in de Netherlands, the focus on a person's own control and adaptiveness is reflected in healthcare policy and regulations. Taking control is expected from both the patient and the professional. The patient is expected to be more pro-active in thinking about solutions to the management of their healthcare needs. Care professionals are expected to exert autonomy and professionalism to deliver appropriate care in line with the needs, preferences and capabilities of the patient. An evaluation study of The Netherlands Institute for Social Research (2020) about five years reforms in Dutch healthcare systems and legislation showed that these expectations are overestimated.

A systematic review showed that the concept of control in families with children with chronic illness, has a broad range of definitions and related aspects. An follow-up study focuses on control in practice, the experiences of parents with children with a life-limiting or life-threatening illness to get a deeper understanding of their perspective on control. This qualitative study was performed in the Netherlands, in seven Regional Networks Integrated Childcare (NIC). In every NIC a mirror-meeting was organized with 2/6 parents and professionals present as listeners.

The results showed that control is a broad concept and encompasses a wide range of translations into practice. Also, we see differences in what parents need and prefer and their individual experiences of their support to perceive control. These different needs require different approaches. Especially in the initial phase after diagnosis, parents are thrown into the deep and not able to take control. It seems important that professionals involved with the family pay attention to equip families. Shared decision-making is an important aspect of control, the results show different experiences to what extent decisions are made. Consciously putting shared decision-making on the agenda is not self-evident. Further, parents indicate that they cannot change their child's illness, that they have no control over it, but that control is influenced by everything that happens around their child. Organizational barriers are frustrating here and interfere with taking control, especially administrative burdens, protocols and hassle around legislation/financing are not helpful. Parents are depending on the professionals around them. An open and friendly attitude towards the parents, truly listening is facilitating and helps parents to take control. Innovations for organizing a dedicated and trusted point of contact are mentioned by parents as helping to take control.

Currently (April 2024), we have initiated a new round of mirror meetings in each NIC once again. Following the recommendations from the previous study, we are concentrating on evaluating the NIC intervention. With the mirror meetings we evaluate from the perspective of parents: What are the success factors of the intervention model 'NIC' aligned with what parents find important, and how do they feel supported in their control over the care for their child?

Audience Take Away Notes

- To gain insight from the perspective of parents into what is supportive and what not for their well-being within their family with a child with a life-limiting or life-threatening illness.
- Insight into success factors for appropriate interventions that help parents feel supported in their control over their child's care.
- Recognize that all parents start completely blank in the beginning and rely entirely on the professionals around them.
- Understand the importance of truly an open listening to parents and building trust to collaborate effectively.

Biography

Stephanie Since 1991, has been rooted in the field of healthcare. Starting as a district nurse, she evolved into an innovator/projectleader. In 2004, she obtained her master's degree in Healthcare Management. In 2007, she co-founded the PAL-Foundation, dedicated to palliative care for children, and has since been actively involved in advancing children's palliative care. In recent years, Stephanie has shifted her focus towards consultancy and research. In 2018, alongside her work in practice, she started a PhD-project exploring 'How control influences the interaction between healthcare professionals and families with children with complex medical needs, aiming to achieve better outcomes'.



Trine Flensburg-Madsen

National Institute of Public Health, University of Southern Denmark, Copenhagen, Denmark

Childhood predictors of psychological outcomes in adulthood: Research findings from Denmark

Intelligence and personality are considered core mental characteristics in human development and have for decades been found to predict important life outcomes. It is, however, not clear how individual differences in these psychological outcomes arise, how they develop, and the extent to which they can be traced back to early-life development.

The presentation will, in a series of research findings from Denmark demonstrate lifelong connections between factors in the first years of life and individual differences in intelligence and personality in adulthood. The studies are based on one of the oldest birth cohorts in the world, The Copenhagen Perinatal Cohort, which was established in 1959–61 with data on 8949 mothers and their 9125 children born at Rigshospitalet in Copenhagen. Follow-up examinations were carried out during childhood and adulthood up until today.

Our studies suggest that several early-life factors are associated with intelligence and personality in adulthood, which underlines a stability of development from early to late life. Specific factors that may be especially important for development will be pointed out. These include age at attainment of infant milestones and milestones in the subsequent years, namely milestones related to language and social interaction. Additionally, infant parental socio-economic status and predictors related to physical size were important.

Whether these associations are caused by direct effects of early-life factors cannot be determined from our studies, but potential mechanisms will be discussed, including the possibility of causality. It will also be discussed how we can use this knowledge in a public health and societal perspective.

Audience Take Away Notes

- The audience can use this presentation to identify early-life factors which have a permanent association with intelligence and personality development.
- Milestone developmental factors will be discussed, including their most important predictors.
- The presentation will provide relevant discussions on the issue of causality with designing cohort studies of child development.

Biography

Professor Flensburg-Madsen have MSs in both Public health and Psychology from the University of Copenhagen. She received her PhD degree in 2009 at the same institution and in 2023 she obtained the position as Professor of Medical Psychology at the University of Copenhagen. Since 2024 she has been Professor of Child and Adolescent Health at the University of Southern Denmark. In her research she combines public health with psychology and epidemiology to investigate child development and she has published more +110 peer-reviewed research articles.



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Comparative mid-term clinical follow-up of patients with glutaric aciduria identified through neonatal screening versus clinical diagnosis

Glutaric aciduria is an autosomal recessively inherited metabolic disorder caused by deficiency of the enzyme glutaryl-coenzyme-A-dehydrogenase. It is characterized by encephalopathic crises resulting in striatal lesions and severe dystonic movement disorder. Its early diagnosis, by neonatal screening, is usually based on increased glutarylcarnitine in blood and glutaric acid and 3-hydroxyglutaric acid in urine.

