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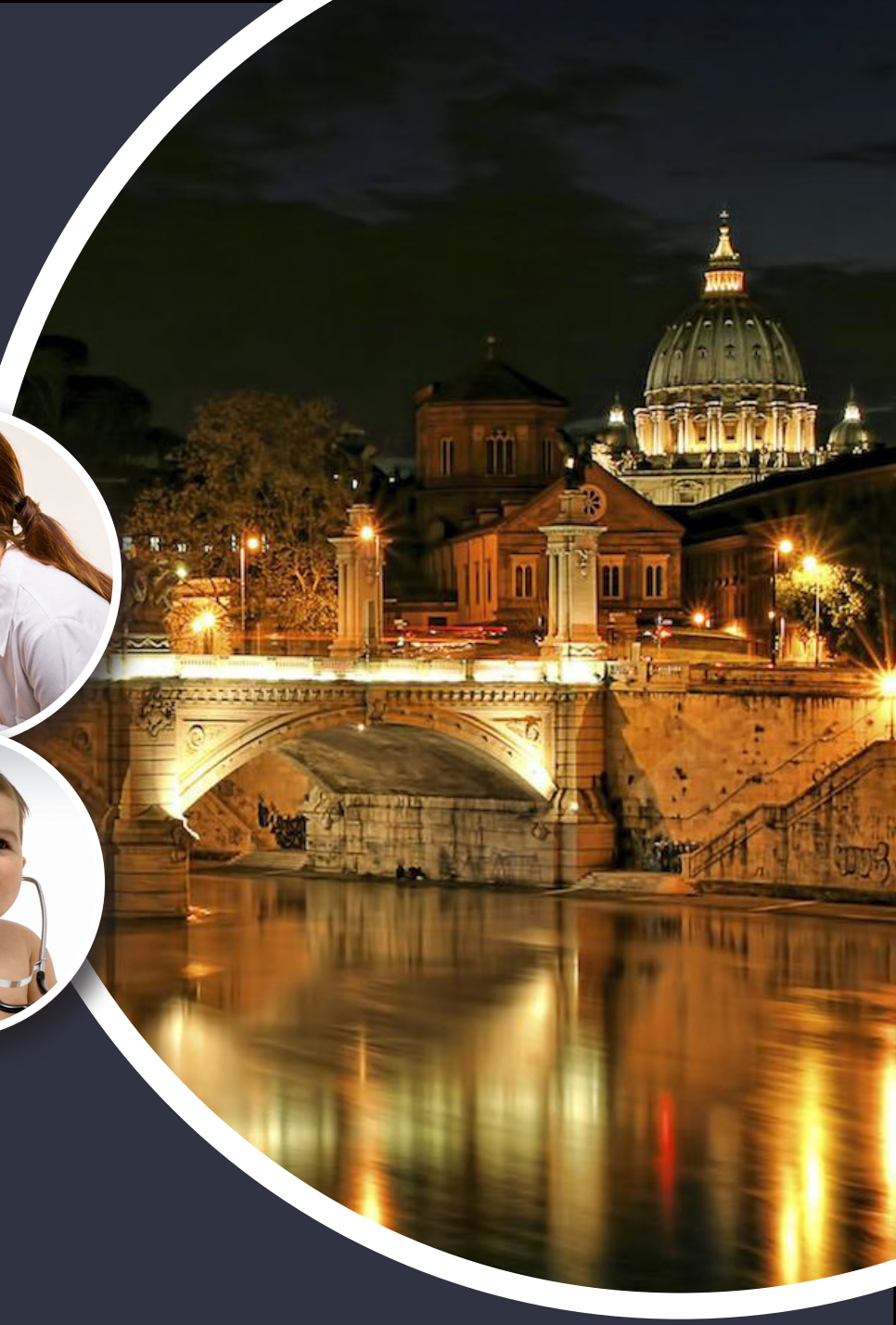

EPN 2018

Euro-Global Conference on

PEDIATRICS AND NEONATOLOGY

SEPTEMBER 13-15, 2018

PUBLISHING PARTNER

PM PEDIATRIC MEDICINE
A Journal Focusing on Translational and Clinical Research in Pediatrics

VENUE

HOLIDAY INN ROME AURELIA
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ROME, ITALY

http://pediatric-conference.com/

INDEX

Presenters

Anick Berard
University of Montreal
Canada

Antonio Ruggiero
Catholic University
Italy

Babak Omidvar
Aban Hospital, Iran

Betul Tiryaki Bastug
Eskisehir Osmangazi
University, Turkey

Biljana Vuletic
University of Kragujevac
Serbia

Delphine Collin Vezina
McGill University
Canada

Fadiah Alkhattabi
King Faisal Specialist Hospital
& Research Center
Saudi Arabia

Fareena Ahamed
M.P.Shah Hospital
Kenya

Hadar Yardeni
Ministry of health office
Israel

Haruo Shintaku
Osaka City University Gradu-
ate School of Medicine
Japan

Inge M. Wolberink
Reinier de Graaf Hospital
Netherlands

Irina N Zakharova
Russian Medical Academy
of Continuing Professional
Education
Russia

Jorge Lizandra
University of Valencia
Spain

Krasimira Prodanova
Technical University of Sofia
Bulgaria

Laura Marynczak
University Children's Hospital
of Cracow, Poland

Ljiljana Pejcic
University of Nis
Serbia

Marcos Roberto Tovani Palone
University of Sao Paulo, Brazil

Marlene W Borschel
Abbott Laboratories
USA

Michiko Yoshida
Japanese Red Cross Akita
College of Nursing, Japan

Nevenka Mravlincic
Prime school kralja Tomislava
Croatia

Reham Shareef
University of Khartoum
Sudan

Robert J. Goldberg
University of Massachusetts
Medical School, USA

Sridhar M Ramaiah
The Newcastle upon Tyne
Hospitals, UK

Sunil Kumar Jatana
Manipal Medical College
Malaysia

Tiziana Greggi
Rizzoli Orthopaedic Institute
Italy

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Hadassha Medical Center
Israel

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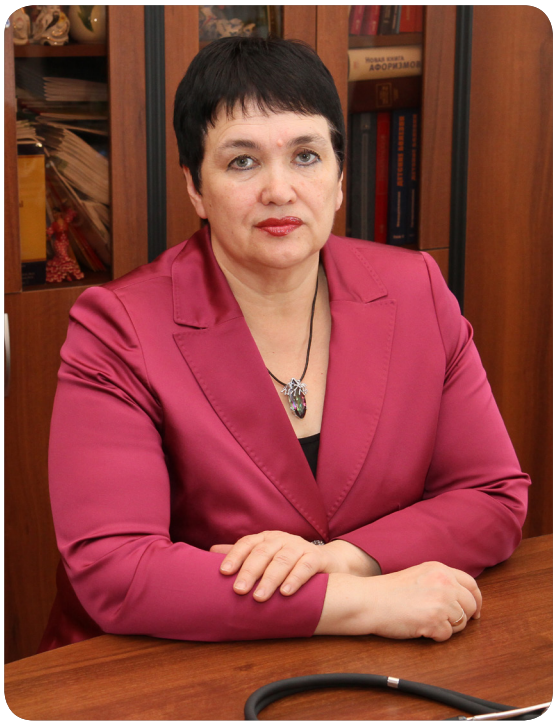
Sofia University St. Kliment
Ohridski, Bulgaria

Thank You All...

Welcome Message



Dear collegues! It is a great pleasure and a special privilege for me to invite you to the Euro-Global conference on pediatrics and neonatology which will be held in Rome in September 13-15, 2018. This conference serves as an international forum for the presentation and discussion of current research in the field. In the era of ongoing developments in pediatrics and neonatology it is essential to discuss vividly recent reports and evidence with leading experts from different countries. We understand that children are a symbol of our future. It is our task to help them to become healthy and happy adults. Collaboration spirit at our conference will open a unique opportunity to address intriguing issues for all attendees. The diverse nature of the conference guarantees a high quality of this meeting. We look forward to welcoming you in Rome!

Irina Zakharova
Russian Medical Academy of Continuing Professional Education, Russia

Welcome Message

Dear Colleagues

On behalf of the scientific organising committee, It is my great pleasure and honour to welcome you all to attend the Euro-Global Conference on Pediatrics and Neonatology (EPN 2018) held in the ancient, cultural and beautiful city, Rome, Italy.

Medicine is at a crossroads as we march into a new genomic era with major technological advances. Pediatrics and Neonatology are the important branch of medicine with plenty of opportunities and huge challenges. In the current practice of Pediatrics, the treatment of infectious and nutritional disorders is well established. In contrast, genetic onset disorders and cancer now constitute a substantial load in the Pediatric clinic. Care of the genetic based diseases and childhood cancer is becoming the major task in Pediatric practices worldwide and this is unprecedented.

The theme for this conference is to provide a great opportunity to share an exciting scientific program with the foremost interdisciplinary platform to interact with international colleagues from 17 different fields in Pediatrics and Neonatology care.

Zhan he Wu
Children's Hospital at Westmead, Australia

keynote speakers

Irena Bralic
University of Split
Croatia

Janet Mattsson
The Swedish Red Cross
University College, Sweden

Josep Panisello
Yale School of Medicine
USA

Karen S. Fernandez
University of California San
Francisco (UCSF), USA

Rita P. Verma
Nassau University Medical
Center, USA

Zhan he Wu
Children's Hospital at
Westmead, Australia

About MAGNUS GROUP

Magnus Group (MG) is initiated to meet a need and to pursue collective goals of the scientific community specifically focusing in the field of Sciences, Engineering and technology to endorse exchanging of the ideas & knowledge which facilitate the collaboration between the scientists, academicians and researchers of same field or interdisciplinary research. Magnus group is proficient in organizing conferences, meetings, seminars and workshops with the ingenious and peerless speakers throughout the world providing you and your organization with broad range of networking opportunities to globalize your research and create your own identity. Our conference and workshops can be well titled as 'ocean of knowledge' where you can sail your boat and pick the pearls, leading the way for innovative research and strategies empowering the strength by overwhelming the complications associated with in the respective fields.

Participation from 80 different countries and 688 different Universities have contributed to the success of our conferences. Our first International Conference was organized on Oncology and Radiology (ICOR) in Dubai, UAE. Our conferences usually run for 2-3 days completely covering Keynote & Oral sessions along with workshops and poster presentations. Our organization runs promptly with dedicated and proficient employees' managing different conferences throughout the world, without compromising service and quality.

About EPN 2018

Magnus Group takes great pleasure to invite you to participate in the 'Euro-Global Conference on Pediatrics and Neonatology' scheduled on September 13-15, 2018 in Rome, Italy.

EPN 2018 aims to nurture and conduct an interdisciplinary research in pediatrics and neonatology. This conference is a unique chance for you to meet Researchers, Industrialists, delegates, speakers who are at the forefront of their field and to improve your strategy for the development of innovative ideas that will be vital for the children's of tomorrow. It is to exchange innovative ideas between different research fields and to expose and discuss inventive theories, frameworks, methodologies, tools, and applications. The main theme of the conference is Multifaceted aspects in pediatric medicine and child health.

The Euro-Global Conference on Pediatrics and Neonatology scrutinize the entire work on newly born children's with earlier and current work. It provides a critical review of the present state of the subject. It also provides a foremost interdisciplinary platform for researchers, practitioners, and educators to discuss contemporary innovations. The Scientists, delegates, and speakers are from academia, industries and private and government laboratories across the world.

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DAY 1

KEYNOTE FORUM

Euro-Global Conference on

PEDIATRICS AND NEONATOLOGY

SEPTEMBER 13-15, 2018
ROME, ITALY

Germ line mutation associated acute leukemia in childhood: Different genetic landscape and therapeutic strategies

Zhan he Wu, PhD

Children's Hospital at West mead, Australia

Biography

Zhan he Wu graduated from Harbin Medical University, China IN 1978. He worked in cardiology/haematology clinic for 8 years. He received his Master degree on the project of hematopoietic stem cells of leukaemia in 1985 and received his PhD in 1993 from University of New South Wales on the topic of Haematology/ Immunology, identified IgG Fc receptors on 5 different types of hematopoietic cells/lines (megakaryocytic lineage). He has published more than 60 original articles and 4 chapters in books. Since 1996, he has been working in the field of human genetic disease studies, mainly on the genetic cause of early fetal loss, inherited bone marrow failure syndromes including Fanconi anemia and hematologic malignancies in the Sydney Genome Diagnostics, Western Sydney Genetics Program, The Children's Westmead, affiliated to University or Sydney. He is a Founding Fellow of Royal College of Pathologist for Australasia (RCPA). He is working as the associate editor, editor-in-Chief and chair of the rare disease column for several medical journals currently.

Audience Take Away:

- Clinicians and basic scientists alike will be presented with preclinical findings confirming that a therapy given for dementia is also beneficial as a treatment approach for experimental brain trauma.

It is estimated that acute myeloid leukemia from the germ line mutation associated cause is about 15% and it could be more and recent discoveries have revealed that inherited germ line mutations are present in an increasing proportion of children predisposing them to leukemia.

To increase the recognition for myeloid leukemia/MDS associated with inherited or germ line mutations, a major changes has made by adding of the germ line mutation in the classification of myeloid neoplasms and acute leukemia in the new version of classification of tumors of the hematopoietic and lymphoid tissues published by the World Health organization (WHO) in 2016 including; 1) myeloid neoplasms with germ line predisposition without a preexisting disorder or organ dysfunction, 2) myeloid neoplasms with germ line predisposition and preexisting platelet disorder and 3) myeloid neoplasms with germ line predisposition and other organ dysfunction.

Myeloid neoplasms associated with inherited bone marrow failure syndromes (IBMFS) commonly include Fanconi anemia (FA), dyskeratosis congenital (DC), shwachman-diamond syndrome (SDS), diamond blackfan anemia (DBA), congenital amegakaryocytic thrombocytopenia (CAMT), severe congenital neutropenia (SCN) and thrombocytopenia absent radii (TAR) which they are often diagnosed at a young age. They require different treatment strategies due to the underlying gene defects. IBMFS are complex mixture of genetic disorders characterized by insufficient blood cells production usually association with one or with one or more somatic abnormality and an increased cancer risk. Fanconi anemia (FA) is usually inherited as an autosomal recessive (AR) trait, but it can also be X-linked recessive (XLR). FA is the most common and representative type of IBMFS. So far, 22 genes responsible for FA were identified and also found that FA is susceptible to malignancies, commonly in acute myeloid leukemia. Patients with FA are characterized with progressive bone marrow failure, congenital abnormalities and susceptibility to malignancies, commonly in MDS, AML, and solid tumors. Very importantly, cells from patients with FA are more sensitive to chemotherapy than patients without FA which it can cause severe results from chemotherapies. Similarly, studies demonstrated that hereditary predisposition has higher risk to develop to acute lymphoblastic leukemia (ALL) such as in TP53.

