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# Scientific Tracks & Sessions

## June 12, 2019

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### *Clinical Pediatrics 2019*



2<sup>nd</sup> World Congress on  
**Pediatrics and Clinical Pediatrics**

June 12-13, 2019 | Edinburgh, Scotland

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# Pediatrics and Clinical Pediatrics

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## Aquatic physical therapy protocol with emphasis on balance and gross motor function in children with Cerebral palsy

Joyce Xavier Muzzi de Gouvêa, Brunna Santos Thomazin da Silva, Maria Fernanda Turatti de Goes, Caio Roberto Castro, Douglas Martins Braga, Lais Cardoso Oliveira and Luciana Moreira Magalhães Oliveira  
AACD (Associação de Assistência à Criança Deficiente), Brazil

Cerebral Palsy (CP) affects motor and sensory systems, posture and balance, which generate functional limitations. The objective of this study was to evaluate the effects of an aquatic physiotherapy protocol on balance and gross motor function of children with CP level III of Gross Motor Function Classification System. Individuals were randomly in a Control Group (CG) which performed aquatic conventional therapies, or in Intervention Group (IG) which performed a specific aquatic protocol. There were 16 individual sessions of aquatic physiotherapy, twice a week, for 35 minutes, and both groups did conventional physiotherapy out of water once a week. The groups were evaluated pre and post intervention with the following outcomes: Gait Visual Analogue Scale, Gross Motor function Measure (GMFM-88), Pediatric Balance Scale, Dynamic Gait Index (DGI), Timed Up and Go, 10-meter walk test (10MWT), Child Health Questionnaire (CHQPF-50). Significant improvement was found in total GMFM in the IG ( $p=0.028$ ) post intervention, while in E dimension of

GMFM both showed significant improvement, (IG  $p=0.026$ ) and (CG  $p=0.046$ ). In the 10MWT the IG decreased the course time, with significant value ( $p=0.028$ ). Significant improvements in balance were observed in the IG ( $p=0.041$ ) post intervention in DGI scale. In quality of life (CHQPF-50), in the domain Physical Function, (IG/CG) the intergroup analysis post intervention shown positive results ( $p=0.054$ ), in domain Impact on Parents Time ( $p=0.043$ ) both groups improved. Aquatic physiotherapy showed improvement in gross motor function, gait speed, balance and quality of life in children with CP.

### Speaker Biography

Joyce Xavier Muzzi de Gouvêa graduated in physiotherapy in 2005, in Brazil. She is Master in Neuroscience and Behavior, specialist in Physiotherapy applied to Neurology and Acupuncture. She is currently a physiotherapist at AACD - "Associação de Assistência à Criança Deficiente" (Association for Assistance to the Disabled Child), in the aquatic physiotherapy sector.

e: joycemuzzi@yahoo.com.br

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## Cardiometabolic risk factors in children with Celiac disease on a gluten-free diet

**Francesca Olivero**

San Matteo Hospital, Italy

Celiac disease (CD) is an immune-mediated systemic condition evoked by gluten and related prolamines in genetically predisposed subjects, characterized by a variable combination of clinical symptoms, CD-specific antibodies, HLA-DQ2 and HLA-DQ8 haplotypes, and enteropathy. The only therapy is a life-long gluten free diet (GFD). Strict GFD adherence results in full clinical, serological and histological remission, avoiding long-term complications in CD patients. However, gluten-free products have high levels of lipids, sugar and salt to improve food palatability and consistency, and subjects with CD show an excessive consumption of hypercaloric and hyperlipidic foods to compensate dietetic restriction. GFD may therefore have a negative impact on cardiometabolic risk factors such as obesity, serum lipid levels, insulin resistance, metabolic syndrome, and atherosclerosis. We analysed the current clinical evidence on the impact of GFD on cardiometabolic risk factors in children and adolescents with CD. The available literature shows conflicting data: the majority of studies indicate changes in markers associated with cardiovascular risk. However, these variations do not constantly point at a better or worse cardiovascular risk profile. Limitations of most studies comprise the relatively small sample size, the cross-sectional design that does not permit comparison between pre- and post-GFD

values of the evaluated parameters, and the absence of knowledge of familial history for CVD risk factors. Therefore, additional longitudinal, well-designed studies involving a large number of children with long-term follow-up are necessary to clarify whether prolonged exposure to GFD might result in an increased cardiometabolic risk. GFD remains the milestone of CD treatment. Nonetheless, an in-depth assessment of nutritional status along with cardiometabolic screening in CD children at diagnosis and during GFD have to be recommended because an early intervention may prevent cardiovascular morbidity. Dietary guidance over time, besides monitoring adherence to GFD, may therefore be warranted in youths with CD.