We present a retrospective review of the patients diagnosed in our center in the last 25 years to evaluate comparatively the medium-long term clinical evolution of those diagnosed by Newborn Screening (NBS) versus those diagnosed clinically.

Of 11 patients (6 males and 5 females), 9 were diagnosed by NBS and 2 (cases 1 and 2) by clinical diagnosis. Case 1, debuted with clinical encephalitis at 11 years of age, causing severe dystonic spastic tetraparesis, and died at 34 years of age due to acute respiratory failure. The second case is a false negative of NBS due to low excretion of glutaric acid in urine with normal glutarylcarnitine levels in blood. He was identified by elevation of glutarylcarnitine in urine after clinical onset at 14 months with encephalopathy during viral infectious. His subsequent neurological development was favorable except for slight muscle spasticity. Of the NBS group, 100% have normal neurocognitive development (IQ performed in 6/9 patients: normal), 22% present attention Deficit Hyperactivity Disorder (ADHD) and one patient has tics.

Only 18% of the series presented macrocephaly, although 66% of NBS patients maintained evolutionary head circumference >80% and 27% presented enlargement of the subarachnoid spaces. Other manifestations were language disorders in three patients. None of NBS patients presented encephalopathic crises after diagnosis.

All of them received treatment with carnitine and a diet restrictive in lysine and tryptophan, with slight dietary liberalization from the first decade of life.

Thirteen different variants were identified in the GCDH gene, two (R88H and L103F) not previously described, being R227P the most frequent variant (18% of alleles).

Audience Take Away Notes

- The medium-long term follow-up of our series corroborates the importance of neonatal screening to improve the prognosis of this entity, allowing a good quality of life, without remarkable neurodevelopmental alterations in adherent patients.
- To highlight the evidence of hyperactivity/attention deficit disorder and language disorders in 27% of the patients.
- To highlight the role of urine glutarylcarnitine as a screening marker in false negative cases.

Biography

Dra. Victoria Redondo Cervantes studied Medicine at the University of Málaga and graduated in 2018. In 2020, she began the residency at Pediatrics at the Clinical University Hospital of Santiago de Compostela. She is currently completing her last year in her residency training, and she is doing a rotation in the Diagnosis and Treatment Unit of Congenital Metabolic Diseases.



Victoria Redondo Cervantes^{1*}, Paula Sánchez Pintos^{2,3,4,5,6}, Beatriz Martín López-Pardo^{2,3,5}, Sofia Barbosa Gouveia², Maria Jose Camba Garea^{2,3,5}, Maria Eugenia Vázquez-Mosquera^{2,3,5}, Álvaro Hermida-Ameijeiras^{2,3,5,6}, Miguel Martínez Olmos^{2,6}, Maria Luz Couce^{2,3,4,5,6}

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Unraveling the genetic landscape of hereditary fructose intolerance in Galicia, Spain

Hereditary Fructose Intolerance (HFI) is a rare autosomal recessive disorder resulting from defects in the Aldolase B (ALDOB) gene, leading to impaired fructose metabolism. ALDOB gene encodes the 364-amino acid fructose-1,6- biphosphate aldolase, a glycolytic enzyme which is involved in the breakdown of fructose mostly found in fruits. This study focuses into the specific genetic characteristics of HFI patients shedding light on the prevalence and clinical implications of endemic variants in the Galician population.

Genetic analyses revealed a high prevalence of the c.448G>C and c.360_363delCAA variants in the ALDOB gene among all the Galician patients diagnosed with HFI, representing 45% (18/40) and 42.5% (17/40,) respectively. Additionally, two different CNVs deletions were identified: exons 2 to 6 in 3 patients and a novel deletion of the complete gene (E1_E9) in compound heterozygosity in one patient. In 2 patients the diagnosis was established by family study prior to the introduction of dietary fructose; and in 18 patients as a result of clinical symptoms (in 7/20 due to diarrhea related with sugar or fruit intake, in 6/20 due to recurrent hypoglycemia accompanied by ketoacidosis episodes in 3; due to hypoactivity episodes related to fruit intake (8/20) or to immunization with vaccine that includes sucrose (1/20) and in 2/20 due to liver dysfunction). Evolutionarily, 12 patients maintain intermittent gastrointestinal manifestations and 13 develop hepatic steatosis and one adult mild fibrosis despite good dietary adherence. All patients maintain normal values of transaminases after diagnosis. When comparing the two most frequent variants in homozygosity the frequency of hypoglycemia (80 vs 25%) and diarrhea at diagnosis (80% vs 0%, p:0.016) and evolutionarily hepatic steatosis (80% vs 50%) is higher in patients with c.448G>C variant in homozygosity.

The prevalence of c.448G>C variant is high in Galician population, in accordance with previous European studies, although with a lower frequency (45%) than those reported (61–67.4%). Despite the lack of a clear genotype- phenotype correlation, the homozygous variant c.448G>C seems to have greater hepatic developmental severity and is associated with higher frequency of diarrhea related to fructose consumption (p<0.05). Furthermore, molecular modeling revealed that both c.448G>C and c.360_363delCAA variants

were associated with altered enzyme activity, providing mechanistic insights into its pathogenicity. Understanding the functional impact of these variants enhances our comprehension of HFI at a molecular level, facilitating the development of targeted therapeutic intervention. The homogeneity of the identified variants highlights the importance of region-specific genetic studies to tailor diagnostic- approaches effectively.

Audience Take Away Notes

- This study represents a comprehensive understanding of HFI in the Galician population, emphasizing the prevalence and clinical implications of specific ALDOB gene variants, including c.448G>C and c.360_363delCAAA.
- This molecular knowledge highly contributes to the HFI accurate diagnosis, genetic counseling, and the development of targeted therapeutic strategies.

