37th International Conference on

Advanced Pediatrics and Neonatology

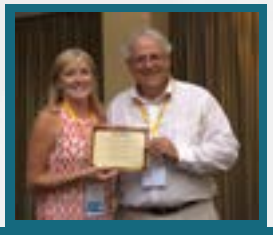
31st International Conference on

Pediatrics Health

March 30-31, 2022

WEBINAR






Scientific Tracks & Abstracts

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Phototherapy at home for the treatment of neonatal jaundice: An innovative, patient-centered pilot project during the COVID-19 pandemic

Laura Mezzalira
University of Ferrara, Italy

Introduction: Approximately 60% of term babies develop jaundice. This often requires inpatient hospital treatment with phototherapy. Home phototherapy is not well-established within Italy as routine care for the management of neonatal jaundice. The 2019 outbreak of the coronavirus disease has changed hospitals' policies around perinatal care, banning fathers and extra people from entering the neonatal ward to keep mothers and babies safe. The prolonging hospital stay for phototherapy would increase by the stress of isolation, making lockdown in hospital challenging for maternal mental health and breastfeeding initiation. The purpose of this study is to report a patient-centered pilot project of phototherapy at home during the COVID-19 pandemic, to promote mother and baby bonding and experience of neonatal jaundice by reducing hospital stay.

Methods: Newborn babies were considered for home phototherapy during the COVID-19 outbreak following the guideline ('Home Phototherapy': ST-MD-01, 03.15.2018, Policlinico Abano Terme). Inclusion criteria: feeding established, bilirubin levels at >75 <90 percentile (Bhutani nomogram), weight loss <10%, parents motivated, no social concerns, and lived within a pre-defined surrounding area (the Euganean Hills). The equipment used for phototherapy at home is Mira®, GINEVRI srl. Albano Laziale, Rome. The baby was visited 24 hours after hospital discharge.

Results: 21 babies were included between January and May 2021. Mean gestational age was 39.73 ± 1.13 weeks, average weight 3,355.90 ±419 g, average discharged home day 2.3±04, and average days received phototherapy at home 1.27±0.43. No adverse events were noted. Two additional babies could be included but they did not live within the pre-defined area.

Conclusions: The pilot project of 'Home Phototherapy' was well appreciated by parents and cost-effective to improve maternal and newborn health. It has given us the basis to roll this project out to different Level 1–3 neonatal units across the country after the Covid-19 outbreak.

Biography

Laura Mezzalira is a graduate student in medicine and surgery at University of Padua (Italy) in September 2020. In November 2021, I started attending the specialization course in Pediatrics and neonatology at the University of Ferrara (Italy). My first work experience was at the Polyclinic of Abano Terme (Padua, Italy) where I was able to witness the use of home phototherapy in the treatment of Hyperbilirubinemia in full-term babies.

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Presentation and outcomes of elizabethkingia meningosepticum an emerging pathogen in neonates

Jagan Mohan Varakala
Rainbow Children Hospital, India

Introduction: Elizabethkingia meningosepticum is a non-fermentative gram negative bacillus, ubiquitous in nature. E. meningosepticum causes meningitis, pneumonia, bacteremia, and sepsis in pneumonia, endocarditis, postoperative bacteremia, meningitis and endopthalmitis. Among the different infections, a high mortality and severe post infection sequelae including hydrocephalus, deafness, and developmental delay have been reported in neonates with meningitis due to E. meningosepticum. Infections caused by E. meningosepticum are difficult to treat because of its resistance to extended spectrum lactam agents and aminoglycosides (1–3). Peculiarity is that it behaves like gram positive on susceptibility pattern. The underlying host factors associated with E. meningosepticum meningitis in neonates is prematurity and low birth weight.

Materials and Methods: Case series of 14 neonates with E. meningosepticum across various centers in who presented to the Neonatal Intensive Care Unit of RAINBOW children's hospital Hyderabad, between January 2016 and June 2019, were included in the study.