The cytogenetic and molecular technologies for leukemia testing provide huge improvements for diagnosis, prognostic stratification, disease monitoring and therapeutic guidelines.

To deal with germ line mutated leukemia, it not only requires to increase the awareness for germ line mutations, to taking family history from patients and to offer genetic counselling for the relevant to malignant diagnosis, it also requires to understand the developments of the genetic landscapes.

Biography

Karen S. Fernandez is a Pediatric oncologist with expertise in solid tumors and Hodgkin lymphoma. She currently serves as the director of the solid tumor program at Valley Children's Hospital in Madera, California and has an academic affiliation with the University of California San Francisco. In addition to practicing pediatric oncology. Fernandez is involved in hematology/oncology global health initiatives, and has participated in educational and research projects in Guatemala, Vietnam and Uganda.

Tumors in the newborn period

Karen S. Fernandez, M.D.

University of California San Francisco (UCSF), USA

Solid tumors discovered at birth or during the first month after delivery are rare. Neonatal tumors are often benign. Malignant tumors in neonates represent only 2% of all malignancies in childhood. Some tumors that appear histologically malignant may show benign behavior, whereas apparently benign tumors may be fatal by virtue of their site of origin, which makes neonatal tumors one of the most difficult diagnostic and therapeutic challenges in the neonatal units. Planning the diagnostic evaluation and therapeutic interventions necessitates a multidisciplinary approach that involves the neonatology, radiology, surgery, pathology, hematology, and oncology services. Here we provide a general overview of the most common tumors seen in the newborn period and address some of the initial approach to their treatment.

Audience Take Away:

- Provide a broad introduction to the most common tumors found in the neonatal period and the general principles involved in their diagnosis and management.
- Describe the clinical presentation of the most common malignant tumors during the neonatal period.
- Contrast the features that differ between solid tumors presenting during the neonatal period versus older children.
- Describe the genetic syndromes associated with solid tumors in neonates.

Biography

Janet Mattsson have specifically devoted her research to complex care situations and pedagogical encounters such as how she learnt and what they learnt in clinical practice from a multimodal perspective, as well as the interaction school, clinic, student. Her field is within the pediatric intensive care context. Her research is interdisciplinary between nursing and medical education.

Theoretically, she is anchored in pedagogical theories and nursing theories, especially Patricia Benner's thoughts on holistic nursing have been of great importance to her. Methodologically, her research primarily derives from a qualitative approach with phenomenology and interpretative phenomenology as foundation. Data collection takes place through interviews, participatory observations and action research in various care-related contexts.

Feel me; hear me, children's participation in the PICU

Janet Mattsson, PhD

The Swedish Red Cross University College, Sweden

Background: Children who are critically ill are vulnerable and the nurse has a responsibility to meet the child`s needs in a pediatric intensive care unit (PICU).

Objectives: The aim was to explore the vulnerable child's participation and how it can be understood through the nurses' perspective in the situated nursing care intervention. By exploring ways clinical supervisors facilitate the learning of the participation from critically ill children in a clinical environment.

Method: The study design was an exploratory inductive qualitative approach. Data collection was done through observations and interviews. The data from the observations were analyzed through interpretive phenomenology.

Findings: The affective elements were viewed as essential for learning to understand how children participate in the PICU and to develop professional competency. Three themes emerged through the analysis: Mediated participation, Bodily participation and Participation by proxy. They all highlight different aspect of the vulnerable child's way of participating in the nursing care given, through nurses awareness and situated salience.

Conclusion: The concept participation should be redefined and broadened; as participation can present itself through the child's body in diverse ways.

Considerations: Confidentiality procedures were followed, ethical permission was given from the ethical komitee at KI, and all informants participated on an informed, independent and voluntary basis. The informants that chose to participate were informed that they could cease participation at any time.

Audience Take Away:

The concept participation should be redefined and broadened; it should be understood and interpreted in a new way within the PICU.

- Participation can present itself through the child's body in diverse ways, and every person working with children needs to act accordingly. Children has a right to be involved in their care and treated as the first person the PICU nurses first responsibility lies with the child, to address their needs and their rights.
- We call for awareness and a strategy on how participation can be established and strengthened in various ages at the PICU. Through the awareness of the Childs body and the technical devices the Childs needs can be interpreted and meet
- The audience will get examples of how nurses can listen with their nursing care interventions and meet the subtle signs of the child's will
- It will give them evidence to be in harmony with the convention of children's right as well as strengthen the child as a person. Practical tips on how to expand the wellbeing of the whole family in the PICU. It also relates to the caring culture which can be studied.

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DAY 1

SPEAKERS

Euro-Global Conference on

PEDIATRICS AND NEONATOLOGY

September 13-15, 2018
Rome, Italy

Tumors of CNS in the first year of life – characteristics, outcomes, and prognoses

Laura Marynczak*, Stanisław Kwiatkowski , Wojciech Gorecki , Alicja
University Children's Hospital of Cracow, Poland

CNS tumors in the first year of life differ in histological features, locations, dynamics of development, and clinical presentations. The analysis of diagnostic and therapeutic procedures and outcomes in tumors of CNS was performed to establish factors which have an impact on outcome.

A retrospective study of 42 patients was performed according to symptoms, tumor location, histology, methods of treatment and outcome. Functional outcome was evaluated prospectively according to Glasgow Outcome Scale and Lansky Performance Scale.

CSN tumors in the first year of life represent 8.89 % of all children operated on due to newly recognized CNS tumors. The most common signs in children up to 6 weeks of age were macrocrania and those of increased intracranial pressure whereas in older children focal symptoms prevailed. Nearly 60 % of all tumors were located in the supratentorial compartment. There was prevalence of high grade tumors during the first 6 months of life and low grade tumors throughout 6-12 months. There was significantly higher mortality in cases located in the infratentorial region and with high grade tumors. There was also significant deterioration after 5 years that mainly affected patients who received low scores after 1 year, with high grade tumors located in the posterior fossa and incompletely resected.

Congenital CNS tumors have poor prognosis both in respect of mortality and quality of life. The outcome of congenital CNS tumors depends on the extent of surgical resection, histopathologic type, and location of the tumor.

Audience Take Away:

- Tumors of the central nervous system are less common in the first year of life but rank second of infantile malignancies.
- They differ in histological features, location, dynamics of development and clinical presentation which is a multidisciplinary problem.
- Congenital tumors of CNS generate special difficulties in therapeutic management in general and have a poor prognosis.
- Extend of surgical resection, histopathologic type and location of tumor was found as prognostic factors for CNS tumors in the first year of life with respect to outcome and mortality. Procedural algorithm was draw up based on mentioned factors.

Biography

Laura Marynczak completed her education at Jagiellonian University Medical College, Faculty of Medicine (2001-2008), Jagiellonian University Medical College, PhD (Doctorial dissertation: „The assessment of procedures and results of treatment in congenital tumors of central nervous system) (2009-2013). Her professional experience include Physician, in the course of pediatric surgery: Department of Pediatric Surgery, Department of Pediatric Neurosurgery, University Children's Hospital of Krakow (2009-2016) Physician,Pediatric Surgeon: Department of Pediatric Neurosurgery, University Children's Hospital of Krakow (2016-present), Tutor: School of Medicine in English Jagiellonian University, Medical College (2017-present). Her publications include Torticolis as a first sign of posterior fossa and cervical spinal cord tumors in children, Fetus in fetu: a medical curiosity-considerations based upon an intracranially located case, Tethered cord syndrome in children, Itramedullary tumors in craniocervical junction in children.

Vitamin D immunomodulatory effect

Biljana Vuletic*[1], Nedeljko Radlovic[2]
[1]University of Kragujevac, Serbia
[2] Serbian Medical Society, Serbia

In addition to the most familiar classical role vitamin D to maintain calcium and phosphorus homeostasis through effects on the intestine, kidney, and bone, in conjunction with parathyroid hormone, vitamin D shows a regulatory effect on a number of different cells, especially its anti-proliferative and pro-differential biological function. Through its own receptor in the immune cells, vitamin D increases the phagocytic activity of macrophages. Also, by binding to the regulatory sequences of antimicrobial peptides genes, vitamin D increases the microbicidal activity of phagocytes. Inhibition of differentiation and maturation of antigen-presenting dendritic cells, as well as direct influence on their contact with T lymphocytes, it significantlly influences the type of immune response. Dendritic cells under the influence of vitamin D induce suppressor T cells, which can inhibit Th1 cell response and are critical in the regulation of immune tolerance. Vitamin D inhibits proliferation of Th1 and Th17 cells, as well their cytokine production, and suppresses the differentiation and maturation of B lymphocytes. Due to all these functions, vitamin D has shown beneficial effects in the prevention and modification of a number of autoimmune diseases. Data have shown that a broad spectrum of tissue cells, including immune cells, express vitamin D metabolizing enzymes, providing a biologically plausible mechanism for local, auto- and paracrine conversion of the native circulating forms, to the active form calcitriol. This process seems to be essential for normal immune function and therefore impaired or insufficient vitamin D levels may lead to dysregulation of immune responses. Addressing the questions as to whether vitamin D levels are related to the risk of developing autoimmunity and whether vitamin D supplementation can modify the course of autoimmune diseases? Unfortunately, clinical application of $1,25(OH)_2D_3$ is obstructed by toxicity issues since the supraphysiological doses needed to modulate immune responses elicit concomitant calcemic side effects. The problem is the hypercalcemia in some diseases with impaired immune systems due to elevated levels of active vitamin D in the blood (sarcoidosis, tuberculosis, Crohn's disease, T cell lymphoproliferative disorders), a cytokine which is explained by stimulating the expression of CYP27B1 and CYP24A1 dysfunction (mitochondrial protein initiates the degradation of the $1,25(OH)_2D_3$. In regulating the level of vitamin D3, this enzyme plays a role in calcium homeostasis and the vitamin D endocrine system.

Audience Take Away:

- Vitamin D is converted to its major circulating form, 25 hydroxyvitamin D 25(OH)D, by the liver 25-hydroxylase enzyme (CYP27A1) . Several cytochrome P450 (CYP) isoforms have been proposed to accomplish this hydroxylation step (including the mitochondrial CYP27A1 and the microsomal CYP2R1, CYP3A4, and CYP2J3), but CYP2R1 is suspected to be the high- affinity 25-hydroxylase Little is known about the regulation of these 25- hydroxylases.
- Despite the optimal level of vitamin D in circulation, the metabolism capacity can vary among individuals, as proposed in the case of certain genetic polymorphisms in VDR and vitamin D metabolizing enzymes. Four polymorphisms (FokI T_C, BsmI A_G, ApaI G_T and TaqI C_T) of VDR gene have been extensively studied in order to find their association with various diseases, including disorders of the immune response.
- The physiological function of vitamin D in the CNS, heart, pancreas, mammary gland, skin and immune system are still poorly understood, but it can be said that its overall biological function of 1,25(OH) dihydroxycholecalciferol is antiproliferative and pro-differential .
- $1,25(OH)_2D_3$ can modulate both innate and adaptive immune responses. $1,25(OH)_2D_3$ inhibits the expression of costimulatory molecules (CD40, CD80, CD86) major histocompatability complex II (MHCII) on the surface of antigen-presenting cells (DC) inhibits production of inflammatory cytokines - interleukin IL-12 and IL-23. This control on B cell activation and proliferation may be clinically important in autoimmune diseases as B-cells producing autoreactive antibodies play a major role in the pathophysiology of autoimmunity.
- Additional mechanisms suggested to be involved in the protective effect of $1,25(OH)_2D_3$ in IBD include regulation of the composition of the gastrointestinal microflora and a reduction in intestinal epithelial cell apoptosis.
- An important property of $1,25(OH)_2D_3$ and its analogs is their capacity to modulate both APCs and T cells , induction of tolerogenic DCs, enhanced number of CD4+ CD25+ regulatory T cells important in prevention and treatment autoimmune diseases and graft rejection
- Vitamin D supplementation which can improve the course of immunity and overall health benefits present challenge.

Biography

Biljana Vuletic, MD, PhD is Associate Professor of Pediatrics at the Faculty of Medical Scineces University of Kragujevac and Chief of the Department of Gastroenterology of Pediatric clinic and a full ESPGHAN member. Dr Vuletic recived her medical degree from the Medical faculty University of Belgrade. She started her residency in Pediatrics at the University Children s Hospital University of Belgrade. Her mainly cliical interests include chronic intestinal failure, Coeliac disease and others autoimunnity disorders and a clinical nutrition. Prof. Vuletić has summary 168 publications including authored or co-authored papers in peer-reviewed journals and also chapters in the national Monographs and Textbooks published in Serbia.

Accidental extubation events – How unplanned it is and what lessons can be learnt?

Sridhar M Ramaiah*, H Brown, O Osmulikevici, D Chong, J Druce, K Paterson, N Arkless
The Newcastle upon Tyne Hospitals NHS Foundation Trust, UK

Review on accidental extubation from the literature. Effects of accidental extubation on the baby and wider impact parents/staff and outcome. Challenges of capturing data on accidental extubation. Results of a quality improvement project on accidental extubation. Extubation event is common in the neonatal unit. Accidental (unplanned) extubation should be uncommon. However, accidental extubation events are often not measured/ under reported and it's perceived as normal". This quality improvement project aims to determine the frequency and characteristics of accidental extubations in preterm infants in a large neonatal unit and strategies to manage the issues around its occurrence.

Audience Take Away:

- Accidental extubations are under reported, under studied and challenging to understand. Audience will get an insight to the characteristics of the event and how to measure the incidences.
- This study enhances the understanding of the accidental extubation event and strategies to decrease the vent.
- This study will help other researchers collaborate and explore their own experience. This will in turn lead improved patient care and patient experience potentially long term outcomes.
- This will give insight in to help improve an important life threatening event in the neonatal unit.
- There is enhanced learning outcome

Biography

S M Ramaiah completed his neonatal training in Cambridge, Edinburgh and Newcastle to become Consultant neonatologist at RVI Newcastle upon Tyne Hospitals NHS Foundation Trust since 2013. He has wide interest especially around acute neonatal management issues, neonatal neurology specially cord gas and outcomes, HIE and a EEG. He is currently coordinating a study on life threatening bronchopulmonary dysplasia in UK. He has interest in medical education and has few roles. He is a clinical lead for corporate induction for the employing Trust, associate TPD for the training region and he is the deputy chair for the CESR committee at the RCPCH UK.