### Speaker Biography

Francesca Olivero has completed her MD *cum laude* at the age of 24 years from Sapienza University, Rome, Italy. Now, she is a first-year paediatric trainee at San Matteo University Hospital of Pavia, Italy. During medical school she participated to 5 International publications and she has contributed to the writing of chapters of 3 books. Her work has been presented as oral presentations at International Conferences. She has been awarded prizes such as "Accademia Lancisiana prize 2016 - 2017 for new medical graduates for a particularly relevant final thesis" and the award "excellent graduate 2016-2017" Giornata del Laureato - Sapienza University of Rome.

e: francesca\_ol@hotmail.it

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## Air pollution impact on children health knowledge into action

**H Paramesh**

Indian Institute of Science (IISc), India

**Background:** Air pollution is a major risk factor and is responsible for 8 million deaths globally. Airway allergies are the global health epidemic where women and children suffer more. 50% of Indian cities are critically polluted and 13 of the world's 20 worst cities are in India. It is imperative we need to clean our air pollution as a priority.

The SPM – 2.5-micron traverses to lower respiratory tract and cross the lung tissue in a minute and enter the blood stream and circulate all over the body producing various severe diseases by oxidative stress. They have an impact from womb to tomb 30% premature birth and small for date infants.

### Impact of particulate air pollution on Health

- **Respiratory system: inflammatory/ Allergic diseases of:**
  - Upper respiratory tract
  - Lower respiratory tract
  - Parenchyma and interstium
- **Cardiovascular:**
  - Increase coagulation of blood • Hypertension • Strokes • Heart attacks
- **Effect on other organs from oxidative stress:**
  - Insulin resistant Diabetes • Decrease cognitive function • Attention deficit • Over activity • Autism in children • Dementia • Cancer.
- **Behavior problem on polluted days:**
  - Increase crime rate • Impaired judgment • Worst test scores on polluted days • Reduced productivity at work.

### Knowledge into Action

Doctors are the strongest link to mitigate air pollution between - Scientists, researchers and technocrats and society, policy makers, service clubs and social clubs.

What have we achieved?

1. Bringing legislation in banning leaded petrol – 1999
2. Bringing face mask to traffic police people - 1999
3. Appointing Bhurelal Committee
  - to clean up megacities in India - 2004
  - Look for school environment
4. Banning tobacco smoke
  - at Century Club - 1995
  - in Karnataka - 2001
  - In India (Supreme Court) - 2003
5. Restricting the use of firecrackers - 2017-2018
6. Reducing the burden of school bags - 2018.

### Speaker Biography

H Paramesh is the Founder member & Past Chairman for Respiratory chapter of IAP, and the Founder President of IAP Environment chapter, Allergy and Immunology chapter, Indian Medical Association Bangalore east. He serves as a Visiting Professor at Divecha Center for Climate Change, Indian Institute of Science (IISc). He is the Founder member and advisor of Thalassemia society Bangalore. In addition to that he is the Adviser to WHO, UNICEF, COMHAD & Alliance for Global Health, GENEVA. He presented 622 – Invited Scientific papers/talks; Orator Awards – 40; and many chapters in 31 textbooks; 81 – Publications in National and International Journal. He obtained I.C.A.A.I. Prof. Shivapuri Memorial Orator Awardee in 2011. He served as the Past National President of Indian Academic of Allergy and Past National President of Pediatric Association of India in 2015. He received many Local, State, National & International Awardee for his work in Environment and Health.

e: drhparamesh@gmail.com

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## Effectiveness of kangaroo mother care in reducing morbidity and mortality among preterm neonates on RAM Cannula continuous positive airway pressure: A randomized controlled trial

Catherine P Ricero Luistro, Ma Esterlita V Uy, Socorro De Leon Mendoza, and Aurora Gloria I Libadia

Batangas Medical Center, Philippines

**Background:** Prematurity is a major cause of neonatal death. Continuous positive airway pressure (CPAP) is the recognized initial intervention among preterm neonates in respiratory distress. The Kangaroo Mother Care (KMC) method may improve neonatal outcomes.

**Objective:** To determine the effectiveness of KMC in reducing morbidity and mortality among preterm neonates on CPAP via RAM nasal cannula.

**Methodology:** A prospective, non-blinded, randomized controlled trial was conducted on eligible preterm neonates requiring RCPAP due to respiratory distress. They were randomly allocated to either KMC (n=35) or conventional care group (n=35). Outcome measures included duration of RCPAP, and oxygen support, morbidity, mortality and length of hospital stay.