Biography

Dra. Victoria Redondo Cervantes studied Medicine at the University of Málaga and graduated in 2018. In 2020, she began the residency at Pediatrics at the Clinical University Hospital of Santiago de Compostela. She is currently completing her last year in her residency training, and she is doing a rotation in the Diagnosis and Treatment Unit of Congenital Metabolic Diseases.



Dr. Colombo Veronica Deysi Genoveva^{1*}, Eng.Vassallo Dario², Prof. Vito Natale³

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Epidemiological international study about: Emotional synesthetic quotient run in the world like EBT tool in social network for a preliminary criminology evaluation

Background: In actual society, documents of investigation and literature are in web sites for a culture diffusion of knowledge science. By this point of view, social network represents necessary instrument of spread information and collect rich data in every part of word. The new method of research permit to evaluate the interesting about Emotional Synesthetic Quotient in many countries in the same times, among selected countries like: Bolivia, United States of America, United Kingdom, Italy and Taiwan.

Aim of study: The publish of emotional synesthetic quotient in a social network permit to inform about it. Just in one week, 209913 persons with accurate selection of country according to the language of emotional battery test present in the website: Italian, English and Spanish. The social interaction is principally detected about Instagram Stories, Video in-stream on mobile, Facebook Stories, Messenger and others.

Analysis of data: Significant samples data for these five countries are respectively: 14.36% (30152 are persons informed in La Paz Department – Bolivia), 2.59% (5439 are persons informed in California State), 2% (4223 are persons informed in Campania – Italy), 0, 23% (490 are persons informed in Hsinchu – Taiwan).

The interesting population is shared for sex in 37% girls, 28,4% boys and 34,6% Not Applicable (N.A.) and the range of age is corresponding to younger between 13-17 years old with 34,4% and 10% more of 65 years old (8.8% Woman and 7.0% Man) with a gradual reduction until 2% between 18-24 years old. In fact, the interaction in web site has gotten this distribution: 27.83% Instagram Stories, 22.40% Video In-Stream on mobile, 2.04% Facebook Stories and 0.16% Messenger.

Conclusion: The Emotional Synesthetic Quotient (E.S.Q.) has gotten 2053 click on link of Test Web Page to do E.B.T. Tool or Emotional Battery Test Colombo-Vassallo-Shore just recording with cooperate in a previous article with preliminary data. The promotion of this test to realize epidemiological international studies want to identify three critical areas: relationship, nutrition status and arousal related to stress to get data in prevention of antisocial behaviour and other different disorders like Post Traumatic Stress Disorder (PTSD), Eating Disorder (ED), Autism Spectrum Disorder (ASD) in a criminology early diagnostic study in developmental age.

- Doing Emotional Battery Test to determine Emotional Synesthetic Quotient or E.S.Q. you can able to determine emotional personal skills and behavior profile.
- You can use E.S.Q. in your job to evaluate the three areas relationship, nutrition and arousal related to stress to indicate to your patient the treatment better for them like: Applied Behavior Analysis (ABA), Cognitive Behavior Therapy (CBT), Eye Movement Desensitization and Reprocessing (EMDR) for an early therapy.

- This preliminary E.S.Q. Tool need to a total a complete evaluation of single person with an anamnestic data Raven I.Q., Mini Mental and Hypnosis with Video with vocal analyzer, GSR and FACS Paul Ekman's Method.
- We suggest E.S.Q. Tool like a screening test in a College School to investigate younger people.

Biography

Dr. Colombo Veronica Deysi Genoveva is a Pediatrician and Neonatology in Italy. She works in ASST Bergamo Ovest of Treviglio-Caravaggio Hospital and Territorial since 2013 and Social Health Unit like Pediatrician and ABA or CBT since 2015 and, Criminology Analyst since 2020.

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POSTERS

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Care for solitary patients: Establishing intimate relationships and psychological support as a comprehensive strategy

Objective: This study aims to explore and evaluate a comprehensive strategy for improving the mental health and emotional state of solitary patients during physical examinations. Given that solitary patients often face greater mental health challenges, this study focuses on how establishing intimate relationships and providing psychological support can enhance their care experience and overall health.

Methods and Materials: This study employed a mixed-methods approach. Initially, 100 solitary patients were observed over a six-month period, during which specific strategies for establishing intimate relationships and psychological support were implemented. Quantitative data included patients' mental health scores, satisfaction surveys, and specific data from physical examinations. Qualitative data came from personal interviews with patients and observations made by healthcare professionals.

Results: The results of this study show a significant improvement in both the mental health and cooperation of solitary patients during physical examinations after the implementation of the comprehensive strategy. Detailed data are as follows:

- **Mental Health Scores:** Before and after the strategy implementation, patients' average mental health scores increased from 45 to 75. Specifically, depression symptom scores decreased from an average of 22 to 10, anxiety symptom scores from 25 to 12, and overall mental health perception scores from 60 to 85.
- **Patient Satisfaction:** Satisfaction surveys showed an overall satisfaction increase from 40% before the strategy to 85% after. Specifically, satisfaction with physical examinations increased from 35% to 80%, and satisfaction with healthcare personnel interactions from 45% to 90%.
- **Physical Examination Cooperation:** Improvements in cooperation were seen in several aspects, such as the average cooperation during physical examinations increasing from 60% to 90%, and active communication during the examinations from 30% to 70%.
- **Efficiency of Physical Examinations:** The average time for physical examinations decreased from 30 minutes to 20 minutes, waiting time from 15 minutes to 8 minutes, and feedback time after examinations from 10 minutes to 5 minutes.
- **Physiological Indicator Changes:** Changes in heart rate and blood pressure before and after physical examinations reduced, with heart rate decreasing from an average of 90 beats/minute to 85 beats/minute during examinations, and blood pressure from 130/85 mmHg to 125/80 mmHg.
- **Qualitative Feedback:** Patients generally reported feeling more understood and supported during the physical examination process, with 85% expressing a significant reduction in psychological stress and 90% finding healthcare personnel to be friendlier and more patient.
- **Observations by Healthcare Professionals:** According to observations made by healthcare professionals, patients appeared more relaxed and cooperative during physical examinations, with about a 50% reduction in questions and unease about the examination process.