Results: A total of 14 E, meningosepticum species identified using standard biochemical reactions and species identified by automated BD phoenix machine. Sample was collected using Bactec culture media for blood samples. 12 babies have survived with a survival rate of 85 % which is far better when compared to all existing survival rates across varies center. Among two Neonatal deaths (15%) one baby was preterm 26 weeks and other baby was term. There were 5 out of 14 Neonates were extreme preemies less than 27 weeks. Among them 2 were 25 weeks and 3 were 26 weeks. Among extreme preemies (<27weekers) 3 babies have survived. Isolates were from blood in 11 babies. 3 babies had both CSF and Blood positive. Isolated from ET culture in 3 babies. Among survivor's 7 babies had Neurological sequelae (50%) and 5 babies had hydrocephalus (35.7%), IVH in 1 neonate and Cerebral oedema in 1 baby. 6(42.7%) babies had Neonatal seizures. Other associations were Endopthalmitis in one case, pericardial effusion in one case, PPHN in one case. 4 neonates had hemodynamically significant PDA among them 2 babies were term.

Antimicrobial Susceptibilities: Among the E. meningosepticum isolates, 1 out of 16 was resistant to Vancomycin with high MIC (64). 100% were resistant to *piperacillin-tazobactam*, respectively, but only 23% were susceptible to fluoroquinolones. Although most of the species were susceptible to vancomycin, clinical response was not adequate. One neonate responded to Rifampin and cotrimoxazole, which were the promising drugs were we could see clinical response.

Discussions: The data on antibiotic susceptibility of E. meningosepticum is limited because it is rarely isolated from clinical specimen and there are no standard guidelines on antibiotic susceptibility testing and reporting and interpretation of the susceptibility data. Infection is associated with high mortality and Sequelae. This outcome is confirmed in the literature review which showed 57% mortality rate and 69% hydrocephaly rate in survivors. The antibiotic profile of Elizabethkingia meningosepticum is different from other Gram-negative rods. The bacterium is characterized by its inherent resistance to aminoglycosides, β-lactam agents, Chloramphenicol and Carbapenems, but also by its susceptibility to Rifampicin, Ciprofloxacin, Vancomycin and Trimethoprim–Sulfamethoxazole.

Conclusions: Elizabethkingia meningosepticum is an emerging infection and a nosocomial threat, with high risk for complications and mortality in premature neonates. The improvement of accuracy in bacterial identification and standardization of antibiotic susceptibility tests are essential for early diagnostic and etiologic treatment, in order to reduce mortality and neurological complications.. Active infection control in hospital environments, especially of water sources, is necessary to prevent Elizabethkingia meningosepticum epidemics.

Biography

Jagan Mohan Varakala is affiliated to Department of Neonatology and Microbiology Rainbow Children Hospital, Hyderabad, India. He is a recipient of many awards and grants for his valuable contributions and discoveries in major area of subject research. His international experience includes various programs, contributions and participation in different countries for diverse fields of study. His research interests reflect in his wide range of publications in various national and international journals.

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Risk factors associated with relapse in childhood steroid sensitive nephrotic syndrome

Mujeebullah Mahboob[1]*, Abdul Jamil Rassoli[2] and **Ambreen Gowani[3]**
[1,2]Medical Institute for Mothers and Children (FMIC), Afghanistan
[3]Aga Khan University, Pakistan

Introduction: The long-term prognosis of children with Steroid Sensitive Nephrotic Syndrome (SSND) is excellent. However, half of them will develop Frequent Relapsing (FR) disease which is a major challenge for physicians to manage. Many patients with FR nephrotic syndrome experiencing complications of immunosuppression and steroid toxicity which leads to increased morbidity and mortality. Hence, it is very important to find out children who are prone to develop FR nephrotic syndrome early in the course of the illness.

Objective: The aim of our study was to identify the risk factors associated with relapse in children with Steroid Sensitive Nephrotic Syndrome (SSNS).

Material and Methods: A cross-sectional analytical study was conducted at French Medical Institute for Mothers and Children (FMIC), Kabul, Afghanistan from January 2018 to January 2019. A total of 120 children aged 1-10 years with the diagnosis of SSNS and a minimum follow up of 6 months were included in the study. Data obtained retrospectively from reviewing medical record files. Data was analyzed by using SPSS version 25. Chi-squared test and Student's t-Test were used as statistical tests and $p< 0.05$ was taken as significant.