**Results:** Thermoregulation and oxygen saturations were better during the KMC sessions. The durations of RCPAP and oxygen support were both significantly shorter in the KMC group. Morbidities (air leak syndrome, necrotizing

enterocolitis and late onset sepsis) were also significantly lower in the KMC group. Although the mortality rate and the hospital stay were reduced in the KMC group, these were not statistically significant.

**Conclusion:** KMC effectively decreases the duration of RCPAP and oxygen support, and incidence of morbidities. There were trends of reduced mortality and length of hospital stay in the neonates who received KMC.

**Keywords:** Kangaroo Mother Care, Preterm Neonates, RAM Cannula CPAP, Oxygen Support.

### Speaker Biography

Catherine P Ricero Luistro has completed her degree as Doctor of Medicine from Iloilo Doctors' College of Medicine, Philippines. She had her pediatric residency training in Batangas Medical Center and fellowship training in newborn medicine at Philippine General Hospital. She is presently the Chairperson of the Committee on Care for Small Babies at Batangas Medical Center, Philippines.

e: [cpriustro@gmail.com](mailto:cpriustro@gmail.com)

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## Treatment effect of probiotic *Bacillus Clausii* on Neonatal jaundice in late preterm and term newborn babies: An experimental study

C Jayakumar, Thomas Panikasseril Varghese, Anjana Gopi, Manu Raj, Remya Sudevan and Haripriya Jayakumar  
Amrita Institute of Medical Sciences, India

**Objective:** To evaluate the effect of prophylactic probiotic *Bacillus clausii* treatment on the need and duration of phototherapy in newborn babies. Design: Open labeled clinical trial. Setting: Level II obstetric ward of a teaching hospital in Southern India. Participants: A total of 1043 babies with a gestational age of more than 35 weeks were enrolled in the study. There were 510 babies in the probiotic *Bacillus clausii* intervention group and 533 babies in the control group. Intervention: Intervention group babies < 37 weeks received 2 ml of *Bacillus clausii* (2.5 ml for those >37 weeks) twice a day for 3 days. Main outcome measure: The outcome measures were (i) Need of phototherapy and (ii) Duration of phototherapy. Results: A total of 32 babies in control group and 17 in intervention group required phototherapy. This difference in need for phototherapy was statistically significant between the two groups ( $p = 0.04$ ). Treatment with probiotic reduced the risk of need for phototherapy by 44% (RR 0.56, 95% CI 0.32, 0.99). The median duration of phototherapy in the intervention group was 18 hrs (IQR 16.50, 24.00) and that of control group was 24 hrs (IQR 18.00, 48.00). This

difference in duration of phototherapy was statistically significant ( $p=0.027$ ). No adverse drug reactions were noticed in the intervention group. What is already known: The management of neonatal jaundice depends on phototherapy and exchange transfusion. What this study adds: Prophylactic probiotic therapy appears to reduce the need and duration of phototherapy in neonatal jaundice. Conclusion: Prophylactic treatment of probiotic *Bacillus clausii* for three consecutive days reduced both the need as well as the duration of phototherapy in new-born babies.

### Speaker Biography

C Jayakumar currently serves as Head and Professor at the Department of Paediatrics, School of Medicine, Kochi. He received his MBBS, DCH, and MD from Govt. Medical College, Thiruvananthapuram. He has served as the Head of Department at Govt. Medical College, Alleppey from 2015 - 2016 and has held teaching posts (Associate Prof. to Prof.) in Govt. Medical College of Kottayam, Alleppey, and Thiruvananthapuram from 1989 through 2016. He was also awarded the Fellow of Indian Academy of Paediatrics in 2011.

e: [cjayakumar@aims.amrita.edu](mailto:cjayakumar@aims.amrita.edu)

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## Burden of malnutrition in children under 5 years in Nigeria

**Crystal Nneka Ozoka**

University of London, United Kingdom

**M**alnutrition is a significant public health problem and it is an important cause of morbidity and mortality in children below 5 years of age. The proportion of this disease is much higher in sub-Saharan countries than in other geographical regions globally. The aim of this article was to identify the factors that contributed to malnutrition, critically analyse them and provide logical recommendations. Some of the factors influencing the nutritional status of children under the age of five were educational and economic status of the parents, especially the mother, health and nutritional status of the mothers during pregnancy and breastfeeding, immunisation status of the child and the political system of the country. Recommended interventions included; health education, female empowerment, nutrition and government participation.