Huiqin Meng

Yunyang County People's Hospital, Chongqing, China

Observation on the efficacy of interferon combined with Xiyanping injection in the treatment of pediatric mumps

Objective: To explore the efficacy of interferon combined with xiyanning injection in the treatment of pediatric mumps.

Methods: 69 cases of children with mumps admitted to our hospital from May 2021 to August 2023 were screened as research subjects and divided into control group (n=35) and observation group (n=34) according to randomized numerical table method. The control group received interferon intramuscular injection, and the observation group added Xiyanping injection for intravenous drip on the basis of the treatment in the control group, and both groups were treated for 3-5 d, and were observed until they were discharged from the hospital. The clinical efficacy, temperature recovery time, parotid swelling time, neck resistance disappearance time, serum interleukin-4 (IL-4), interleukin-8 (IL-8), tumor necrosis factor-alpha (TNF- α) levels before and after treatment, and the occurrence of adverse reactions during hospitalization were compared between the two groups.

Results: The total clinical effective rate after treatment of the observation group was higher than that of the control group ($P<0.05$); the recovery time of body temperature, the time of parotid gland swelling, and the disappearance of neck resistance of the observation group were shorter than that of the control group ($P<0.05$). Serum IL-4, IL-8 and TNF- α levels after treatment were lower in the observation group than in the control group ($P<0.05$).

Conclusion: Interferon combined with Xiyanping injection can promote the recovery of symptoms and reduce the inflammatory reaction in children with mumps, and the therapeutic effect is accurate.

Group	number of examples	produce an effect	validity	null	total effective
control group	35	9(25.71)	16(45.71)	10(28.57)	25(71.43)
Observation Group	34	11(32.35)	20(58.82)	3(8.82)	31(91.18)
χ^2					4.399
P					0.036

Group	number of examples	Time to recovery of body temperature	Time for parotid swelling to subside	Time for disappearance of neck resistance
control group	35	3.66±0.76	5.14±1.22	2.92±0.88
Observation Group	34	2.71±0.56	4.28±1.04	2.06±0.55
t		5.897	3.147	4.851
P		<0.001	0.002	<0.001

Group	number of examples	Interleukin-4		interleukin-8		tumor necrosis factor-alpha	
		Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment
control group	35	1.76±0.56	1.41±0.11	50.74±5.25	37.20±4.36	704.03±24.36	471.03±21.19
Observation Group	34	1.81±0.52	1.02±0.08	50.89±5.18	30.62±3.25	703.89±24.29	411.95±20.14
t		0.384	16.801	0.119	7.091	0.024	11.864
P		0.702	<0.001	0.905	<0.001	0.981	0.000

Ling Zhou

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Individualized treatment approaches and preventive strategies for pediatric mycoplasma pneumonia

Objective: This study aims to explore individualized treatment plans and prevention strategies for Mycoplasma Pneumoniae Pneumonia (MPP) in children. Given the prevalence and complexity of treating MPP in the pediatric population, this article focuses on evaluating the effectiveness of various treatment methods and developing more precise preventive and control measures.

Methods and Materials: This study is based on an in-depth analysis of multiple research articles. It primarily references studies on the treatment of MPP in children, encompassing a comprehensive analysis of pathogen types, symptom presentation, laboratory test results, and treatment efficacy. Through these data, we evaluated the current practices and their effectiveness in treating pediatric MPP and explored potential individualized treatment plans and prevention strategies.

Results: Laboratory Indicators: Certain laboratory indicators, like levels of IL-8, IL-10, and IL-18, show potential in assessing the severity of MPP and the response to treatment. Infection Types and Clinical Features: MPP in children presents with various infection types, including singular and mixed infections. Mixed infections, particularly co-infection with Streptococcus pneumonia, often manifest with more severe symptoms, such as prolonged fever duration, longer hospital stays, and elevated white blood cell counts and C-reactive protein levels. Treatment Methods: The studies suggest that for MPP cases unresponsive to antibiotics like macrolides, medications such as corticosteroids, doxycycline, and levofloxacin demonstrate certain efficacy. Among these, corticosteroids show better performance in short-term fever reduction, yet their long-term treatment effectiveness is not significantly different from initial macrolide antibiotic therapy.

Conclusion: The treatment of pediatric MPP must consider individual differences and pathogen characteristics. For cases resistant to antibiotics, the use of corticosteroids or alternative antibiotics can be considered. Moreover, children with mixed infections require more detailed treatment plans to address the higher severity of the disease and the risk of complications. Laboratory indicators such as white blood cell counts, C-reactive protein, and cytokine levels are valuable in formulating individualized treatment plans. Furthermore, considering the increasing antibiotic resistance, prevention strategies should include the judicious use of antibiotics, monitoring antibiotic sensitivity, and raising public awareness of this issue. Overall, the individualized treatment and prevention strategies for pediatric MPP should be based on detailed clinical assessments and ongoing research support.

Figure: 1 Understanding Mycoplasma Pneumoniae Pneumonia (MPP) in Children.