The rehabilitative day care centers in Israel - when a dream meets reality

Hadar Yardeni
Ministry of health office, Israel

The Rehabilitative Daycare law (2000) was designed to ensure that a toddler with a disability will receive adequate care suited to his individual needs. Rehabilitative daycare regulations (2008) describe the treatment package for a toddler, according to his medical and functional status. The regulations differentiate between toddlers with special medical needs, and with complex medical needs.

In Israel there are 125 rehabilitation Daycares, with approximately 3,000 toddlers. At the enactment of the law, the increase in survival preterm infants and children with severe and chronic illness was not anticipated. The rehabilitation Daycare population has become medically more complex. The population nowadays includes many toddlers with special and complex medical needs. The regulations state that the response to the toddler's needs will be given by the addition of assistant's or nursing hours if he meets special medical criteria.

In 2017- 170 infants entitled to rehabilitation Daycare were entitled to have a privet nurse and more than 230 to privet assistance. This creates a legal requirement for employment of several nurses in the same rehabilitation Daycare, and even class, without professional justification. In many Daycares, in collaboration with the Ministry of Health, a workaround routine made possible to recruit staff, but currently there's a growing gap between rule of law and staff reality.

Today we are in the process of updating the Rehabilitative Daycare regulations. Cancel the concepts 'special and complex medical needs', have one nurse for a class of ten toddlers with more assistances with more medical authorities after suitable training.

Biography

Hadar Yardeni since 2013 is acting as the Head of the department of child developmental and rehabilitation at Ministry of health office, Jerusalem, Israel

Pediatric abdominal emergency imaging

Betul Tiryaki Bastug
Eskisehir Osmangazi University, Turkey

Trauma, appendicitis, intussusception, and hypertrophic pyloric stenosis are the most common reasons for emergent abdominal imaging in pediatric patients. Although the use of computed tomography has increased dramatically in recent years, children are at particular risk for side effects of ionizing radiation, and even low dose radiation is associated with a small but significant increase in lifetime risk of lethal cancer In the majority of emergency services, the use of magnetic resonance (MR) imaging as the primary modality for the evaluation of a child is impractical due to high cost, limited availability, and frequent need for sedation. Ultrasonography (US) does not involve ionizing radiation and, unlike MR imaging, is relatively inexpensive, is widely available, and does not require sedation. Another major advantage of US in abdominal imaging is that it allows dynamic assessment of bowel peristalsis and compressibility. Delayed diagnosis of any disease process can result in severe morbidity and, in some cases, death..The ability to diagnose or exclude disease with US should be part of a core radiology skill set for any practice that includes a pediatric population.

Audience Take Away:

- Although the use of computed tomography has increased dramatically in recent years, children are at particular risk for side effects of ionizing radiation.
- The use of magnetic resonance (MR) imaging as the primary modality for the evaluation of a child is impractical due to high cost, limited availability, and frequent need for sedation.
- Ultrasonography (US) does not involve ionizing radiation and, unlike MR imaging, is relatively inexpensive, is widely available, and does not require sedation. Another major advantage of US in abdominal imaging is that it allows dynamic assessment of bowel peristalsis and compressibility.

Biography

Betul Tiryaki Bastug was born in 1978 in Trabzon/ Turkey. She completed her first middle and high school education in Trabzon Anatolian High School from the schools of Trabzon and graduated with a high degree. She received a good grade from university entrance examinations nationwide in 1995 and continued her education at the Istanbul University Faculty of Medicine . After 6 years of education, in 2002, she took a high note from the examination of expertise in the field of universities all over the country, she started its specialist education which will last more than 5 years in the radiology department of Istanbul University Istanbul Faculty of medicine. She has spent more than 2 years of her radiology education in the interventional radiology unit and especially in the field of emergency interventional radiological procedures. In 2008, due to the obligatory state service obligation which is compulsory for all specialist doctors in Turkey, she was appointed to the bilecik state hospital. Particularly because it is the only hospital in the city, she has gained significant experience in emergency radiology, especially in the areas of trauma and pediatric emergency radiology. During this period, studies have been conducted and published on how much the x-ray-free images are used in the diagnosis stage and the unnecessary observations with x-ray images. In 2016, she has started to Eskişehir Osmangazi University Medical Faculty Radiology Department as an assistant professor and made a functional emergency radiology unit in the hospital emergency department. She has a particular interest on pediatric emergency radiology. And especially she wants to avoid unnecessary x-rays in diagnosing and draw attention to these unnecessary x-rays in pediatric patients who have long life expectancies. She is still working in the same unit and is preparing her file for the application for the associate professorship.

Single daily dosing of ceftriaxone and metronidazole is as safe and effective as ampicillin, gentamicin and metronidazole for non-operative management of complicated appendicitis in children

Yardeni Dan*, Kawar B, Siplovich L, Rosine I, Zebidat M, Polla H, Gwetta Z, Ochayon Y, Pressman A, Sakran W, Miron D

Hadassha Medical Center, Israel

Introduction: Perforated appendicitis very common abdominal emergency in children and nonoperative management with Ampicillin Gentamicin and Metronidazole (AGM) has shown good results. Recent data show that single daily dosing of Ceftriaxone and Metronidazole (CM) is as safe and effective as ampicillin gentamicin and clindamycin for treatment of perforated appendicitis after surgery in children. Treatment of complicated appendicitis in children with once daily CM can decrease the risk of in drug administration's mistake, require the patient to be connected to the IV line for short time only once a day, may cause less IV line infection and may cost less. The aim of this study was to compare the effectiveness, and safety of CM with the traditional triple antibiotic for conservative treatment of complicated appendicitis children.

Methods: A prospective, open, randomized study conducted from July 1st 2008 to June 30th 2009. Included were children younger than 14 years with complicated appendicitis who were randomly assigned to therapy with either CM as a single daily dose or AGM. The outcome variables compared were maximum daily temperature, duration of fever, time return to oral diet, length of antibiotic therapy, results of repeat WBC counts, need for abdominal abscess drainage, length of hospitalization and complication.

Results: Overall 22 and 21 children were assigned to CM and AGM regimens respectively. There were no any significant differences in all clinical outcomes parameters between the two groups.

Conclusions: Single daily dosing of CM is as safe and effective as the triple antibiotic regimen and has significant advantages for the conservative therapy of complicated appendicitis in children.

Keywords: Appendicitis, Conservative

Biography

Yardeni Dan is working as Consultant Pediatric Surgeon (since 2016) in Pediatric Surgery Dept. at Hadassah Medical Center, Jerusalem, Israel.

Assessment of nocturnal sleep architecture by actigraphy and one-channel electroencephalography in early infancy

Michiko Yoshida*, Hideya Kodama
Japanese Red Cross Akita College of Nursing, Japan

Objective: To elucidate characteristic sleep architecture of different nocturnal sleep patternsin early infancy.

Methods: Participants were 27 infants at the same conceptional age of 3-4 months. Nocturnal sleep ofthese infants was monitored at home by simultaneously using actigraphy and a one-channel portableEEG device. According to the infants' activity for 6 hours from sleep onset, each night's sleep patternwas classified into three categories: sleeping through the night (STN), sleeping with weak signals(crying/fuss episodes <10 minutes or fed), and sleeping with strong signals (crying/fuss episodes 10 minutes). Associations of sleep patterns with sleep variables (percentage of time in sleep stages, pattern of slow-wave sleep (SWS) recurrence, etc.) were investigated.

Results: Analysis was conducted in 95 nights. STN pattern (n=36) was characterized by suppressedbody movements while EEG represented a state of wakefulness. Weak signal pattern (n=27) tended toindicate rich and regular distributions of SWS across the night. Strong signal pattern (n=32) wascharacterized by reduced sleep time, although the amount of SWS was not reduced to that degree.Exclusively breastfed infants accounted for 78% of weak signal patterns, whereas formula-feedinginfants, 67% of STN patterns. In several nights with STN or strong signal pattern, SWS did not occur in >50% of the sleep cycles. Multiple regression analysis showed that exclusive breastfeeding mayincrease the proportion of SWS in non-REM sleep.

Conclusions: Each nocturnal sleep pattern was associated with some sleep architecture, part of which would be attributed to infant's feeding methods.

The ultimate goal of the present study was to apply the obtained findings in order to explain the etiology and real nature of the individual differences in sleep patterns observed in 3–4-month-old infants. The STN pattern was associated with formula-feeding and characterized by suppressed body movements during wakefulness. However, some infants showing the STN pattern may not have attained stabilized sleep due to poor SWS. The weak signal pattern was associated with exclusively breastfed infants, and indicated mostly stable sleep with rich and regular distributions of SWS across the night. In the strong signal pattern, the duration of sleep was reduced, but the duration of SWS was not reduced to that degree, suggesting that the infants who cry often at night appear to have stabilized sleep. However, some infants who cry a lot in the middle of the night may have some intrinsic problems in sleep regulation due to poor and atypical SWS occurrence. However, an infant sleep pattern does not necessarily repeat, and it is often difficult to categorize an infant simply as a baby who sleeps a lot or a baby who cries a lot.

Audience Take Away:

- Some formula-fed infants showing the STN pattern may not have stabilized sleep due to poor SWS.
- Sleep of exclusively breastfed infants may be more stabilized due to increased SWS although they awaken more frequently at night.
- Some infants showing strong signal pattern may have some intrinsic problems in sleep regulation, such as poor synchronization of a sleep cycle with other circadian rhythms (i.e. melatonin, body temperature rhythm)

Biography

Michiko Yoshida is a midwife and has about twenty years of professional experiences in clinical nursing and university teaching. She received a master's degree in the work about taste of milk from inflamed breasts (Breastfeed Med. 2014 9(2):92-7) and obtained a doctorate in this study (Early Hum Dev. 2015 91(9):519-26) from a postdoctoral course of Akita Graduate School of Medicine under the guidance of professor Kodama. Then she promoted assistant professor of the Japanese Red Cross Akita College of Nursing in 2017. Her special interest about research has included a circadian rhyme of early infants.

Associations between physical activity and quality of life in children and adolescents with cystic fibrosis

Jorge Lizandra[1*], Alexandra Valencia-Peris[1], Amparo Escribano[1], Silvia Castillo[3], Elena Lopez-Cañada[1] and Fernando Gomez-Gonzalvo[2]

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Physical activity (PA) is being considered in recent years as an important part of the therapy and rehabilitation for cystic fibrosis (CF) patients, due to the evidences of health benefits (slower lung function decline, improved bone mineral density, nutritional status and mucus hydration and clearance, among others) for their quality of life. Nonetheless, PA is not always incorporated into the routine of people with CF. Moreover, the effects of PA in the quality of life of children and adolescents have been scarcely investigated in Spain.

Therefore, the aim of the study is to assess if there is any difference in the perceived quality of life of children and adolescents with CF regarding if perform or not PA and also depends on the type of activity.

Methods: Participants of the two hospital units of CF in Valencia (Spain) were invited to take part in this study aimed to assess PA, sedentary time and quality of life in children and adolescents with CF. A total of 51 CF patients (54.2% girls) aged 6 to 18 completed the Cystic Fibrosis Questionnaire for children and adolescents (CFQR Spain) taking into account the following domains: physical fitness, role limitations, vitality, emotional status, social limitations, body image, eating disturbance, treatment burden, health perception, weight problems, respiratory symptoms and digestive symptoms). For each domain, the score is given on a 0- to 100-point scale with higher scores denoting higher quality of life. PA was measured with accelerometry (Actigraph) and type of activity was registered. Non-parametrics tests (Mann–Whitney U test) were performed using software SPSS version 22.0 (SPSS Inc., Chicago, IL, USA), with alpha set at $p < 0.05$. Informed consents were obtained from all participants, and their parents or tutors, also having the support of the ethics committee of the university.

Results: Median values for quality of life in the participants of the study were: physical fitness=83.3, role limitations=100, vitality=79.1, emotional status=70.8, social limitations=61.9, body image=66.6, eating disturbance=44.4, treatment burden=44.4, health perception=61.1, weight problems=66.6, respiratory symptoms=41.6 and digestive symptoms=33.3. Results indicate that 82.6% of participants perform at least one or even more than one PA or sport. With regards to the relationships between PA and quality of life, better perception of physical fitness was found in PA practitioners compared with non-PA practitioners ($p<0.05$). Moreover, those subjects performing more than one activity (62.9%) got better punctuation in vitality than those who engaged only in one (37.1%) ($p<0.05$). No differences were found between participants who practise or not practise swimming (47.4% vs 52.6% respectively) or among those who perform organized versus non-organized PA (89.7% vs 10.3% respectively).

Therefore, it can be concluded that there is a positive relationship between PA and quality of life, at least in the perception of physical fitness and vitality. Nonetheless, it is still unclear if specific types of activities or organized PA, can have a better effect in the quality of life in youth with CF. In this sense, results of this study can help doctors, and specially pulmonologist and gastroenterologist, with their recommendations of physical activity or specific sports to their patients with CF

Audience Take Away:

- Audience will learn the important role of physical activity for the improvement of the quality of life of cystic fibrosis patients.
- It would be particularly interesting to know which sports or physical activities are more appropriated and helpful for patients with CF.
- Finally, this presentation will help welfare community (especially pulmonologist and gastroenterologist), to recommend these specific type of sports of physical activities to their patients with CF.

Biography

Jorge Lizandra is Lecturer in the Didactics of musical, plastic and corporal expression department at the University of Valencia (Spain). His main research field is the study of physical activity and health promotion in youth. Moreover, as a member of the Physical Activity and Pedagogy Research Unit at the University of Valencia he is very interested in the study of vulnerable populations and their relation with the physical activity as a mean for them to be recognized and visible.

Eleven years of alcohol intoxications in adolescents in all Dutch pediatric departments. Alcohol poisoning and the role of tobacco, illicit drugs and medication

Inge M. Wolberink*[1], Joris J. Van Hoof[2], Nicolaas Van Der Lely[1]
[1] Reinier de Graaf Hospital, Netherlands
[2] University of Twente, Netherlands

During the last decade, alcohol intoxication in children and adolescents developed into a major health concern in current pediatrics. In this longitudinal study we monitored intake and treatment of 6416 adolescents in Pediatric Departments in Dutch hospitals over the years 2007 to 2017.