### Speaker Biography

Crystal Nneka Ozoka, M.B.B.S, MPH, is a medical doctor, and works in medicine department in Essex England. She completed her master's degree in public health from City, University of London in the United Kingdom. She became a volunteer for save the children, while pursuing her master's degree and she continues to search for avenues to improve child and maternal health. Prior to that, she worked as a medical doctor in Abuja, Nigeria after graduating from Igbiniedion University medical school, in Nigeria. She would be starting her General Practice (GP) training here in the United Kingdom and she will also be undergoing her PHD in Public health, as she aspires to become a Professor of Public Health. Her publication on malnutrition, provides insight, learning and recommendations on how to tackle the burden of malnutrition in children.

e: [nneka.ozoka@city.ac.uk](mailto:nneka.ozoka@city.ac.uk)



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## Vascular anatomy of little's area in children with Epistaxis

**Joerg Bachmann and Benedikt J Folz**

Karl-Hansen Medical Center, Germany

**E**pistaxis in children originates in more than 90% of the cases from the anterior nasal cavity. In the majority of the paediatric population Epistaxis is due to trauma (Accidents, manipulation, secondary hemorrhages after surgery), bleeding disorders (v.-Willebrand's disease, side-effects of medication), dry climate (low humidity, heating period), rhinitis and vascular anomalies. In rare cases it is due to hereditary syndromes, e.g. Osler-Weber-Rendu disease. In contrast to Epistaxis in adults blood pressure changes play no essential role in paediatric nosebleeds. This presentation analyzes the vascular anatomy of the anterior nasal septum (Little's area) based on videoendoscopic findings in affected children. Videoendoscopies of 16 children could be analyzed for the study. Twelve of 16 children had a prominent vessel shining through the mucosa at the anterior or lower edge of the nasal septum and teleangiectic vessels appeared in 4/16 cases. The endoscopic examinations showed that the dominant vessels for the anterior septum was emerging from the floor of the nose, making a 90° turn cranially towards Little's area. In contrast to most descriptions in literature, anastomoses with vessels deriving from cranial

parts of the nose, i.e. from the anterior ethmoidal artery, could not be found. According to the findings of the present analysis, Little's area therefore is predominantly supplied by the septal branch of the superior labial artery and inferior septal branches of the sphenopalatine artery. Results in Epistaxis therapy might therefore be improved, if the respective terminal branches of these vessels can be obliterated successfully.

### Speaker Biography

Joerg Bachmann earned his medical degree in 1995 at Justus Liebig University in Giessen. In addition, after studying at the technical university in Darmstadt and the open university in Hagen, he obtained a diploma in electrical engineering. In 1996 he received his medical doctorate. After completing his training as a specialist in otorhinolaryngology, he has been working as a senior physician since 2002, and since 2015 as Assistant medical director in the ENT clinic Bad Lippspringe, Germany. Congress contributions and publications took place amongst others on the subjects tonsillectomy, Zenker's diverticulum, foreign body of the nasal cavity. He is a very experienced surgeon in the field of the rhinosurgery and reconstructive microsurgery of the middle ear.

e: j.bachmann@medizinisches-zentrum.de

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## Celiac disease: Diagnostic dilemma

**Bharat Parmar**

Zybus Medical College, India


Celiac disease, an autoimmune disorders, occurs in genetically susceptible individuals and is triggered by the ingestion of a well-identified autoantigen- gluten. It affects primarily the small intestine, where it progressively leads to flattening of small intestinal mucosa. Three cereals contain gluten and are toxic for Celiac patients – wheat, rye and barley. It occurs more commonly in relatives of celiac patients and some at risk groups. It causes gastrointestinal symptoms, predominantly chronic diarrhoea with wastings, but also many extra-intestinal manifestations can be present alone. Suspected patient should be screened with transglutaminase + total serum IgA and if positive, confirmed by biopsy before the gluten-free diet is started. A gluten free diet typically reverses all signs and

symptoms within a short time. Monitoring of the patient to verify ongoing dietetic compliance is fundamental in order to ensure that all possible complications, including malignancies, are avoided.

### Speaker Biography

Bharat Parmar has completed M.D (Paediatrics) From Gujarat University Ahmedabad Gujarat India. He is working as a Professor and Head of Paediatrics Department at ZYBUS Medical college Civil hospital. He has completed 25 teaching experience in B.J Medical College Ahmedabad, Gujarat India. He has published 15 research paper in national and international journal. Recently one publication cited in Science Direct and Pub Med. He has been serving as an editorial board member of reputed Journal.

e: [bjpdr@hotmail.com](mailto:bjpdr@hotmail.com)

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## Effect of bovine colostrum on the absolute neutrophil counts of Acute Lymphocytic Leukemia patients undergoing Chemotherapy: A double-blind randomized placebo-controlled study

**Edith Cyrill L Caysido, Rainelda Runez and Ferdinand Gangangan**

Baguio General Hospital and Medical Center, Philippines

**Background:** Changes in the blood cell counts, such as leukopenia and neutropenia, in patients with Acute Lymphoblastic Leukemia (ALL) are common events following chemotherapy. These commonly delay further administration of chemotherapeutic agents. Furthermore, the risk of infection rises correspondingly with the degree of neutropenia. Bovine colostrum is a rich source of immunoglobulins and other antimicrobial factors. These immunoglobulins are believed to improve the immune function and may be effective in the prevention of neutropenia following chemotherapy.