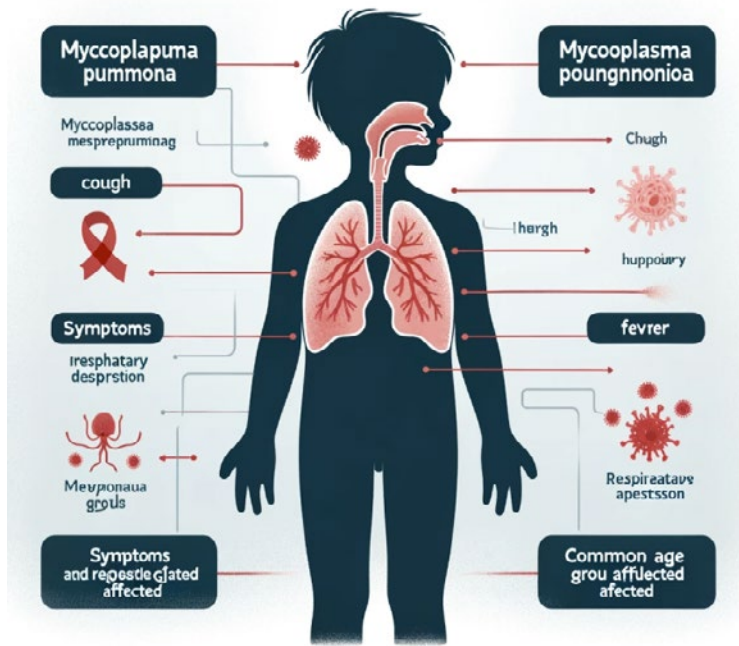


Figure: 2 Individualized Treatment Plans and Prevention Strategies for Mycoplasma Pneumoniae Pneumonia (MPP) in Children.



Li Wang

Yunyang County People's Hospital, Chongqing, China

Clinical observation of anerning granule combined with ribavirin in treatment of herpetic angina in children

Objective: Herpetic angina is a common acute infectious disease mainly occurring in children aged 1 to 7 years. The clinical manifestations are mucosal herpes, fever, ulcer and other symptoms, which seriously threaten the health of children. The purpose of this study was to investigate the clinical effect of Anerning granule combined with ribavirin in the treatment of children with herpetic angina.

Methods: 84 children with herpetic angina treated in our hospital from January to December 2023 were selected as the study objects, and were divided into control group and observation group according to random number table method, with 42 cases in each group. The control group was treated with ribavirin alone, and the observation group was treated with Anerning granule combined with the control group for 7 days. The clinical efficacy, improvement of clinical symptoms and humoral immunity indexes of the two groups were compared.

Results: After treatment, the total effective rate of the observation group was higher than that of the control group, the scores of clinical symptoms were lower than that of the control group, and the humoral immunity was higher than that of the control group, with statistical significance ($P < 0.05$).

Conclusion: Anerning Granule combined with ribavirin in the treatment of children with herpetic angina can effectively relieve clinical symptoms, regulate immunity, and have better curative effect.

Keywords: Herpetic angina in children; Anerning granules; Ribavirin; Clinical observation; Humoral immunity

Comparison of clinical efficacy in two groups [n (%)]

Group	remarkable	effective	in vain	total effective rate
control groups(n=42)	22(52.38)	11(26.19)	9(21.43)	33(78.57)
Observation Group(n=42)	31(73.81)	9(21.43)	2(4.76)	40(95.24)
χ^2				5.126
P				0.024

Comparison of clinical symptom in two groups ($\bar{x} \pm s$, score)

Group	angina		herpes		fever	
	pre-treatment	post-treatment	pre-treatment	post-treatment	pre-treatment	post-treatment
control groups(n=42)	2.42±0.37	0.97±0.22	2.15±0.41	0.74±0.15	2.37±0.35	0.52±0.06
Observation Group(n=42)	2.39±0.34	0.62±0.13	2.22±0.37	0.41±0.09	2.44±0.29	0.42±0.02
t	0.387	8.876	0.821	12.226	0.998	10.247
P	0.700	<0.001	0.414	<0.001	0.321	<0.001

Comparison of serum immunoglobulin levels in two groups ($\bar{x} \pm s$, g/L)

Group	IgA		IgG		IgM	
	pre-treatment	post-treatment	pre-treatment	post-treatment	pre-treatment	post-treatment
control groups(n=42)	7.52±1.23	1.22±0.21	0.82±0.17	8.49±1.37	0.72±0.21	0.98±0.15
Observation Group(n=42)	7.59±1.26	1.53±0.24	0.79±0.21	9.25±1.45	0.70±0.15	1.14±0.23
t	0.258	2.469	0.720	3.776	0.502	26.512
P	0.797	0.016	0.474	<0.001	0.617	<0.001

Xiang Hui

Chongqing Beibu Maternity Hospital, China

Influence of blood glucose management during pregnancy on pregnancy and neonatal birth outcomes in patients undergoing in vitro fertilization-embryo transfer

Objective: To investigate the effects of gestational glucose management intervention on pregnancy and neonatal birth outcomes in patients with gestational diabetes mellitus undergoing the In Vitro Fertilization-Embryo Transfer (IVF-ET).

Methods: A retrospective analysis was conducted on the data of 90 pregnant women diagnosed with gestational diabetes who received IVF-ET in our hospital from January 2019 to December 2022 and underwent regular prenatal check-up. During pregnancy, the subjects developed a lifestyle of reasonable diet, proper exercise, adequate rest and the blood sugar were tested once a week. Patients were divided into well-controlled group (HbA1c<5.5%, n=53) and poorly controlled group (HbA1c≥5.5%, n=37) based on the glycosylated Hemoglobin A1c (HbA1c) levels two times before delivery. Complications during pregnancy including premature rupture of membranes, preeclampsia and adverse neonatal outcomes including respiratory distress syndrome and asphyxia were compared between the two groups.