Results: Out of 120 children, 112 (93.3%) of the participant suffered from SSNS, 53 (44.2%) were FR and 67 (55.8%) were IFR. The mean age of presentation was (4.3±2.5) years. There were 65 (54.2%) males and 55 (45.8%) females with a male to female ratio of 1.2:1. The mean time taken to achieve remission during the first episode was (1.4±0.8) weeks and the mean time interval between remission and first relapse was (7.3±2.8) months. Risk factors significantly associated with FR were: young age (14 days) time taken to achieve remission during the first episode ($p=0.0001$), relapse within the first 6 months of remission ($p=0.0001$), interruption of treatment ($p=0.002$) and associated infections ($p=0.014$). In our study, asthma attack and duration of corticosteroid therapy did not influence the pattern of relapse.

Conclusions: Young age at the time of initial presentation, female gender, >14 days' time to achieve remission during the first episode, relapse within the first 6 months of remission, associated infections and interruption of treatment were the risk factors significantly associated with FR nephrotic syndrome.

Biography

Mujeebullah Mahboob is a pediatrics consultant and Emergency physician works with French Medical Institute for Mothers and Children (FMIC) at Kabul, Afghanistan. He completed Medical Faculty (MD) at Kabul Medical University from 2008-2015 then completed residency program in pediatric medicine at French Medical Institute for Mothers and Children (FMIC) under the supervision of Aga Khan University Hospital (AKUH) from 2015-2019. Currently he works as consultant pediatrician and Pediatrics Emergency Physician with FMIC since Apr 2019 till to date.

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Determinants of diarrheal diseases among under five children in Jimma Geneti District, Oromia Region, Ethiopia, 2020: A case-control study

Mecha Mecha Aboma
Ambo University, Ethiopia

Background: Globally, in 2017, there were nearly 1.7 billion cases of childhood diarrheal diseases, and it is the second most important cause of morbidity and mortality among under-five children in low-income countries including Ethiopia. Sanitary conditions, poor housing, unhygienic environment, inadequate safe water supply, cohabitation with domestic animals that may carry human pathogens, and lack of storage facilities for food combining with socio-economic and behavioral factors are the common determinate of diarrhea diseases and had a large impact on diarrhea incidence in most of the developing countries.

Methods: A community-based unmatched case-control study was conducted on 407 systematically sampled under-five children of Jimma Geneti District (135 with diarrhea and 272 without diarrhea) from May 01 to 30, 2020. Data was collected using an interview administered questionnaire and observational checklist adapted from the WHO/UNICEF core questionnaire and other related literature. Descriptive, bivariate, and multivariate binary logistic regression analysis were done by using SPSS version 20.0.

Results: Sociodemographic determinants such as being a child of 12-23 months of age (AOR 3.3, 95% CI 1.68-6.46) and parents/legal guardian's history of diarrheal diseases (AOR 7.38, 95% CI 3.12-17.44) were significantly associated with diarrheal diseases among under-five children. Environmental and Behavioral factors such as unavailability of handwashing facility nearby latrine (AOR 5.22, 95% CI 3.94-26.49), lack of handwashing practice at critical times (AOR 10.6, 95% CI 3.74-29.81), improper domestic solid waste disposal practice (AOR 2.68, 95% CI 1.39-5.18) and not vaccinated against rotavirus (AOR 2.45, 95% CI 1.25-4.81) were found important determinants of diarrheal diseases among under-five children.

Conclusions: Unavailability of hand-washing facility nearby latrine, mothers/caregivers history of last two weeks diarrheal diseases, improper latrine utilization, lack of hand-washing practice at critical times, improper solid waste disposal practices, and rotavirus vaccination status were the determinants of diarrheal diseases among under-five children identified in this study. Thus, promoting the provision of continuous and modified health information program for the households on the importance of sanitation, personal hygiene, and vaccination against rotavirus is fundamental to decrease the burden of diarrheal disease among under-five children.

Biography

Mecha Mecha Aboma is working as a Lecturer in (College of Medicine and Health Science Department of Public Health) at Ambo University, Ambo, Ethiopia.

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Survival status and predictors of time to death among neonates admitted to Neonatal Intensive Care Units in West Shewa Zone, Oromia Region, Ethiopia: A prospective cohort study

Benyam Seifu Woldeyes
Ambo University, Ethiopia

Background: Neonatal mortality is the death of neonates that happens within the first 28th day of life. The first 28 days of life is the most vulnerable time for a child's survival. Hence the aim is to estimate the survival time and to investigate predictors of neonatal mortality among neonates admitted NICU at public hospitals west shewa zone, Ethiopia.