**Objective:** To determine the efficacy of bovine colostrum in preventing neutropenia among ALL patients undergoing chemotherapy.

**Methods:** This study included pediatric patients, aged 6 months to 18 years old diagnosed with ALL undergoing chemotherapy. Twenty-one subjects were randomly assigned to receive bovine colostrum or placebo that were taken twice a day for a week beginning from the first day of chemotherapy. Baseline complete blood count (CBC) and the absolute neutrophil count (ANC) were determined

before and after 7 days of giving the colostrum or placebo. A t-test was applied to determine significant differences before and after the supplementation on each group.

**Results:** Results showed that there was a significant increase in ANC of patients given bovine colostrum as compared to the placebo group with a p-value of 0.007. There were also significant increases in the white blood cells and platelet counts in those who were given bovine colostrum, with p-values of <0.001 and 0.001, respectively. No untoward effects were observed on both groups.

**Conclusion:** Bovine colostrum is effective in increasing the ANC of ALL patients undergoing chemotherapy and with no noted side effects.

### Speaker Biography

Edith Cyrill L Caysido completed her residency in pediatrics at Bguio General Hospital Medical Center Philippines last 2016. She is currently a medical officer in a rural area practicing as a pediatrician in Mountain Province Philippines.

e: edithcyrill@yahoo.com

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## Quality of Neonatal health care: Learning from health workers' experiences in critical care in Kilimanjaro Region, Northeast Tanzania

**Bernard Mbwele**

University of Dar es Salaam - Mbeya University College of Health and Allied Sciences, Tanzania

**Background:** Neonatal deaths are generally attributed to suboptimal standards of health care. Health care worker motivation and adherence to existing guidelines are rarely studied. The objective: To assess the performance of health workers for neonatal health care in the hospitals of Kilimanjaro region.

**Methods:** A descriptive study using a semi-structured interview for health care workers at a tertiary referral hospital and peripheral health facilities (regional referral, district hospitals and health centres) was used. Health Care Workers (HCW) were asked to recall a scenario of a critically ill neonate admitted in the wards and the treatment that was provided. The WHO Emergency Triage Assessment and Treatment (ETAT) guidelines were used as a standard reference for knowledge of critical care.

**Results:** Birth asphyxia was the most recalled health problem requiring critical care, reported by 27.5% of 120 HCW at both peripheral hospitals and by 46.4% of 28 health workers in tertiary referral centres. Half of the HCW commented on their own performance (47.5%, n=140). HCW presented with low to moderate levels of knowledge for critical care were at 92%. Supplementary training was associated with a higher level of knowledge of neonatal critical care (p value 0.05). HCW in peripheral hospital

had lower levels of knowledge (only 44.7% at peripheral hospitals had enough ratings compared to 82.1% at the referral centre). [Pearson  $\chi^2$  (2) = 12.10, p value = 0.002].

**Conclusion:** Guided Practical-Competence Diagnostic Specific neonatal health care training is highly needed in the peripheral facilities of rural Kilimanjaro region.

### Speaker Biography

Bernard Mbwele is a lecturer at the University of Dar es Salaam for Epidemiology. He is a Tanzanian Medical Doctor graduated Medical school in 2004 at University of Dar es salaam – Muhimbili University College of Health and Allied Sciences. He was trained by special attachment for clinical trials at Bagamoyo Research Training Center and National Institute for Medical Research for Malaria vaccine, RTSS at NIMR-Tanga. In 2007, He Worked for Tuberculosis diagnostic trials as in Tr DNA, ADAT and Enose, at Mbeya Medical Research Program, MMRC. He obtained his Master of Science in Clinical Research from London School of Hygiene and Tropical Medicine, LSHTM and Duke University at KCMC and he was trained by the Institute for Quality of Health Care at Radboud Medical University, Nijmegen, The Netherlands for Quality Improvement in Infectious diseases. Currently, Worked for Christian Social Services commission (CSSC) as a Continuous Quality Improvement Specialist and Clinical Team Lead for HIV/AIDS care and treatment program.

e: benmbwele@gmail.com

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