Results: The rate of cesarean section in the well-controlled group was 32.08% (17/53) significantly lower than that in the poorly controlled group 54.05% (20/37), the difference was statistically significant ($\chi^2=4.35$, $P=0.04$). The total incidence of pregnancy complications in the well-controlled group was 21.62% (8/53) lower than that in the poorly controlled group 35.14% (13/37), the difference was statistically significant ($\chi^2=4.89$, $P=0.03$). There were no significant differences in Apgar score between the two groups ($P>0.05$). The incidence of giant newborns in the well-controlled group (1.89%, 1/53) was significantly lower than that in the poorly controlled group (13.51%, 5/37) ($\chi^2=4.73$, $P=0.03$). The overall incidence of adverse outcomes in the well-controlled group was 11.32% (6/53) significantly lower than that in the poorly controlled group 29.73% (11/37), and the difference was statistically significant ($\chi^2=4.44$, $P=0.04$).

Conclusion: Good control of gestational blood glucose can significantly reduce the risk of complications and adverse neonatal outcomes in pregnant women with gestational diabetes undergoing IVF-ET.

Keywords: Gestational Glucose Management, Pregnancy, Neonatal Birth Outcomes, In Vitro Fertilization-Embryo Transfer.

**Liu Yu**

Chongqing Traditional Chinese Medicine Hospital, China

The value of combined application of multiple prenatal diagnostic techniques in the prenatal diagnosis of fetal chromosomal abnormalities

Objective: To explore the value of combined application of multiple prenatal diagnosis techniques in prenatal diagnosis of fetal chromosomal abnormalities.

Methods: A retrospective analysis was conducted on 5692 pregnant women who underwent amniotic fluid karyotype analysis combined with bacterial artificial chromosomes-on-beads (BoBs) labeling technique or Chromosomal Microarray Analysis (CMA) technique from January 2020 to June 2023.

Results: Abnormal detection rate is 13.91%. Among them, There was no significant difference between the two groups ($P>0.05$). Among the 792 cases of abnormal chromosomes, karyotype analysis alone detected chromosomal abnormalities mainly in the form of balanced rearrangements and mosaicism. Compared with karyotype analysis, BoBs and CMA detected an additional 266 cases of Copy Number Variations (CNVs), including 64 cases of pathogenic and possibly pathogenic CNVs, and 202 cases of VOUS and possibly benign CNVs. In the group of older pregnant women, the detection of chromosomal abnormalities was mainly in the form of numerical abnormalities, and there was a significant difference in the detection rates of numerical abnormalities and CNVs ($P<0.05$). In the group with abnormal ultrasound findings, the detection of chromosomal abnormalities was mainly in the form of CNVs, and there was a significant difference in the detection rates of CNVs and numerical abnormalities ($P<0.05$). There was no significant difference in the detection rates of chromosomal numerical abnormalities and CNVs between the high-risk group of serological screening and the high-risk group of Noninvasive Prenatal Genetic Testing (NIPT) (both $P>0.05$).

Conclusion: karyotype analysis combined with BoBs/CMA detection should be performed simultaneously to fully utilize the complementary advantages of cytogenetics and molecular genetics prenatal diagnosis techniques, thereby effectively reducing the incidence of birth defects.

Keywords: Multiple Prenatal, Prenatal Diagnosis, Fetal Chromosomal Abnormalities.

Biography

Liu Yu has been engaged in clinical medical treatment and teaching of obstetrics and gynecology for more than 10 years, and he has obtained the cytogenetic certificate, prenatal screening and genetic counseling certificate. His expertise includes perinatal health care, prenatal screening, genetic counseling, pregnancy complications, gynecological endocrine diseases. He is also proficient in summary, presided over scientific research projects and published many CSCD research papers.

Zhongyou Tan

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Long-term safety and cognitive effects of oxcarbazepine in pediatric and adolescent epilepsy patients

Objective: This study aims to evaluate the long-term safety and cognitive effects of oxcarbazepine in children and adolescents with epilepsy. By analyzing clinical trial data and relevant literature, we seek to determine the efficacy, safety profile, and impact on cognitive functions over extended treatment periods.

Methods and Materials: A retrospective cohort study was conducted, reviewing the medical records of 500 pediatric and adolescent epilepsy patients aged 6-18 who were treated with oxcarbazepine for a minimum of two years. Data were collected from multiple centers, focusing on seizure control, adverse effects, cognitive assessments, and overall quality of life. Cognitive function was measured using standardized neuropsychological tests, including the Wechsler Intelligence Scale for Children (WISC) and the Children's Memory Scale (CMS). Adverse effects were documented through regular clinical evaluations and parent/guardian reports. Literature from databases such as PubMed, Scopus, and Cochrane Library was reviewed to supplement the findings.

Results: Seizure Control: Efficacy: 78% of patients achieved seizure reduction greater than 50%, with 45% achieving complete seizure freedom within the first year of treatment. Consistency: The efficacy remained stable over the two-year follow-up, with 70% maintaining the same level of seizure control.