Methods: Hospital -based prospective cohort study was conducted among 495 newborns admitted in public hospital neonatal intensive care unit from August 01 to December 2019. Data was entered into EPI info version 7.1 and exported to STATA version 14 statistical software for analysis. Kaplan and Meier's method was used to estimate neonatal survival functions and Cox-proportional hazard regression analysis was carried out in order to identify the independent predictors of time to death.

Results: A total of 495 neonates were followed for 28 days at NICU and 78 were died and making the Neonatal Mortality Rate (NMR) was 157 per 1000 live births. During the follow-up, 20 (25.6%) neonates died in the first day, 39 (50%) neonates died within three days and 70 (89.7%) neonates died within a week. The independent maternal predictors of time to death were; hypertension during pregnancy (AHR:1.78(95%CI:1.04-3.03), anaemia during pregnancy (AHR:2.00;95%CI:1.13-3.54), short birth interval (AHR:1.55;95%CI:1.03-2.34), induced labor (AHR: 3.25;95%CI: 1.87-5.65), no ANC follow up (AHR: 2.06 ;95% (CI: 1.26-3.38) and Neonatal predictors were: sever APGAR at five minutes (AHR:2.59;95%CI: 1.53- 4.38), not initiating breastfeeding within one hours (AHR:1.8;95%(CI: 1.13-2.99).

Conclusion and Recommendations: The risk of mortality among neonates admitted to the NICU was high. Both maternal and neonatal predictors were found to determine survival status and timing of death among neonates admitted to the NICU. In order to reduce the incidence of death, efforts should be initiated before conception by adequate birth spacing and during pregnancy by encouraging women to start ANC follow-up and get treatment for medical disorders during pregnancy. Providing all initial new-born care and early identification of new-borns that need critical care will improve survival of neonates at low-resourced NICU.

Recent Publications

1. Seifu, B., Belema, D., Mamo, K., Bulto, G.A., 2021. Determinants of Neonatal Hypothermia among Babies Born in Public Hospitals of West Shewa Zone of Oromia Regional State, Ethiopia: Unmatched Case–Control Study. Res. Reports Neonatol. Volume 11, 13–21. https://doi.org/10.2147/rrn.s293123.
2. Seifu, B., Yilma, D., 2021. Prevalence and Associated Factors of Anemia among Lactating Women in Prevalence and Associated Factors of Anemia among Lactating Women in Ethiopia from 2010 to 2020 : A Systematic Review and Meta-Analysis. BioMed Res J 5, 327–342.
3. Bulto, G.A., Fekene, D.B., Seifu, B., Debelo, B.T., 2021. Determinants of Neonatal Sepsis among Neonates Admitted to Public Hospitals in Central Ethiopia: Unmatched Case-control Study.Glob. Pediatr. Heal. 8. https://doi.org/10.1177/2333794X211026186.
4. Seifu, B., Yilma, D., Daba, W., 2020. Knowledge, Utilization and Associated Factors of Postpartum Family Planning Among Women Who Had Delivered a Baby in the Past Year in Oromia Regional State, Ethiopia. Open Access J. Contracept. Volume 11, 167–176. https://doi.org/10.2147/oajc.s268561.
5. Fekene, D., Daba, G., & Seifu, B. (2020). Determinants of Adverse Birth Outcome in West Shewa Zone, Oromia Regional State, Ethiopia Hospital Based Unmatched Case-control Study.

Biography

Benyam Seifu Woldeyes was born in Addis Ababa, Ethiopia, in 1991. He received the BSc degree in Midwifery from Addis Ababa University, Ethiopia, in 2013, MSc Master Degree in Maternity and Reproductive Health from Addis Ababa University, Ethiopia, in 2017 and MPH Master Degree in General Public Health from Jimma University, Ethiopia, in 2019. In 2014 he joined Ambo University Department of Midwifery and engaged in teaching, community service and research from lecturer to his current position of Assistant Professor. He was able to published 11 manuscripts on the area of maternal & child health and reproductive health and 5 manuscripts under review process.

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