Methods: From 2007 to 2017 all data were collected on all admitted Dutch adolescents (aged < 18, positive Blood Alcohol Content (BAC)), treated in one of the Dutch hospitals (Dutch Pediatric Surveillance System (NSCK)). Questionnaires about the adolescents were collected, making use of a patient interview.

Results: 6416 adolescents were treated, mainly (5699; 89%) related to (severe) alcohol intoxication and subsequent reduced consciousness, in contrast to the adolescents (717; 11%) who were admitted because of an accident, fracture or suicide attempt. Mean age of the patients was 15.4 years, and 53% were boys. BAC level increased during this period (1.82 ‰ in 2007, 1.91 ‰ in 2017), and mean reduced consciousness duration lasted from 2.24 hours in 2007 to 3.00 hours in 2017). Currently, data showed the numbers of adolescents with tobacco use (1310 adolescents were smokers; 20.4%) and illicit drug use (740 adolescents used illicit drugs during intoxication; 11.5%). The data also showed that 1199 adolescents (18.7%) took prescribed medication, which depending on the type of medication might affect the BAC. Our data showed a change in attitude of the parents concerning alcohol usage during the years: in 2011 (first year of registration) 75% of the parents gave permission to their child to drink alcohol (including only on special occasions), in 2017 this decreased to 32%. This increase in awareness is partly due to a change in legislation: from January 2014 on, only adolescents from the age of 18 can legally buy alcohol.

Conclusion: In Europe, alcohol intoxication treatment remains an actual issue within Pediatrics. The Dutch dataset is of value to conduct interesting analyses on alcohol intoxication characteristics in all Dutch youngsters as well as the medical treatment of them. The data were also of value to change the attitude of parents concerning alcohol. The role of tobacco, illicit drug and prescribed medicine usage is highlighted.

Audience Take Away:

- The continuous importance of the topic of adolescent alcohol intoxication.
- Causes, circumstance and treatment of adolescent alcohol intoxication.
- The role of tobacco, illicit drug use and prescribed medication in alcohol intoxication cases.
- Directions for medical treatment and policy advice, the 'Dutch approach

Biography

I.M. Wolberink is a pediatric resident and researcher at the Reinier de Graaf Hospital (RdGG) in Delft, the Netherlands. From 2010 to 2017 she studied medicine at the Leiden University Medical Center (LUMC). Her research covers topics related to alcohol and youth. She works for Dr. Nicolaas van der Lely, who founded the multidisciplinary outpatient clinics for Youth and Alcohol in the Netherlands. Because of his work, the Dutch government raised the age for buying alcohol for adolescents from 16 to 18 years by January 2014.

Alcohol & child health in rural Kenya: Patterns of use, abuse and associations with child health

Fareena Ahamed[*1], Swedo E[2], Jackie Naulikha[3], Dalton Wamalwa[3], Judd Walson[2], Maneesh Batra[2], Suzinne Pak-Gorstein[2]

[1]M.P.Shah Hospital, Kenya
[2]University of Washington, United States
[3]University of Nairobi, Kenya

Background: Alcohol is one of the leading contributors to non-communicable disease in the developed and developing world. Children of alcoholic parents have more emotional & health problems, school failure, learning disabilities, and criminality than their counterparts. There are limited studies describing the relationship between parental alcoholism and child malnutrition.

In 2014, rates of malnutrition increased at Kisii Teaching & Refferal Hospital in Western Kenya. Community-based participatory research in the Gesoni sub-location of Kisii revealed alcoholism to be a primary perceived cause of adverse child health outcomes and a major health priority for the community.

Objective: To determine the prevalence of alcohol use and associations with adverse child health outcomes in Gesoni, Kenya.

Design/Methods: The survey consisted of child and adult components and was administered in Kiswahili by community health volunteers (CHV) to children aged 8-17 years and adults aged >18 years in 15 villages. CHVs selected houses according to geographic proximity at varying times of day to capture different populations. Survey questions inquired about alcohol use, spousal and parental alcohol use, food insecurity, child health, and attitudes towards alcohol. Portions of the survey are based on WHO's AUDIT tool and NIAAA's Youth Guide.

Results: There were 411 survey participants (181 children, 230 adults, 307 households). Of those surveyed 8.9% of children and 45.6% of adults drink alcohol. Alcoholic traits were present in 25% of adult respondents. Eighty per cent (n=85) of adult drinkers met WHO criteria for hazardous drinking. Children with parents who drink were 21.7 times more likely to endure illness and injury when compared with children of alcohol non-users ($p<0.001$). Over 14% of children reported being injured/ill due to parental or self-alcohol use. Prevalent odds of missing school were 6.8 times higher among children whose parents drink ($p=0.001$). Children of alcohol users were 24.3 times more likely to miss meals when compared with children of alcohol non-users ($p<0.001$).

Conclusions: Alcohol is an emerging contributor to adverse health outcomes in developing settings. In this study, alcohol use was significantly associated with school absence, child injury/illness, and food insecurity. Efforts to alleviate alcohol use should be considered in future efforts against childhood illness & injury.

Audience Take Away:

- There are few studies studying the link between alcohol intake and its effect on child health, this study was one of the first studies to study such effects in sub Saharan Africa.
- We had to create an audit tool which was locally acceptable to the community, and this tool could be possibly used for further research on the same.
- This research could be the stepping stone to pave the way for further research with regards to interventions required to prevent adverse child health outcomes linked to alcohol use and abuse.

Biography

Fareena Ahamed did her undergraduate and master's degree in Paediatrics and Child Health in University of Nairobi Kenya. She works as a consultant general paediatrician for the past two years in a private hospital in Nairobi, Kenya. She hopes to specialise in paediatric cardiology and to join the faculty at the University of Nairobi in the near future. She is a member of the Kenya Paediatric Association and the Kenya Breastfeeding Society. She is an instructor on the European Paediatric Advanced Life support (EPALS) course, the Paediatric Epilepsy Training Course and the Paediatric Disaster Management Course.

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DAY 1

VIDEO PRESENTATION

Euro-Global Conference on

PEDIATRICS AND NEONATOLOGY

SEPTEMBER 13-15, 2018
ROME, ITALY

Physiological expression of HLA-G and pregnancy

Marcos Roberto Tovani Palone*, Fernando Silva Ramalho, Eduardo Antonio Donadi and Leandra Naira Zambelli Ramalho
University of Sao Paulo, Brazil

Human leukocyte antigen (HLA)-G is a nonclassical major histocompatibility complex (MHC) class I molecule with immune-modulatory properties. Such molecule predominantly possesses tolerogenic and anti-inflammatory functions. Until now, it has been verified the existence of seven isoforms of HLA-G, being that four are membrane-bound isoforms and the other three are soluble isoforms. During physiological pregnancy, it should be noted that HLA-G is expressed in high levels by extravillous cytotrophoblasts. It has been proposed that in the course of pregnancy period HLA-G induces fetus immune tolerance through direct binding to the inhibitory receptors immunoglobulin-like transcript (ILT)-2 present on lymphoid and myelomonocytic cells, and ILT-4 expressed by dendritic cells, macrophages and monocytes. In addition, in this context, the killer cell immunoglobulin-like receptor expressed by natural killer (NK) cells is also an HLA-G-specific receptor. Therefore, HLA-G induces the maintenance of maternal-fetal tolerance at different stages of the immune response, such as in differentiation, proliferation, cytolysis and cytokine secretion, given that it can directly interact with different immune cell subpopulations. Furthermore, by indirect mechanisms HLA-G can express the nonclassical HLA class I molecule HLA-E, which directly binds peptides derived from HLA-G. Consequently, HLA-E can interact with the inhibitory receptor CD94/NKG2A (present on NK cells and T lymphocytes) resulting in inhibition of cytolysis. However, despite this some controversies can be found in the literature about this subject. We expect that the original results of our ongoing research can provide new and relevant explanations concerning the role of HLA-G during pregnancy. We aim to publish them soon in a scientific journal.

Audience Take Away:

- This is an original research.
- Our findings certainly will lead researchers to rethink about the mechanism of pregnancy.
- This speech, undoubtedly, will result in advances in the fields of pediatrics and neonatology.

Biography

Marcos Roberto Tovani Palone has completed his MSc from the Hospital for Rehabilitation of Craniofacial Anomalies, University of São Paulo, Brazil, and currently he studies PhD in Experimental Pathology from Ribeirão Preto Medical School, University of Sao Paulo, Brazil, under the coordination of Doctor Leandra Náira Zambelli Ramalho. He is a DDS and, moreover, specialist in pediatric dentistry, syndromes and craniofacial anomalies, and health management. His main research interests are pediatric pathology, cleft lip and palate, dentistry and public health. He has published more than 37 papers in reputed journals and has been serving as an editorial board member of 30 journals.

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DAY 1

POSTER PRESENTATION

Euro-Global Conference on

PEDIATRICS AND NEONATOLOGY

SEPTEMBER 13-15, 2018
ROME, ITALY

Barriers and facilitators to the real-world implementation of supervised asthma therapy in public schools: A qualitative study of school nurse perspective

M.Trivedi, S. Hoque, K. Biebel, N. Byatt, M. Rosal, L. Pbert, R. Goldberg*
University of Massachusetts Medical School, USA

The attitudes of school-based nurses to an asthma management program for school-aged children and adolescents.

Background: Randomized controlled trials have demonstrated that school-supervised delivery of inhaled corticosteroid therapy reduces asthma-related morbidity in school-aged children. However, successful evidenced-based interventions have not been incorporated into routine school practice.

Objectives: Asthma Link is a clinical program that provides school nurse-supervised inhaled corticosteroid therapy to high-risk children with asthma. This intervention is a real-world application of evidenced-based interventions of supervised asthma therapy. We examined the perspectives of school nurses involved in Asthma Link to determine barriers and facilitators to real-world program implementation in public schools in central Massachusetts.

Methods: Asthma Link included 38 schools and 108 school-aged children in central Massachusetts. Semi-structured interviews were conducted with school nurse participants in Asthma Link (n=16) based on five constructs: Process, Barriers, Facilitators, Satisfaction, and Problem Solving. Interviews were recorded, transcribed, and open-coded. Thematic analysis was used to identify major themes discussed in these interviews.

Results: School nurses identified the following facilitators to successful implementation of Asthma Link: (1) willingness to participate in the program (no school nurses refused to implement the program); (2) appreciation of the opportunity to connect with the pediatric asthma provider, be a central member of the healthcare team, and supervise preventive medication delivery; and (3) self-identification as professionals to engage families and children in understanding the importance of preventive asthma care and daily medication adherence. Barriers to the implementation of this program were: 1) difficulty communicating with families and health care providers; 2) frustration with families not bringing the prescribed asthma medication into school; and 3) concern that some school nurses may not think it is their responsibility to administer daily preventive asthma medication. School nurses suggested that medical offices have a liaison tasked with working with school nurses and that an electronic system be developed to ease communication between parties. Overall, the surveyed school nurses found Asthma Link to be an acceptable program to incorporate into their everyday practice given the brief time needed, the ease in making it part of their morning medication distribution routine, and that this program creates a positive impact on children with asthma, including reduced asthma symptoms and rescue inhaler use and fewer school absences. They also agreed that Asthma Link helped children develop a medication routine, thus improving treatment adherence.

Conclusions: Despite evidence supporting supervised asthma therapy in schools, this modality is not widely adopted into routine practice. School nurses identified several key issues that can be addressed in intervention protocols to successfully implement the evidenced-based Asthma Link intervention in routine practice and have an important public health impact on pediatric asthma.

Audience Take Away:

- Understanding the attitudes and concerns of school-based nurses to a pediatric asthma prevention program
- Barriers and facilitators to the implementation of a school-based asthma prevention program as expressed by school nurses
- Use of a tried and proven asthma prevention treatment program in school aged children

Biography

Dr. Robert J. Goldberg, Ph.D., is Professor and Chief, Division of Epidemiology of Chronic Diseases and Vulnerable Populations, in the Department of Quantitative Health Sciences at the University of Massachusetts Medical School. He is also Program Director of the medical school's Masters of Science in Clinical Investigation (MSCI) Program. Dr. Goldberg has been actively involved in community-based studies of the natural history and primary and secondary prevention of coronary heart disease, heart failure, and deep venous thrombosis for more than three decades. He and several clinical researchers established the Worcester Heart Attack Study in the early 1980s. Through the current period of federal funding support, they are examining more than three-decade-long trends (1975-2007) in the incidence rates, in-hospital and long-term survival, and therapeutic approaches used in the management of more than 14,000 greater Worcester, Mass. residents hospitalized with acute myocardial infarction at all medical centers in the Worcester metropolitan area. He also presently serves as the Co-PI on a population-based surveillance project that is examining changing trends in the incidence, hospital and long-term case-fatality rates, and management practices of in and outpatients with venous thromboembolism among residents of the Worcester metropolitan area. He is also receiving funding support from the National Heart, Lung, and Blood Institute to develop community-wide hospital and outpatient surveillance for heart failure in greater Worcester residents. Dr. Goldberg serves as the senior epidemiologist for the Global Registry of Acute Coronary Events (GRACE) Project, which is a large multinational coronary disease registry examining differences in the management practices, hospital, and post-discharge outcomes of more than 50,000 patients hospitalized in 14 countries with an acute coronary syndrome.

Myocardial dysfunction in septic shock

Ljiljana Pejcic*, Marija Ratkovic Jankov, Karin Vasic
University of Nis, Serbia

Septic shock is a serious, life-threatening condition often associated with multiple organ dysfunctions. The incidence of myocardial dysfunction in sepsis is unknown as well as its impact on survival, independently other organ system dysfunction.

Case report: Adolescent aged 15 years with clinical signs of septic shock was admitted to the Intensive Care Unit. The previous five days he has occasionally hyperthermia and complained of dry cough and diarrhea. In laboratory investigations dominate leukocytosis, thrombocytopenia, very high parameters of inflammation, and moderately elevated levels of nitrogen products, hypoalbuminemia, hypoproteinemia and metabolic acidosis. After initial therapy of septic shock, patient was still haemodynamically unstable with significant signs of myocardial dysfunction. Transthoracic echocardiography showed left ventricular dysfunction (FS = 18%), with mitral regurgitation 1+, tricuspid regurgitation 2+ and pericardial effusion. We continued with intensive inotropic stimulation, antibiotics, corticosteroids and correction of metabolic disorders. During further hospitalization clinical and laboratory recovery were a significant, but with long-term maintenance depending on inotropes. After two weeks the boy was discharged home with regular clinical and echocardiographic findings.