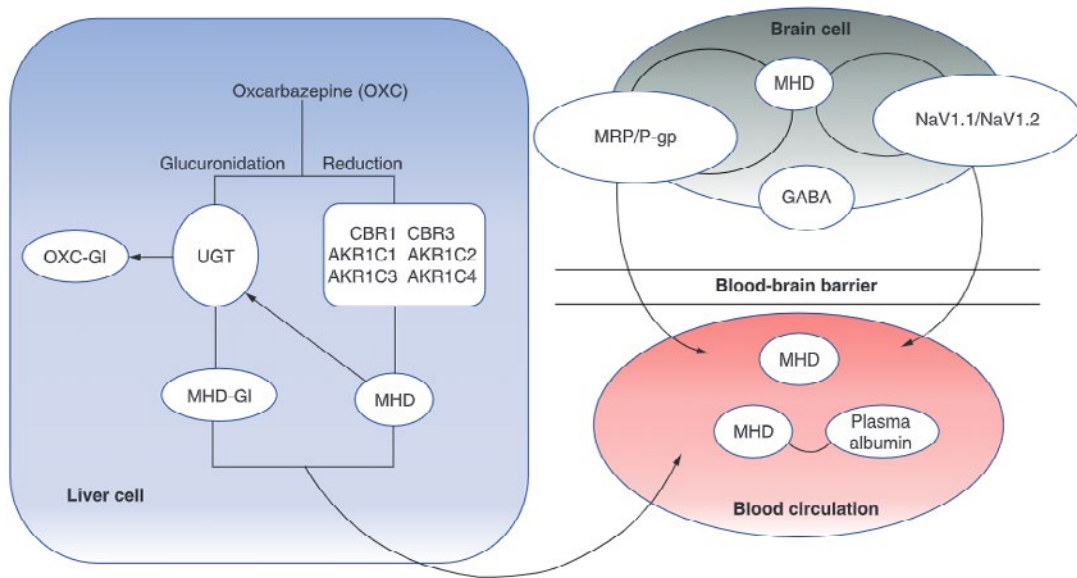
Adverse Effects: Common Adverse Effects: The most frequently reported side effects included dizziness (20%), somnolence (18%), and headache (15%). Severe Adverse Effects: Serious adverse effects were rare, with hyponatremia observed in 5% of the patients, necessitating dose adjustments or discontinuation. Weight Changes: A statistically significant increase in weight (average of 3.2 kg) was observed in 12% of patients over the treatment period.

Cognitive Function: IQ Scores: No significant change was observed in the full-scale IQ scores from baseline to the end of the study period (mean change: -1.2 points, $p=0.45$). Memory and Attention: Minor improvements were noted in memory recall and attention span (CMS scores improved by 4.5%, $p<0.05$), suggesting no detrimental effect on cognitive functions. Comparison with Control Group: Compared to a control group treated with other Antiepileptic Drugs (AEDs), oxcarbazepine showed a more favorable cognitive profile ($p<0.01$).

Quality of Life: Patient and Parent Reports: Quality of life, as reported by both patients and their parents, improved significantly (average score increase of 15% on the Quality of Life in Childhood Epilepsy Questionnaire, $p<0.01$). School Performance: Enhanced academic performance and social integration were reported in 68% of the patients.

Conclusion: The study indicates that oxcarbazepine is an effective and safe long-term treatment for pediatric and adolescent epilepsy, with a favorable impact on cognitive function and quality of life. Seizure control was achieved in a significant proportion of patients, with minimal serious adverse effects. Cognitive assessments demonstrated stability or improvement in memory and attention, suggesting that oxcarbazepine does not negatively impact cognitive development. The positive outcomes in quality of life further support its use as a first-line treatment for this population. Continued monitoring and additional longitudinal studies are recommended to further validate these findings and optimize treatment protocols.

Figure 1: Oxcarbazepine pharmacokinetics and pharmacodynamics.



Yong Xue

Yunyang County People's Hospital, China

The impact of high glucose consumption on weight gain in neonates with very low birth weight

Object: The aim of this study was to assess the impact of high glucose intake as a component of total parenteral nutrition on the recovery of birth weight in extremely low birth weight (BW) infants.

Methods: This prospective study enrolled 60 infants born between January 2023 and January 2024 at ... Hospital with a birth weight <1500g, who were randomly assigned to either the control group or the experimental group. Both groups received an identical total parenteral nutrition regimen. The control group (n=30) received a standard level of glucose intake, providing 7-14 g/kg/d 10% glucose water, while the experimental group (n=30) received a high-sugar nutrition regimen, providing 9-18 g/kg/d 12.5% glucose water. The primary outcome measure was the rate of weight improvement during the treatment period in both groups, as well as the time required for infants to regain normal birth weight from their initial weight at birth. The secondary outcome measure was the duration of respiratory support needed by patients.

Results: There were no significant differences in baseline demographic characteristics between the two groups. Both groups had gestational ages ranging from 28-34 weeks, with a median age of 31 weeks. The average birth weight in the control group was measured at 1250g±380g, while it was recorded as 1295g±310g in the experimental group. There was no statistically significant difference observed between these two groups (p>0.05). Infants in the experimental group demonstrated faster recovery to normal BW compared to those in the control group (15.86±3.12 vs 18.92±3.07 d, P=0.031), and also required less respiratory support (6.28±2.05 vs 8.23±3.56 d, P=0.008).

Summary: Providing high sugar nutrition to extremely low BW infants can expedite the recovery process of BW and shorten intensive care unit stays while reducing the risk of medical-related infections.

Keywords

Extremely low birth weight infants, Birth weight regain, Aggressive parenteral nutrition, Glucose



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Prediction of behavioral problems based on attachment styles and sensory processing in children with a history of prematurity at birth

Background: Despite significant advancements in the care of premature infants, it must be acknowledged that premature infants especially low birth weight infants are prone to problems such as sensory, cognitive, neuro-motor, visual, and hearing problems. Behavioral abnormalities, and socio-emotional difficulties, and impaired school performance are the objective future difficulties of them too.

Methods: This research aimed to predict behavioral problems based on attachment styles and sensory processing in children with a history of prematurity at birth. The research method was descriptive cross sectional study. The study population consisted of all 5 to 12-year-old children in Tehran in the year 2022, among them 154 children aged 5 to 12-year-old whom had the history of prematurity at birth were selected as convenience sampling method. Data were collected using the sensory profile2-child, kinship center attachment questionnaire and strengths and difficulties questionnaire. Data were analyzed through Pearson correlation coefficient and regression analysis.