Audience Take Away:

- The diagnosis of sepsis requires the clinician carefully continuous haemodynamic monitoring in order to recognize early signs of possible development of a shock.
- The mechanisms underlying myocardial depression have not been fully elucidated and there are still many unclear questions to answer.
- Early recognition of intrinsic myocardial dysfunction is critical for the administration of the most appropriate therapy for septic patients.
- Current treatment for sepsis-induced cardiac dysfunction is based on appropriate treatment for the infectious focus (antibiotics and source control) and hemodynamic support (fluids, vasopressors, and inotropes).

Biography

Ljiljana Pejcic has over 30 years in medical clinical practice and experience in clinical research. In 1992 she finished the specialization in pediatrics with grade excellent at Faculty of Medicine, University of Nis and since then has been working and gaining extensive experience in pediatric cardiology. She is particularly skillful in echocardiography, ergometry and 24 h ECG Holter monitoring analysis. As a noninvasive pediatric cardiologist she is especially interested in the field of preventive cardiology. She is member of some very reputable professional organizations. In 2007 she gained the degree of Professor of Pediatrics at the Faculty of Medicine, University of Nis. To date she has published over 15 scientific papers on pediatrics, mainly in recognized international journals.

Modeling survival in childhood acute lymphoblast leukemia

Krasimira Prodanova*[1] and Nadejda Yurukova[2]
[1]Technical University of Sofia, Bulgaria
[2]Specialized Children's Oncohematology Hospital, Bulgaria

Acute lymphoblastic leukemia (ALL) is the most common malignancy diagnosed in children, representing nearly one third of all pediatric cancers. Annually, around 13000 children in the world are diagnosed with acute lymphoblastic leukemia. White children are more frequently affected than black children, and there is a slight male preponderance. With improvements in diagnosis and treatment, overall cure rates for children with acute lymphoblastic leukemia have reached 90%. About 30% of the children with ALL have a gene marker. The most frequent abnormality is t (12; 21) resulting in TEL-AML1 gene rearrangement. This molecular marker can be detected in 20%-30% of the cases with ALL.

In this study the survival analysis is used to determine the prognostic significance of TEL-AML1 and to models the time it takes for relapse or death. The data are from 170 patients, observed in Specialized Children's Oncohematology Hospital – Sofia, Bulgaria for a time of 10 years. Gene marker TEL-AML1 is detected in 43 of the patients. For estimating event (relapse or death) free survival rate the Kaplan–Meier method is used. Time to event is calculated as the time from study entry to first event or data of last contact. The log-rank test is used for comparison of survival curves between two groups. Multivariate analysis is conducted by using Cox proportional hazards regression to characterize disease progression on existing cases by revealing the importance of covariates. For the analysis of the data the software package STATISTICA 10.0 is used.

Audience Take Away:

- The presentation demonstrates data from a retrospective single center study. In this patient group by appropriately used statistical methods was found a positive significant value of the specific genetic abnormality. The collection and the analysis of the data from similar studies are very important for defining the concept of risk-oriented therapy in pediatric oncology. The correct statistical processing has a key role in properly interpreting the results.

Biography

Krasimira Prodanova graduated in Mathematics at Sofia University, Bulgaria, received Ph.D. degree (1995) from the Technical University of Sofia with thesis about statistical models in pharmacokinetics. At present she is a Professor and vice dean of the Faculty of Mathematics & Informatics at the Technical University of Sofia. She has more than 100 publications in reviewed and indexed journals and proceedings of international conferences, 9 books and two book chapters. Her scientific interests are in the fields of mathematical modeling in pharmacokinetics and medicine, estimation of the parameters of stochastic models, drug response models, and survival analysis and optimization problems.

Regenerative therapy in neonates with hypoxic ischemic encephalopathy

Haruo Shintaku[1]*, Makoto Nabetani[2], Takashi Hamazaki[1], Satoshi Ohnishi[1], Emi Tanaka[1], Satoshi Kusuda[3], Masanori Tamura[4], Sinichi Watabe[5], Masahiro Hayakawa[6], Yoshiaki Sato[6], Masahiro Tsuji[7], Akihiko Taguchi[8], Hiroyuki Ichiba[9], AkiraOka[10], Rintaro Mori[11] Takeo Mukai[10], Tokiko Nagamura-Inoue[10]

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Hypoxic ischemic encephalopathy (HIE) is considered to be a major cause of cerebral palsy (CP) in neonates with moderate or severe asphyxia. To date, therapeutic hypothermia (TH) has been the only effective treatment for HIE to prevent the development of CP. However, even if infants are treated with hypothermia, nearly half of them die or left with moderate to severe neurological impairments as yet. A recent publication in the United States, indicated benefits of autologous umbilical cord blood stem cell transplantation combined with TH for HIE, drawing attention to cell therapy for perinatal brain injury. Regenerative medicine by umbilical cord blood stem cells (UC-BSCs) or UC mesenchymal stromal cells (UC-MSCs) which combines the action of suppressing early inflammation and the action of promoting regeneration is expected as a remarkable excellent therapeutic method as a treatment for HIE. UCBSCs was collected aseptically and prepared by using SEPAX which need more than 40ml of UC blood. UC-MSCs were collected aseptically and isolated from UC, and cryopreserved after culture. Infants admitted to the NICU of 6 hospitals in our research group will be eligible if they are ≥36 weeks' gestational age and birth weight ≥1800 g with HIE and meet the cooling criteria. UCBSCs therapy for neonatal HIE in addition to TH was performed in 6 newborn patients. All of them have discharged NICU without support of ventilator and survived from 9 months to 3 years. UC-MSCs have been defined and characterized as follows; (1) abundant sources and ease of collection, storage, and transport; (2) low immunogenicity with significant immunosuppressive ability. Autologous UCBSCs for newborn HIE is safe and feasible, and warrants a larger and controlled phase II study. UC-MSCs therapy will give the possibility of treatment to patients who could not get UC blood.

Audience Take Away:

- We already started umbilical cord (UC) blood stem cells (UCBSCs) therapy for neonatal HIE in addition to TH. We also have been preparing to start a clinical trial of UC mesenchymal stromal cells (UC-MSCs) therapy for patients who did not have a sufficient effect or could not take the UC blood. UCBSCs therapy for neonatal HIE in addition to TH was performed in 6 newborn patients. All of them have survived from 9 months for 3 years. UC-MSCs have been defined and characterized as follows; (1) abundant sources and ease of collection, storage, and transport; (2) little ethical controversy; (3) multipotency to differentiate into various cell types; and (4) low immunogenicity with significant immunosuppressive ability.

Biography

Haruo Shintaku completed his Medicine, in 1982. He worked for Osaka City University Hospital from 1982-1985. From 1985-1986, he went abroad to Switzerland and worked for Zurich University as a research fellow. Since 1988, he became the assistant of department of pediatrics, Osaka City University and became the assistant professor in 1994, the associated professor in 1999, the chief professor in 2010 of department of pediatrics, Osaka City University graduate school of medicine. From 2018, he became the program-specific professor, donated course Disability medicine and regenerative medicine in Osaka City University Graduate School of Medicine.

The predictive value of serum sodium concentration on the early outcome after pediatric liver transplantation

Yordanka Uzunova
Sofia University St. Kliment Ohridski, Bulgaria

The aim of the present study is to evaluate the relationship between the serum sodium concentration and the probability of the outcome in early postoperative period after pediatric liver transplantation. We analyze 32 cases and conclude that high values of the serum sodium concentration at the second and fifth post-operative days (POD) are a reliable indicator for bad outcome. In our study we use a binary logistic regression model in order to predict the probability of early loss of the graft. The model based on second POD data gives correct predictions in 80 percent if the cases and the p-value is 0.05. The model using data from the fifth POD is characterized by p=0.03 and provides even better prediction results which are correct in 90 percent of the cases.

Audience Take Away:

- Gain knowledge on the use of sodium levels as another early predictive factor for outcome in pediatric patients undergoing liver transplantation.
- Sodium levels are easily obtainable in clinical setting and could be used effectively during the early post-operative evaluation.
- Close monitoring of sodium levels could help determine high risk patients, thus alerting medical personnel on the need of initiation of urgent measurements

Biography

Yordanka Uzunova is a certified physician and an acknowledged Bulgarian pediatrician with 30 years of clinical experience. She has special interest in hepatology and transplantology in children and received her PhD degree on the thesis Early postoperative period in children undergoing liver transplantation. Currently she works as an associated professor at Sofia University St. Kliment Ohridski, Lozenetz Hospital in Sofia, Bulgaria. She has more than 40 publications in the field of pediatric liver transplantation.

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DAY 2

KEYNOTE FORUM

Euro-Global Conference on

PEDIATRICS AND NEONATOLOGY

SEPTEMBER 13-15, 2018
ROME, ITALY

Biography

Irena Bralic is a head doctor (Primarius), a specialist paediatrician, Associate Professor of Pediatrics, and scientific associate at the Medical Faculty of the University of Split, permanently employed in a Specialized Paediatric Practice. She is the author and editor of the university textbook Prevention of Diseases in Childhood, the university handbook Vaccination and Vaccines, and the sold-out handbook for parents, How to Grow Up Healthy. She has published more than forty papers in recent journals, and she has been an invited speaker at many foreign and national conferences. She is the head of the scientific project of the Ministry of Science of the RC entitled; Secular changes in growth and the appearance of obesity during puberty. She is the head of category 1 courses in the life-long education of doctors, in the series New Challenges in the Prevention of Diseases in Childhood. Her narrow field of professional and scientific interest are preventive programmes in childhood and adolescence, vaccination, growth and development, and obesity. She is a member of the Management Board and Treasurer of the Croatian Paediatrics Society.

Vaccines: The past, present and future

Irena Bralic

University of Split, Croatia

Vaccination is one of the greatest achievements of contemporary medicine. It has been proven to be the most successful and economically most sustainable measure in primary preventive medicine. The responsibility of doctors for the implementation of vaccination programmes is great, regardless whether they are directly involved in their realization or not. With the development of new technologies and the globalization of society, vaccination is increasingly drawing the attention of the media and the wider society and politics, and not just the scientific and medical community.The health culture of prevention of disease by vaccination is a reflection of the enlightenment of the population, the accessibility of the health care system, and the development of society. An effort is made to include the vaccination programme, as a complex medical intervention, in the regular health care system. Vaccination may be undertaken according to a centralized or a de-centralized model, whether it is mandatory, mandatory for risk groups, recommended to everyone, or only recommended to risk groups. The vaccination calendar is adopted on a national level, according to the needs of the population. Thanks to vaccination, small pox has been eradicated, probably polio myelitis will soon be too, and morbidity has been significantly reduced by vaccinating against preventable diseases. Vaccination prevents on average the death of more than 2.5 million children each year. Vaccines are still not sufficiently available in underdeveloped countries due to poverty. At the same time, despite the obvious benefits of vaccination, especially in developed countries, there has been a noticeable rise in vaccine hesitancy. With the fall in the number of vaccinated people on a global, national, regional and local level, the risk is growing of epidemics breaking out once again of illness which until recently were in the phase of elimination. Evidence based education, especially the experience and attitudes of all health professionals, as potential educators of the population, is the foundation for successful vaccination.

In the lecture, a historical overview is given, based on scientific evidence, of the health care culture of prevention of disease by vaccination. The current paradox is explained of the reduction in vaccination levels, despite the proven benefit of vaccination on the level of individuals and populations, and a vision is presented of the clinical use of new vaccinations in the future.

Audience Take Away:

- To strengthen the positive attitude of doctors towards vaccination, regardless of their specialization and narrow field of professional interest, through analysis of the historical, clinical, epidemiological, psycho-social and social context.
- To understand the professional, ethical and formal legal complexity of vaccination as a medical intervention.
- To consider critically the perception of parents and the perception of doctors of vaccination.

- To master skills in communication with parents regarding the most frequent myths about vaccination (autism, Thiomersal, mercury, allergies).
- To understand the importance of continuous and independent under-graduate and post-graduate education on vaccination and to learn about the trends in the development in vaccinations in the future

Biography

Dr. Verma graduated from medical school in India at the top of her class of 210 students with honors. She was an associate professor of Pediatrics at the State University of New York and the University of Maryland Schools of Medicine before joining Nassau University Medical Center as professor. She has published over 90 peer reviewed manuscripts and abstracts and has presented her research at national and international meetings. She serves on the editorial board and is a manuscript reviewer for several journals. She is a member of the Neonatal-Perinatal, Critical Care and Epidemiology subcommittees of American Academy of Pediatrics.

Early Postnatal Hypotension (EPH) in ELBW neonates: Complications and effects of antenatal factors

Rita P. Verma, M.D., F.A.A.P

Nassau University Medical Center, USA

Background: The incidence of EPH in ELBW infants is 20- 45%. EPH is associated with significant mortality and morbidities in this population. There are no recent reports on the adverse outcomes of refractory and non-refractory hypotension in ELBW infants, as compared with normotensive ELBW neonates. About 25% of hypotensive ELBW infants are refractory to the standard treatment of volume expansion and inotropes (VI) and require hydrocortisone (HC). Such neonates undergo a prolonged exposure to hypotension and VI before resolution is achieved with HC.

Objective: 1.To compare normotensive ELBW infants with those who suffer from refractory (HC) and non-refractory (VI) hypotension. 2. To compare infants suffering from refractory and non-refractory hypotension, in order to identify clinical features of neonates susceptible to refractory hypotension early in course.

Study Design: Retrospective case control

Results: Normotensive controls (C) Vs. Hypotensive VI and HC groups: VI (n=74) Vs. C (n=124): BW, GA and receipt of ANS did not differ. In the multivariate analysis, the occurrence of gestation associated diabetes mellitus (GDM) and risks for PDA, IVH, SIP, VM and oxygen dependence at 36 postmenstrual week of life (BPD) were higher in VI. HC (n=69) Vs. C: HC recipients had lower BW, GA and receipt of ANS. After controlling for these variables, the risks for IVH, BPD, air leaks and PDA were higher in the HC group. The occurrences of SIP, NEC, VM and GDM did not differ.