Results: The findings demonstrated a significant negative correlation between adaptive development and behavioral problems ($r=-.65$, $p<0.05$) in children. Moreover, a significant positive relationship was found between attachment styles and emotional reactivity ($r=0.64$, $p<0.05$), negative behaviors, and avoidance of attachment figure support ($r=.67$, $p<0.05$), as well as sensory processing and behavioral problems in children with a history of prematurity at birth ($r=.67$, $p<0.05$). Additionally, motor processing ($\beta=0.22$, $p<0.05$), emotional reaction ($\beta=0.17$, $p<0.05$), and avoidance of attachment figure support ($\beta=0.17$, $p<0.29$) were capable of predicting behavioral problems in children with a history of prematurity at birth.

Conclusion: it was concluded that as the levels of attachment styles, emotional reaction, negative behaviors, and avoidance of attachment increase in children with a history of prematurity, their behavioral problems increase as well. Conversely, an increase in positive adaptive development is associated with a decrease in behavioral problems.

Keywords: Attachment Disorder, Bonding, Sensory Processing, Behavioral Problems, Premature Births.



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Hope for rescuing children victims of addiction; Children Addiction Treatment and Rehabilitation Residential Centers (CATRCS): A pilot study in Iran

Background: Until recently, there was no center specialized for the treatment and rehabilitation of children with substance use disorder in Iran. However, recently, a new initiation in the form of Children Addiction Treatment and Rehabilitation Residential Centers (CATRC) has been piloted in Iran. This brief report is an early evaluation of the performance of CATRC in the treatment and rehabilitation of children with drug use/use disorder.

Objective: Feasibility and evaluation of a comprehensive treatment and rehabilitation model for children and adolescents with substance use disorder.

Methods: The evaluation on pilot project was done in two CATRCs established in the city of Zahedan. Subjects were 107 children between the ages of 0 and 18 with a history of drug use or drug use disorder sent to CATRCs to fulfill a judicial decision or by the Welfare Organization.

Results: Out of 88 children discharged from the two CATRCs during the 1.5 years since their establishment, there were no relapses or criminal activity in 97.7% of children.

Conclusion: this study showed early evidence of the positive performance of CATRCs in Iran.

Audience Take Away Notes

- Explaining substance use disorder in children and adolescents as a global health challenge.
- Introducing the treatment of substance use disorder in children.
- Clarify the profile of homeless street children or substance abuse/substance abuse victims of the disorder.
- Presenting a preliminary study of a method for residential treatment of substance use disorder in homeless children.
- Presenting lessons learned from a new experience.

Biography

Dr. Mohsen Roshanpajouh is a Psychiatrist with an MD and MPH, presently holding the position of vice-chancellor (Deputy of Research) at the School of Behavioral Sciences and Mental Health, Tehran Institute of Psychiatry, Iran University of Medical Sciences (IUMS). He has an extensive research background in the area of addiction prevention and treatment, spanning over 25 years. His research portfolio encompasses several national and international projects, including the National Household Survey on the Prevalence of Drug Use in the General Population of Iran, the preparation and compilation of The Comprehensive Document of Social Support and Addiction Treatment of the Islamic Republic of Iran as The National Policies, and the development of various guidelines and protocols such as Treatment protocol for residential centers for the recovery and rehabilitation of person with substance use disorders. Recently, he has implementing a joint research project with the United Nations Development Office (UNDP) under the title of Community-based organizations institutional capacity building for Covid-19 and HIV control in key populations such as IV-Drug Users (IDUs).



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Standardization of sucking patterns during breastfeeding in healthy term neonates: A cross-sectional study

Background: Breathing and swallowing stand as two pivotal processes essential for the survival of infants. The efficacy of these actions is contingent upon safeguarding the respiratory tract, necessitating a heightened level of coordination. following birth, the suckling pattern of infants exhibits a lesser degree of maturity, evolving as they age. nutritive disorders like sucking and swallowing problems are common in infants. The necessity for a clinical tool to assess these issues has never been more evident. this study aims to evaluate sucking patterns and standardize them in healthy neonates.

Methods: A cross-sectional study involving 223 neonates breastfeeding in the Maternity Ward of Shahid Sayyad Shirazi Hospital, Gorgan, Iran, from April to September 2021 was conducted. Neonatal swallowing skills (maximum sucking pressure and number of sucking actions) were assessed using a swallowing skill assessment device. The 95% confidence interval for maximal sucking pressure and the number of sucking actions within a normal distribution were estimated.

Results: Out of 223 infants, 112 (50.2%) were female, 176 (74.9%) were delivered via cesarean section, and their mean birth weight was 3154.48 ± 371.48 grams. The maximum sucking pressure was -6.82 , with a 95% confidence interval of $(-13.21, -3.52)$ in infants. The mean number of sucking actions within a 15-second interval was 6.74, with a 95% confidence interval of $(2.23, 20.37)$.

Conclusion: Regarding this data and the high prevalence of sucking disorders in preterm infants worldwide, we can employ this information in conjunction with an oral-motor skill assessment tool to evaluate infant sucking patterns in hospitals, clinics, and during home visits.

Keywords: Breastfeeding, Infant, Newborn, Standardization.

Audience Take Away Notes

- This article introduces a novel portable tool and provides statistical information within the normal range for the specialized
- Assessment of sucking skills in infants
- In fact, by using this information, researchers can expertly evaluate the sucking skills of babies and use them in their studies, evaluations, and treatment process

Biography

In 2016, Payam graduated from Babol University of Medical Sciences with a bachelor's degree in speech therapy field and after that he entered the master's degree. Then in 2019, he graduated from the senior level and during this time I worked in more than four hospitals and private clinic. During these years, he was active in two specialized start-ups in the field of design, invention and production of oral Motor tools in Iran and Turkey. So far, he had more than five inventions, the most important of which is the device for assessing the nutritional status of babies(which name is Smart Infant Sucking Tester). he was also elected as the president of the Iranian Speech Therapy Scientific Association in 2022 (the youngest president in the history of the Iranian Association). Now he is planning to launch a specialized start-up in the field of breastfeeding and oral motor disorders in sultanate of Oman.

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