Hypotensive infants: HC vs. VI groups: Infants in HC group had lower BW (675 ± 121 g) and gestational age (GA, 25.1 ± 1.3 weeks) and higher mean airway pressure and oxygen requirements, all independent of antenatal steroid (ANS) exposure. The receipt of ANS (p=0.01) and occurrences of GDM, (p=0.01) were lower in HC group. ANS (OR 0.5, 95% CI 0.2–0.9, p 0.01) and GDM (OR 0.3, 95% CI 0.09–0.9, p 0.04) reduced the risk for RH, as did maternal hypertension after controlling for BW (OR 0.2, (%% CI 0.07-0.9 p =.02). HC group had higher risk for IVH (OR2.1, 95%CI1.02–4.2 p= 0.04) which declined in the multivariate analysis. A trend towards lower risk of ventriculomegaly (VM) was noted in HC group (OR 0.3, 95% CI 0.1–1.1), which became significant after controlling for BW (OR 0.2 95% CI 0.07–0.9, p 0.04).

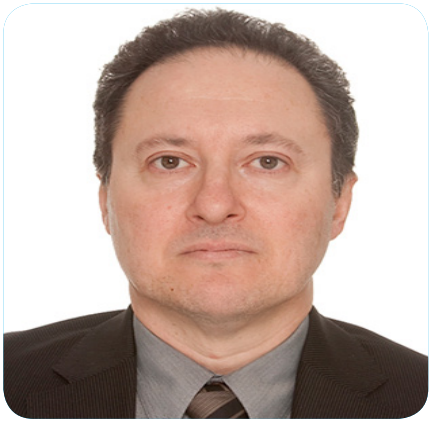
Conclusions: Hypotension treated with inotropes is associated with increased risks for SIP and VM in ELBW infants. ELBW neonates treated with hydrocortisone for refractory hypotension do not exhibit such risks. GDM decreases the occurrence of refractory hypotension in ELBW infants. ELBW infants who are ≤25 weeks of GA and unexposed to ANS and GDM are more likely to suffer from refractory hypotension and may benefit from an initial therapy with, or earlier institution of hydrocortisone. Effect of maternal hypertension in decreasing the occurrence of refractory hypotension is birth weight dependent. This, as well as the trend towards a higher risk for VM with VI therapy needs validation in future well powered studies.

Audience Take Away:

- The trend towards an increased risk of VM and SIP in VI treated infants, unlike those treated with HC, may suggest HC as the safer and primary drug for EPH in ELBW infants.
- Infants susceptible to refractory hypotension may be identified early in course and treated with HC in order to avoid prolonged exposure to VI and hypotension.

Future Directions:

- To investigate the effects of VI therapy on SIP in a well powered study
- To test if a strategy of identification of infants at risk for RH and early institution of HC would decrease the occurrences of VM and SIP
- To establish the effects of maternal hypertension on RH
- To investigate the pathophysiology of the mitigating effects of GDM on RH. Such information could help in understanding the pathophysiology, reducing the occurrence and severity, and identifying more specific treatment for early postnatal hypotension in the ELBW neonates.



Biography

Josep Panisello graduated from Navarra University Medical School, Spain, in 1989. He completed his residency in Pediatrics at New York-Presbyterian Hospital/Weill Cornell Medical Center, New York, in 1994 and graduated from my Fellowship in Pediatric Critical Care and Applied Physiology at Yale School of Medicine, New Have nCT, in 1997. After graduation, he moved to the United Kingdom where he has been a consultant in Pediatric Intensive Care Medicine at the Manchester Children's Hospitals NHS Trust and in the Oxford-Radcliffe NHS Trust where he also served as Clinical Director of Pediatric Intensive Care for almost decade. Currently, He is the medical director of the Pediatric Intensive Care Unit at Yale New Haven Children's Hospital and Chief of Pediatric Critical Care Medicine at Yale Medical School in New Haven, Connecticut, USA.

Quality improvement in pediatric intensive care: Successes and pitfalls

Josep Panisello, MD

Yale New Haven Children's Hospital, USA

Although preventing harm has been a central mission in medicine, the publication of the pivotal document To Err is Human created a revolution catapulting Quality and Safety to the forefront of the health care delivery systems. In Pediatric Critical Care, performance assessment shifted from mortality outcome measures to active programs to reduce morbidity based on the Plan-Do-Study-Act (PDSA) cycle. The landmark study An Intervention to Decrease Catheter-Related Blood stream Infections in the ICU, launched a new era of multicenter collaboration to reduce harm, one of the most remarkable developments during the last decade. A number of agencies and societies are currently hosting these multicenter collaborations and serve as hub to exchange information that is critical to sustain these safety programs. We describe our current quality program, emphasizing the importance of some of the critical steps in a quality project, like determine the baseline or the development of intervention bundles as well as defining the most common pitfalls of this process.

Audience Take Away:

- Importance of developing a culture on safety as a background for quality improvement
- Importance of defining the baseline before implementing an intervention as part of the PDSA cycle
- Importance of institutional accountability and multicenter collaboration for a sustainable quality improvement program

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DAY 2

SPEAKERS

Euro-Global Conference on

PEDIATRICS AND NEONATOLOGY

SEPTEMBER 13-15, 2018
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Impact of an integrated social community-based medicine model: Focus on early intervention with socially and economically disadvantaged children and adolescents

Delphine Collin-Vezina
McGill University, Canada

In this presentation, Dr. Delphine Collin-Vézina, will present an integrated social medicine model that focuses on early intervention with socially and economically disadvantaged children and adolescents, the Social Pediatrics in Community (SPC) model. SCP is an interdisciplinary and intersectoral approach that combines, under one roof, the expertise of medicine, law and social work. This allows to screen for, reduce and eliminate stressors that compromise the development of vulnerable children. Using an ecosystemic framework and based on Social Return on Investment (SROI) models, we will discuss the impact of SPC clinics, as perceived by practitioners and patients who participated in a yearlong collaborative research project. These include: early diagnosis, improved access to specialized services, enhanced collaboration with other child-serving sectors (e.g. schools, child protection systems), and better health and mental health functioning of all family members. Findings will be used to estimate the social and economic value of SPC and to draw conclusions on practice and policy guidelines that could be adopted by other pediatric clinics and organizations worldwide.

Audience Take Away:

- To learn of an integrated social medicine model that focuses on early intervention with socially and economically disadvantaged children and adolescent
- To list the components of the integrated social medicine model
- To understand how social return of investment (SROI) models can be used to assess the impact of health services with socially and economically disadvantaged children and adolescent
- To reflect on how SROI models can influence practice and policy changes

Biography

Delphine Collin-Vézina is the Director of the Centre for Research on Children and Families at McGill University. She is a licensed clinical psychologist and an Associate Professor in the McGill School of Social Work and in the Department of Pediatrics. She holds the Nicolas Steinmetz and Gilles Julien Chair in Social Pediatrics in Community. Her program of research focuses on service provision to children and youths living in vulnerable contexts across three themes: (1) child protection responses to sexual abuse of children and youth; (2) trauma-informed care of children and youth in out-of-home placement; (3) social return of investment models regarding community-based, whole-person services. Provincial and federal granting bodies have extensively funded her program of research. She sits on the boards of influential institutions (e.g. Child Protection Center of the Gregorian Pontifical University; Child Welfare League of Canada). She publishes in well-regarded journals and is regularly invited as a keynote speaker in important scientific and community venues.

Cancer in adolescents and young adults

Karen S. Fernandez
University of California San Francisco (UCSF), USA

Cancer remains the most common cause of disease-related death in adolescents and young adults (AYAs) in high-income countries, their overall survival now exceed 80%. Recognition of the unique distribution of diseases in the AYA population with cancer and further understanding of the distinctive biology of cancers in AYAs will lead to continuing gains in clinical outcomes.

Many of the challenges faced by AYAs with a diagnosis of malignant disease are shared by others with chronic medical conditions and even their healthy peers, such as a sense of invulnerability that may contribute to delays in diagnosis. A particular need for psychological support has been identified for AYAs with cancer, even after active therapy has been completed and especially in the context of palliative care. Notable needs also include fertility preservation and navigation through the multiple transitions in the cancer journey. Additionally, the cost of cure in the form of short-term, treatment-related morbidity and mortality and late effects is also discussed.

This talk aims to increase awareness in the challenges in the care of AYA will cancer but also will high light the important role of the pediatrician and primary care provider in the referral at the time of diagnosis and the importance of participation in clinical trials. In addition, it also aims to lay down the participation of the general practitioner in programs devoted to AYAs with cancer, with complementary educational initiatives in the years after treatment addressing the challenges of survivorship, including secondary prevention of long-term morbidity and mortality.

Audience Take Away:

- Provide a broad introduction to the epidemiology of cancer in the AYA population
- Describe the challenges faced by this population in during the diagnosis, treatment and survivor years
- Emphasized in the role of the pediatrician and general practitioner in the referral of adolescents with cancer

Biography

Karen S. Fernandez is a Pediatric oncologist with expertise in solid tumors and Hodgkin lymphoma. She currently serves as the director of the solid tumor program at Valley Children's Hospital in Madera, California and has an academic affiliation with the University of California San Francisco. She has work with the Children's' Oncology Group (COG) and also presented at the International Society Children, Adolescent and Young Adult Hodgkin Lymphoma (ISCAYAHL). In addition to practicing pediatric oncology Dr. Fernandez is involved in hematology/oncology global health initiatives, and has participated in educational and research projects in Guatemala, Vietnam and Uganda.

Vertebro-medullary injuries in the pediatric age

Tiziana Greggi*, Paola Zarantonello, Antonio Scarale, Gianluca Colella, Konstantinos Martikos, Giuseppe Tedesco, Francesco Vommaro
Rizzoli Orthopaedic Institute, Italy

Vertebro-medullary injuries before the age of 15 years are a relatively rare occurrence, if compared to adults, in terms of trauma mechanics, treatment and follow-up.

Overall, the incidence of severe traumas in infants and children is about 1:100 with respect to adults, and only 5% of traumatic paraplegia is encountered in infants and children. On the other hand, spinal cord injuries without fracture, which are extremely rare in adults, represent about 1/3 of the traumatic spinal cord injuries in infants and children. Complete spinal cord injuries are more often encountered in children, whereas they are observed only in 50% of the adults. The pathogenetic mechanism is often vascular with haemorrhage, generally resulting in flaccid paralysis. In children, spinal shock is shorter if compared to the 4 to 6 weeks observed in adults; very often, few hours are enough to see the sacral reflex restored. There are no significant differences between children and adults, except for the greater caution necessary when examining a child who won't cooperate in the best way.

Audience Take Away:

- Recognize and adequately classify Vertebro-medullary traumas in pediatric age
- Learn to promptly set up the most appropriate treatment.
- It can be a practical lesson for pediatric and orthopedic doctors

Biography

Tiziana Greggi is the Head of the Department of Spinal Deformity Surgery at the Rizzoli Orthopaedic Institute. Her main field of interest is the study and treatment of spinal deformities. She has published more than 200 scientific papers: with more than 1200 citations. She was the coordinator in charge of the research project titled Clinical and diagnostic course for patients affected by Prader Willi Syndrome, promoted by the Italian Istituto Superiore di Sanita (Italian Health Institute)-National Centre for Rare Diseases, in cooperation with the Office for Rare Diseases (NIH-National Institutes of Health, USA) within the main project line 2006 Rare Diseases. She was the President of the XXXVI National Meeting of Spine Surgery and Scoliosis (GIS) in 2013. Every year she is the director of different scientific courses about Deformity Surgery at Rizzoli Institute. She has taken part in more than 60 international conferences as faculty.

2'-Fucosyllactose: A common human milk oligosaccharide with uncommon effects

Marlene W Borschel*, Enrique Vazquez, Karen Goehring, and Rachael Buck
Abbott Laboratories, USA

Human milk (HM) is a complex matrix containing numerous unique components compared to infant formula. One such group of components, human milk oligosaccharides (HMO), is abundant in HM and only exceeded in amount by lipid and lactose. Of the various HMOs, the most predominant HMO in HM is commonly 2'-fucosyllactose (2'FL). The increased availability of selected synthesized HMOs in recent years has allowed for the opportunity to study the preclinical and clinical effects of some of these compelling oligosaccharides. This presentation will review the roles of 2'FL as well as reviewing the emerging science as it relates to the young infant. Preclinical work supports 2'FL as a prebiotic, immune modulator, and a potential anti-nociceptive by regulating colonic contractions in mice. Additionally, more recent emerging preclinical research in rodents supports that 2'FL enhances cognition via the gut-brain axis. Learning and memory skills in both young and adult rodents that are dependent on the integrity of the vagus nerve appear to be impacted by 2'FL feeding. Recent clinical research has revealed that infants fed infant formula with 2'FL during the first 4 months of life exhibited innate immune responses closer to those of HM-fed infants than did infants fed formula without 2'FL. This included decreased levels of circulating innate inflammatory cytokines IL-1ra, IL-1α, IL-1β, IL-6, and TNF-α in HM- and 2'FL formula-fed infants. Additionally, unlike those from infants fed formula without 2'FL, ex vivo peripheral blood mononuclear cell cultures from HM- and 2'FL-fed infants had decreased concentrations of innate inflammatory cytokines IL-1ra, IL-1β, IL-6, TNF-α, and IFN-γ at 48 hours post respiratory syncytial virus infection. New preclinical and clinical work continues to reveal new functions of 2'FL.

Audience Take Away:

- This presentation will introduce the audience to human milk oligosaccharides and inform them to some potential roles/functions of these compelling components of human milk.
- The presentation will give the audience a better understanding of the potential importance of the addition of HMO, specifically 2'FL, to infant formula.
- This presentation will provide current areas of research and stimulate work in adjacent spaces for these components.

Biography

Dr. Marlene Borschel is an Associate Research Fellow at Abbott Nutrition, Abbott Laboratories. She joined Abbott Nutrition in 1987. Dr. Borschel has international recognition as an expert in feedings for infants and children with food allergy. She is responsible for the primary development of 6 globally marketed infant formulas. Dr Borschel has conducted over 70 Abbott clinical studies, is an author of 60 journal articles/book chapters/abstracts/patents, and is a member of the prestigious Volwiler Society, Abbott Laboratories.

Controlled Fio_2 therapy to neonates by oxygen hood in the absence of oxygen analyser

Sunil Kumar Jatana*, S. Dhingra, MNG Nair
Melaka Manipal Medical College, Malaysia

Background: A study was conducted to evaluate and to evolve a system of standardizing the oxygen concentration inside the oxygen hood and to develop guidelines for controlled FiO_2 administration by changing size of the hood, lid position on the hood and the oxygen flow rate, without an oxygen analyzer. The effect of low flow rates on carbon dioxide (CO_2) retention inside the head box was also studied.

Design settings & method: A dummy patient and thirty neonates, requiring oxygen to be delivered through head box, constituted the material for the study group. Oxygen content in the head box was measured using a standard oxygen analyzer while the size of head box; flow rate and lid position were changed independently and in combination. The head boxes were tested on a dummy patient. These results were analyzed, a general guideline was derived, and it was applied to thirty neonates requiring oxygen therapy using head box. Multiple readings were taken. Data thus collected was tabulated, statistically analyzed, and appropriate conclusions drawn.

Results: Volume of headbox had an inverse relation with the oxygen concentration inside the headbox. A smaller sized headbox achieved better & more predictable oxygen concentration at all flow rates. Maximum difference in oxygen concentration by varying the lid position was observed in the large headbox. Keeping the variables constant, oxygen concentration was lower in babies as compared to dummy, which is statistically significant. No significant CO_2 retention was found at flow rate of 4 L/pm in a small & 3 L/pm in a medium & large head box respectively.

Conclusion: It is possible to predict the oxygen concentration inside the head box depending upon various variables without the use of oxygen analyzer. Larger the size of the head box and higher the lid position, lesser the oxygen concentration achieved at a given oxygen flow rate. Oxygen concentration achieved in babies is lesser than the concentration achieved in a dummy. Flow rates of less than 4L/pm in small & 3 L/pm in medium & large sized head boxes are associated with CO_2 retention.

Audience Take Away:

- To make the audience aware that Oxygen is a drug and has to be used very judiciously in neonates lest it cause serious side effects.
- Whenever oxygen is being delivered to a neonate it should be in measured concentration and for a specific period.
- Commonly used methods of oxygen delivery in neonates.
- In absence of oxygen analyzer how to deliver oxygen through headbox in recommended concentration.
- Which size headbox/oxygen hood to be used for oxygen delivery?

Biography

Dr Sunil Jatana is an Indian Citizen who completed his Graduation: MBBS in 1977 & Post graduation (MD) in Paediatrics in 1987, both from Armed Forces Medical College, Pune India. He has 36 years of service in various teaching and other hospitals of Armed Forces, India till 31st January 2014 on superannuation. From 1st February 2014 to 15th November 2014 he worked as a Professor Paediatrics in D. Y. Patil Medical College, Pune, India. He is currently working as a Professor in Paediatrics at Melaka Manipal Medical College since 26th December 2014. He is a recognized Undergraduate & Postgraduate Teacher in India and examiner MBBS, DCH & MD of various universities in India. He is an executive editor of Medical Journal Armed Forces India in the past & Referee for 2 Medical Journals in India. He presented many papers and chaired scientific sessions in National conferences. He published 15 papers in National journals and co-author in one chapter in a book. He is a Life Member of Indian Academy of Paediatrics & sub chapter Hematology Oncology, Member Executive Board, Indian Academy of Paediatrics 2011, Member of Malaysian Medical Association.

Antiemetic use in pregnancy and the risk of major congenital malformations: A population-based cohort study

Anick Berard[*1,2], Odile Sheehy[1], Jessica Gorgui[1,2], Jin-Ping Zhao[1], Cristiano Moura[3], Sasha Bernatsky[3]
[1]CHU Sainte-Justine, Canada
[2]University of Montreal, Canada
[3]McGill University, Canada

Objectives: Antiemetics are commonly used to treat nausea and vomiting of pregnancy, but conflicting information exists regarding its safety to the fetus. We quantified the risk of major congenital malformations (MCM) associated with first-trimester exposure to antiemetics.

Methods: Using the Quebec Pregnancy Cohort (1998-2015), first-trimester doxylamine-pyridoxine, metoclopramide and ondansetron exposures were assessed for their association with MCM overall and organ-specific malformations. Generalized estimating equations models were used to estimate odds ratios (OR), adjusting for potential confounding variables (aOR).

Results: Over 14 years of follow-up, the prevalence of antiemetic use during pregnancy increased by 76%. Within our cohort, 45,623 pregnancies were exposed to doxylamine-pyridoxine, 958 to metoclopramide, and 31 to ondansetron during the first-trimester of pregnancy. The mean gestational age at the first prescription filled was 8.2 weeks for doxylamine-pyridoxine exposed group, 9.4 weeks for metoclopramide exposed group, and 10.2 weeks for ondansetron exposed group. The mean number of exposed days during the first-trimester was 27.4 days among doxylamine-pyridoxine exposed-group, 17.7 days for metoclopramide exposed-group, and 12.8 days for ondansetron exposed-group.

Doxylamine-pyridoxine and metoclopramide use were associated with an increased risk of overall MCM [(aOR 1.07, 95% CI: 1.03-1.11; 3945 exposed cases) and (aOR 1.27, 95% CI: 1.03-1.57; 105 exposed cases), respectively]. Doxylamine-pyridoxine exposure was associated with increased risk of nervous system (aOR 1.25, 95% CI: 1.06-1.47; 225 exposed cases) and musculoskeletal system defects (aOR 1.08, 95% CI: 1.02-1.14; 1735 exposed cases). Metoclopramide exposure was associated with increased risk of genital organ defects (aOR 2.26, 95% CI: 1.14-4.47; 10 exposed cases). No statistically significant association was found between first-trimester ondansetron exposure and the risk of overall MCM, however, we only had 31 exposed pregnancies in our cohort.

Conclusions: First-trimester doxylamine-pyridoxine and metoclopramide exposure were associated with significantly increased overall MCM risk. No statistically significant association was found between first-trimester ondansetron exposure and overall MCM risk.

Audience Take Away:

- Using the Quebec Pregnancy Cohort, we found that first trimester doxylamine-pyridoxine and metoclopramide exposure were statistically associated with an increased risk of overall MCMs. Although no association was found between 1st trimester exposure to ondansetron and the risk of overall MCMs, caution is warranted given the few exposed pregnancies and thus the lack of statistical power.
- Our data may be used to guide clinicians in making an informed decision in their choice of antiemetic to prescribe in the treatment of nausea and vomiting of pregnancy.

Biography

Anick Berard holds a Bachelor's degree in Statistics from Laval University and a Master's degree in Clinical Sciences from the University of Sherbrooke. She obtained her PhD in Epidemiology and Biostatistics from McGill University in 1999. From 1999-2000, Dr. Berard conducted postdoctoral research studies at Harvard School of Medicine in Boston. She was recruited in 2000 as Assistant Professor at the Albert Einstein College of Medicine in New York City. In 2002, Dr. Berard joined the Faculty of Pharmacy at the University of Montreal and the CHU Sainte-Justine Research Center. Anick Berard is a tenured professor at the Faculty of Pharmacy, University of Montreal, and holds the Louis-Boivin Family Pharmaceutical Chair on Medications, Pregnancy and Lactation. In addition, she holds career awards from the Canadian Institutes of Health Research (CIHR) and the Women's Health Research Foundation of Canada. With a passion for all topics concerning drug use in pregnancy, Dr. Berard aims to further scientific knowledge for the wellbeing of pregnant women and their unborn children.

Responding to child abuse concerns in emergency sitting

Fadiah Salman Alkhattabi
King Faisal Specialist Hospital & Research Center, Saudi Arabia

Child Maltreatment constitutes all forms of child abuse including physical abuse, emotional ill-treatment, sexual abuse, neglect, negligent treatment and exploitation of children, resulting in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power. In the presentation will try to appreciate the significance of child maltreatment and learn the risk factors that contribute to child maltreatment. Understand our duty as health care provider to report the cases and understand the medical assessment in suspected physical abuse. Recognize the red flags for physical abuse and early prevention. Understand the importance of supporting caregivers throughout the reporting process. Become familiar with crisis intervention and psych education strategies to support the non-offending caregiver.

Audience Take Away:

- Understand possible indicators of child abuse.
- Appreciate the implications of addressing child abuse concerns with caregivers.
- Understand the importance of supporting caregivers throughout the reporting process.
- Become familiar with crisis intervention and psych education strategies to support the non-offending caregiver.

Biography

Fadiah Al-Khattabi is a Consultant in General Pediatrics, Department of Pediatrics at King Faisal Specialist Hospital & Research Centre (KFSHRC), Riyadh, Saudi Arabia. She is also the Deputy Program Director of the Pediatric Residency Training Program since October 2016, and Assistant Professor of Pediatrics at AlFaisal Univeristy, Riyadh since March 2016.

She completed her Fellowship training in Clinical General Pediatrics, Academic Fellowship and Fellowship Clinical Child Abuse and Neglect in Canada from 2009 to 2015. She passed the Arab Board Certification in Pediatrics in 2009 and American Board of Pediatrics in 2014. She has done several research projects and case reports on child abuse and neglect in the Hospital for Sick Children at Toronto, Canada. She is leading the Child Advocacy Committee at KFSHRC since she came back in 2016 in Saudi Arabia and started her involvement in the National Family Safety National Committee which both committees deal with the welfare of abused patients and their families.

As part of her endeavors to promote the welfare of pediatrics patients, several Child Abuse Awareness Days have been held under Dr. Al Khattabi's leadership.

Risk factors and management of anthracyclines-related cardiotoxicity in childhood cancers

Antonio Ruggiero*
Catholic University, Italy

Anthracyclines are among the most effective antineoplastic drugs and have gained widespread use in the treatment of numerous solid tumors and hematological malignancies. They can cause cytotoxic damage to cardiac cells, especially in combination with radiotherapy. Furthermore, cardiotoxicity increases with the cumulative dose and may lead to congestive heart failure and cardiomyopathy. Other factors, including age, pre-existing cardiac disease, length of follow-up, gender, route of administration, concomitant exposure to some chemotherapeutic drugs, trisomy 21 and black race, play a role in increasing the risk of cardiac dysfunction. The protocol for the assessment of cardiac function in these patients should be based on a multi-modality approach.

The prevention of anthracycline-induced cardiotoxicity is mandatory as children are expected to survive for decades after being cured of their cancer.

Clinicians should investigate the presence of risk factors before starting therapy. Indeed, prompt recognition of modifiable risk factors can help reduce the cardiac damage and the development of acute heart failure.

Biography

Antonio Ruggiero received his medical degree from the Catholic University in Rome in 1992. He holds Board of Pediatrics in 1996 and Board of Pediatric Haematology and Oncology in 1998 at the Catholic University of Rome. Prof. Ruggiero is currently an associate professor in the Department of Pediatrics at the Catholic University of Rome where he is responsible for teaching Pediatrics and Pediatric Hematology and Oncology. His research interests focus on pediatric clinical trials, clinical pharmacology of antineoplastic drugs, pain therapy and pediatric drugs.

Bebi basketball Zurko- children development through movement and game

Nevenka Mravlincic*, Prime school kralja Tomislava, Croatia
Sara Katic, Centar for autism, Croatia

In today's world children all around us are engaged in spending their time in front of televisions, computers and tablets. No one can despute the large amount of opportunities that modern technology has brought to us, but children of today are no longer spending their time outside, walking, running, jumping, climbing even falling.

We need to keep in mind that specially ni early age movement creates a profound base for creativity, learning, thinking and other, higher mental functions. Body and mind are one, they interact and processes that take place in the central nervous system include the whole body.

Keeping those things in mind, the Bebi basketball Žurko was created as a concept of basketball game adjusted for kids in between 2 and 8 years old. Game is a natural, spontaneous activity in which can child express their own needs, feelings, thoughts and happiness. Therefore, the main goal of Bebi basketball Žurko was, and still is, to influence on the development of childs coordination, speed, precision, agility, strenght, balance. All exercises and props (such as height and size of the basket, size and weight of balls) are tailored to the child's age and abilities. Exercises are constructed in the way that child must go through different kind of motoric polygons and they always finish with throwing ball into the basket.

Beside of all the physical benefits that basketball can bring to one, it also has positive affect on psychological characteristics. Beeing a team sport, basketball brings to a child the opportunity to socialize, it creates conditions for establishing healthy interpersonal relationships,creates a sense of responsibility. Furthermore, it develops a sense of self-confidence, self-control and respect to one another including the coach.

Plan and program created for trainings in Bebi basketball Žurko allows to the children to move, develop and acquire working habits from the youngest age, which can later result as turning them into responsible people. Through the program of Bebi basketball Žurko, a child spends his time in organized but not strict structure so that he/she can feel and show happiness and enjoyment doing the whole basketball trainig.

Audience Take Away:

- In the plan and program created for Bebi basketball Žurko are implemented activities that can improve and enhance motorics, cognition and social skills. Therefore, scientist can observe every aspect of child's development and milestone.
- Future goal is to create a new program that would be based on inclusion-thesis. That means that children with disabilities would be included in already existing group, based in school inclusion principe. Also, we would also like to spread this program in other cities in our country.
- This can be a challenge for scientist to see and confirm need for this kind of work with children with disabilities.
- Since this program is carried out in cooperation by basketball coaches and players and educational rehabilitators it shows a great example of cooperation between different fields of science.
- Bebi basketball Žurko can be used as an example for other sports to include children with disabilities in trainig together with their piers, which is something that all can benefit from.

Biography

In 1990, Nevenka Mravlinčić graduated from the Central Pharmacy School at the Healthcare Center in Zagreb. As a Pharmaceutical Technician, she was working in Pharmacy until 2010. In 2000 she enrolled High Health Care in Zagreb and in 2004 got the Bachalaure's Degree in Occupational Therapy. At the same year, she enrolled Faculty of Kinesiology in Zagreb, the Department for Training Coaches- the Basketball Course. She finished her studying in 2007. From 2005 till 2010 she was studying at the Faculty of Education and Rehabilitation in Zagreb, and in the same Faculty she enrolled Post-Graduate Studies. Since the October 2010 she has been working as a prof.rehabilitatior in regular primary school King Tomislav in Zagreb. From 2011 till 2015 she was studying at the Faculty of Pharmacy in Travnik, Bosnia and Herzegovina. Currently, she is graduating from the Faculty of Education and Rehabilitation and as a Post-Graduate Studies at the Specialistic Studies- Basketball. For 31 years she was an active baketball player, and in that time she played in several club in Croatian first and second basketball league. She is a founder of the Basketball Club Labrada 1971-Žurko from Zagreb. In that BC operates a basketball school for children aged 2-8 years (Bebi basketball Žurko), basketball school for young cadets and cadets and senior men's team. She also works as a coach for all of those sections in Basketball Club Labrada 1971-Žurko.

Prevention of vitamin D deficiency in infants and children in the Russian federation: Modern approaches to correction

Irina Zakharova
Russian Medical Academy of Continuous Professional Education, Russia

Objective: To develop recommendations and schemes of medicamental prevention and correction of vitamin D deficiency in children in Russia.

Methods: During the Rodnichok study 1614 children under three years of age were examined from November 2013 till December 2016 in different regions of Russia. Vitamin D status was evaluated based on calcidiol level in serum.

Results: Vitamin D deficiency in autumn-spring period is observed in more than half of Russian children of the first age of life (52.8%). The most vulnerable to vitamin D deficit group is breastfed infants. Formula feeding without cholecalciferol medications supplementation does not satisfy children's need for vitamin D. Hypovitaminosis D should be prevented medicamentally in all children during the first year of life irrespectively of the type of feeding. Cholecalciferol medications supplementation raises level of vitamin D in children significantly and in most cases prevents deficit, but not necessarily leads to reaching 30 ng/ml. 25(OH)D serum level correlates strongly with cholecalciferol medications dosage, at the same time intake of vitamin D medications during the first year of life in dosage 1000-1500 IU/day necessarily raises level of vitamin D without risk of overdose.

Conclusion: The unidirectional nature and comparable efficacy in young children in all cities of the study (Arkhangelsk, Moscow, Kazan, Stavropol) were demonstrated, which allows to recommend the proposed scheme of hypovitaminosis D correction in Russia.

Keywords: vitamin D, hypovitaminosis D, correction

Biography

Prof. Irina Zakharova graduated from D.I. Ulyanov Medical University in Kuibyshev, USSR, in 1979. After that she worked as a pediatrician in different regions in the USSR and other countries. In 1989 she completed her residency in pediatrics in the Russian Medical Academy of Continuous Professional Education, Moscow. She defended there a candidate thesis in 1994 and a doctoral thesis in 2000 (Clinic and diagnostics aspects of tubulointerstitial kidney diseases in children). In 2001-2008 she worked as a professor of department of pediatrics, since 2008 – as a head of this department. Prof. Irina Zakharova currently is also the Chairman of the Association of Doctors on Assistance in Training of Pediatricians of Russia, the Chairman of the Association of Doctors on Vitamin D Research, editor-in-chief of the Concillium Medicum Pediatrics and Medical Council Pediatrics.

Thromboembolism in a 7 year old boy: A case report

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Background: Deep venous thrombosis (DVT) is an uncommon diagnosis in paediatrics, more so in sub -Saharan Africa. We highlight the importance of early recognition of DVT as a clinical diagnosis and managing potential complications such as pulmonary embolism in this case report.

Case Presentation: A previously well 7-year-old boy developed right lower limb swelling and a sudden onset cough, associated with hemoptysis and difficulty in breathing.

Investigations done revealed the patient had extensive DVT of the right lower limb. Patient was initiated on unfractionated heparin and tissue plasminogen activator in the pediatric ICU, after which clexane and warfarin was commenced a few days prior to discharge.

Conclusion: As paediatricians, a high index of suspicion and optimal knowledge on the clinical presentation, complication and management becomes of utmost importance towards a better outcome in a otherwise fatal diagnosis; especially in resource limited set-ups where co-morbidities tend to mask the very glaring signs and symptoms.

Audience Take Away:

- It will guide the audience on how to recognise DVT in their clinical practice, as this is a rare disease in the paediatric population.
- Audience will understand how to manage a patient with DVT and to manage the complications associated with it (pulmonary embolism).
- It will also give them an insight on the various challenges of managing the above condition in a developing country, especially in a resource limited setup primarily when it comes to investigating the possible underlying causes of DVT.

Biography

Fareena Ahamed did her undergraduate and master's degree in Paediatrics and Child Health in University of Nairobi Kenya. She works as a consultant general paediatrician for the past two years in a private hospital in Nairobi, Kenya. She hopes to specialise in paediatric cardiology and to join the faculty at the University of Nairobi in the near future. She is a member of the Kenya Paediatric Association and the Kenya Breastfeeding Society. She is an instructor on the European Paediatric Advanced Life support (EPALS) course, the Paediatric Epilepsy Training Course and the Paediatric Disaster Management Course.

Genetic analysis of 11 Sudanese families with congenital hypothyroidism

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Mutations in multiple genes cause congenital hypothyroidism (CH). The most common cause of CH worldwide is thyroid dysgenesis (85%) followed by dyshormonogenesis (10-15%). CH commonly causes mental retardation in Sudan because of lack of neonatal screening. It was reported that the predominant etiology of CH in the Sudan was dyshormonogenesis (62%), however the genetic cause is unreported.

The aim of this study was to investigate the genetic cause of CH in Sudanese families.

We obtained DNA of 51 individuals, including 27 affected children, from 11 unrelated Sudanese families with CH. Probands were identified by the presence of low IQ, goiter or short stature. The geographic Sudanese origin were 5 from the North, 1 from the East, 3 from the West and 1 from the South and 1 was unknown. Five families had consanguineous marriages. Whole exome sequencing (WES) was carried out on each affected child and unaffected mother. We analyzed the results with published data of single nucleotide polymorphism (SNP) array in Sudanese. Principal component analysis (PCA) was performed on the 260 Sudanese data and we compared mutation frequencies in the candidate genes for CH between the Sudanese and all populations from the genome aggregation database (gnomAD).

WES identified 4 novel mutations in the TG gene, 2 missense, 1 splicing and 1 nonsense variants, including c.7021G>A, c.4816+1G>T, c.6989T>A and c.7655C>G; 1 novel frameshift mutation in the DUOX2 gene, c.1395_1396delCC; 1 novel missense mutation in the SLC5A5 gene, c.1042T>G; 1 novel missense mutation in the TSHB gene, c.141T>G and 1 rare mutation in the TPO gene, c.2578G>A. Each affected child harboring the mutation was homozygous for the variant. Functional in silico prediction algorithms (SIFT or PolyPhen2) suggested that the 5 missense mutations were deleterious. Seven of the 11 probands had low IQ and 8 had goiter. Of the 4 probands with normal IQ 3 had the following homozygous mutations: TG (missense), TG (splicing) and TSHB (missense). PCA revealed a clear distinction between NE and SW Sudanese. The CH mutation carriers appear to fall in-between the two major population groups. However, given the observed allelic heterogeneity of CH a founder effect was not present; rather the increased frequency might point out better access to clinical services associated with the group with CH. Still, the studied Sudanese samples had significantly higher mutation frequency in the TG gene with 645 SNPs compared to the populations of mixed ethnic origin (Mutant allele frequency; 0.1512 vs 0.1406, $P<0.01$).

In conclusion, 7 novel mutations in the TG, DUOX2, SLC5A5 and TSHB genes and 1 rare mutation in the TPO gene were identified in 11 Sudanese families with CH. The group with CH represented different sub-population from NE or SW Sudanese. TG gene mutations occurred at higher frequencies in the Sudanese than other populations represented in widely used genetic databases.

Importance of genetic test: Such test can be done for patients in the developing country with the use of help of international labs.

Biography

Dr. Reham Shareef Ibrhim, MD is a Pediatric Endocrinologist. Her special interest and passion is in improving the health and wellbeing of pediatric patient. Her research interest includes diabetes, congenital hypothyroidism and genetics

Pouya heart automated digital phonocardiograph

Babak Omidvar
Aban Hospital, Iran

Timely diagnosis of congenital heart diseases, seen in about 1 percent of all newborn infants, have been increasingly receiving interests from the researchers in pediatric medicine, even though, precise auscultation and interpretation of pediatric heart sounds have always been a complicated task. Late diagnosis results in the progressive complications for the patients, huge costs for the underlying healthcare system, and impaired credibility and prestige for physicians. It is therefore, of critical importance to screen condition of such patients before the age of one year, when there is no need of sedating drug to conduct the test. Intelligent phonocardiography, as a precise technique for precise screening of congenital cardiac diseases, makes discrimination between pathological and innocent murmurs feasible, especially in neonatal care clinics. This technique is based on processing heart sound signals and exploring disease-related frequency changes of the sounds. This technique allows recording and replaying of the sounds for telemedicine purposes. It can be employed by a trained technician in a neonatal care clinic, where the positive results are referred to a pediatric cardiology specialist for echocardiography and complementary evaluations. Suspicious or problematic cases will appear as red prints of cardiac focus tested, and therefore, extra time and expenses of checking all children will be prevented, which is of a great importance in the developing countries e.g. Iran. Since 2013-07-20, in total, 230 children were exanimated by this device, where 172 patients were under the age of one year with equal proportion of male and female and 14 cases were referred to pediatric cardiology subspecialty for further complementary evaluations due to the abnormal Phonocardiogram. 5 cases were ruled out of the study due to the lack of cooperation and interrupted follow up. Hence, from among 167 infants under one year of age studied (85 females and 82 males), 9 cases had cardiac problems summarized as follows:

Small ASD in 3 cases (2 males and 1 female);

IVS Hypertrophy in 3 cases (2 mild TR in 1 male and 1 female, and 1 large PFO in a female);

Mild Pulmonary Regurgitation in 1 male;

Mild TR + PFO in 1 male; and

Very Small PDA in 1 female.

Male to female proportion in prevalence of CHD was 5 to 4.

All the children underwent intelligent phonocardiography, using POUYA-HEART device.

Accuracy of the intelligent phonocardiography was estimated to be 97.8% with a sensitivity of 100%. Among the 14 children patients with congenital heart disease, 4 subjects had no detectable audible murmur during conventional auscultation, which were screened as abnormal children by the intelligent phonocardiography. The total number of the 230 subjects were candidates to undergo echocardiographic examination due to the historical background or innocent murmurs, while 9 individuals needed to perform the examination. The intelligent phonocardiography showed no negative error, and only 5 positive errors out of the 230 cases were reported.

The POUYA-HEART provides an accurate and efficient tool for screening congenital heart disease which can drastically reduce healthcare costs and stress to the families.

Biography

Babak Omidvar has received his MD from Tabriz Medical Science University, Iran in 1990. He has graduated among the top one percent students and became a scientific member of Hamedan Medical Science University. Dr Omidvar has received his board certified in Pediatrician & Neonatologist from Shiraz University of Medical Science in 1998. He has founded NICU in Aban Hospital where he is head ins NICU & Pediatric wards with full activity in Aban Hospital and private clinic.

Notes

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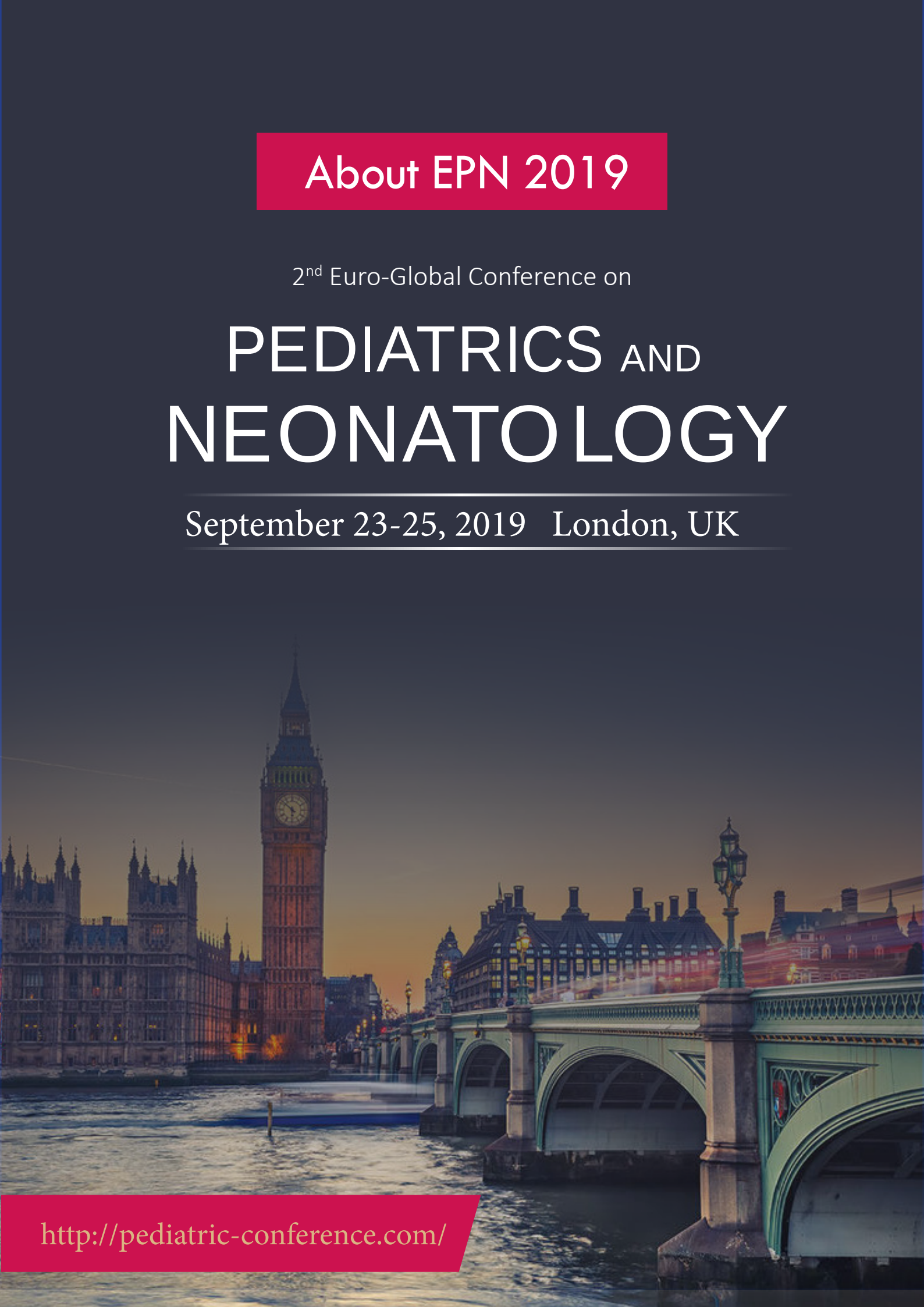

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