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Section on Neonatal-Perinatal Medicine

ARTICLES OF INTEREST – January 2019

Early caffeine administration and neurodevelopmental outcomes in preterm infants Lodha A, Entz R, Synnes A, et al. Pediatrics.

The authors sought to determine the association between early (within 2 days of birth) versus late (received after 2 days of birth) caffeine exposure and neurodevelopmental outcomes in preterm infants <29 weeks' gestation. Of 2108 neonates who were eligible, 1545 were in the early-caffeine group and 563 were in the late-caffeine group. The primary outcome was significant neurodevelopmental impairment, defined as cerebral palsy, or a Bayley Scales of Infant and Toddler Development, Third Edition composite score of <70 on any component, hearing aid or cochlear implant, or bilateral visual impairment at 18 to 24 months' corrected age. The authors found that early caffeine therapy is associated with better neurodevelopmental outcomes compared with late caffeine therapy in preterm infants born at <29 weeks' gestation.

Initial oxygen use for preterm newborn resuscitation: a systematic review with meta-analysis Welsford M, Nishiyama C, Shortt C, et al. Pediatrics.

This systematic review and meta-analysis provides the scientific summary of initial Fio2 in preterm newborns (<35 weeks' gestation) who receive respiratory support at birth. Ten randomized controlled studies and 4 cohort studies included 5697 patients. There were no statistically significant benefits of or harms from starting with lower compared with higher Fio₂ in short-term mortality, long-term mortality, neurodevelopmental impairment, or other key preterm morbidities. The authors concluded that the ideal initial Fio₂ for preterm newborns is still unknown, although the majority of newborns \leq 32 weeks' gestation will require oxygen supplementation.

Prenatal exposure to selective serotonin reuptake inhibitors and serotonin norepinephrine reuptake inhibitors and risk for persistent pulmonary hypertension of the newborn: a systematic review, metaanalysis, and network meta-analysis Masarwa R, Bar-Oz B, Gorelik E, et al. Am J Obstet Gynecol.

To evaluate the association between exposure to selective serotonin reuptake inhibitors and serotonin norepinephrine reuptake inhibitors during pregnancy and the risk for persistent pulmonary hypertension of the newborn (PPHN), the authors of this systematic review and meta-analysis identified 11 retrospective cohort studies and case-control studies. Random effect and network meta-analysis were used to interpret data. Incidence of PPHN was 2.9/1000 live births with a number needed to harm of 1000. PPHN risk was significantly higher with use of SSRI in any trimester and with exposure after 20th week. Sertraline ranked as most likely to have the lowest risk of PPHN.

High-dose human milk feedings decrease oxidative stress in premature infant Chen Y, Fantuzzi G, Schoeny M, et al. JPEN J Parenter Enteral Nutr.

Given that high-volume human milk (HM) feedings decrease morbidity, the authors chose to determine the association between the oxidative stress marker, urinary F2 –isoprostane, in predominantly (HM) and preterm formula (PF)-fed premature infants over the first 21 days of life. They found that median F2 -isoprostane concentrations decreased significantly in the predominantly HM group but increased significantly over time in the predominantly PF group. These findings illustrate that HM feedings are associated with reduced oxidative stress compared to PF which may contribute to improved outcomes in breast milk fed infants.

Randomized trial of platelet-transfusion thresholds in neonates Curley A, Stanworth SJ, Willoughby K, et al. *N Engl J Med.*

In this multicenter RCT, authors used 2 different thresholds (50K vs. 25K) for "prophylactic" platelet transfusions in preterm infants <34 weeks (n=median BW 740g: median GA 2.6 weeks). Interestingly, they concluded that use of a higher threshold for transfusions resulted in a significantly higher rate of death or major bleeding within 28 days of birth. However, they excluded infants with a major bleeding within the previous 72 hours. Authors have not provided any data regarding outcomes after 28 days or pre-discharge.

Elevated midline head positioning of extremely low birth weight infants: effects on cardiopulmonary function and the incidence of periventricular-intraventricular hemorrhage. Kochan M, Leonardi B, Firestine A, et al. J Perinatol.

This study randomized 90 ELBW infants to a supine, flat position and 90 ELBW infants to a supine, 30 degrees bed elevated position for 96 hours after birth. Compared to the flat group, the elevated bed group developed significantly fewer grade 4 hemorrhages (p=0.036) and had significantly higher survival to discharge (p=0.037)

Two-year neurodevelopmental outcomes of extremely preterm infants treated with early hydrocortisone: treatment effect according to gestational age at birth. Baud O, Trousson C, Biran V, et al. *Arch Dis Child Fetal Neonatal Ed.*

This double-blind, multicenter, randomized trial evaluated neurodevelopmental outcomes of surviving infants included in the PREMILOC trial. Infants (24 0/7 to 27 6/7 weeks gestational age) were randomized to receive either 10 days of low-dose hydrocortisone or placebo starting after birth and were assessed for neurodevelopmental impairment at 22 months corrected age. The authors found that for surviving infants in the 24-25 week subgroup (N=96), there was a significant improvement in global moderate to severe neurodevelopmental impairment ((hydrocortisone=2% versus placebo=18%) (p=0.02), risk difference 16 (95% CI -28% to -5%).

Brain imaging in preterm infants <32 weeks gestation: a clinical review and algorithm for the use of cranial ultrasound and qualitative brain MRI Ibrahim J, Mir I, Chalak L. *Pediatr Res.*

Medline Embase database review was performed from 2000 to 2018 to account for the technical evolution of cranial ultrasound machines and introduction of MRI imaging in the NICU. Special attention was made with regard to detection of white matter injury, cerebellar hemorrhage, long term neurodevelopmental outcomes and impact on parental anxiety. Brain MRI was found to be more sensitive as well as had a high predictive value for CP and motor impairment. A hospital specific

guideline algorithm for performing term equivalent MRI based on risk evaluation for < 32 week gestation was recommended.

Developmental outcomes of preterm infants with bronchopulmonary dysplasia-associated pulmonary hypertension at 18–24 months of corrected age Choi EK, Shin SH, Kim EK, et al. *BMC Pediatr.*

In a retrospective analysis of 394 infants (aged < 28 weeks of gestation) between 2005 and 2014, pulmonary hypertension was found to be a worsening factor of non-optimal growth and poor neurodevelopmental outcome in preterm infants with BPD at 18-24 months of corrected age using Bayley scales of infant and toddler development. Studies suggest close screening and developmental follow up to help optimize outcome of infants with BPD and pulmonary hypertension.

OTHER NOTEWORTHY PUBLICATIONS – January, 2018

Pediatrics

Home health care availability and discharge delays in children with medical complexity https://www.ncbi.nlm.nih.gov/pubmed/30509929 Estimated non-reimbursed costs for care coordination for children with medical complexity https://www.ncbi.nlm.nih.gov/pubmed/30584061 Neonatal head circumference in newborns with neonatal abstinence syndrome https://www.ncbi.nlm.nih.gov/pubmed/30530638 Positive predictive value of administrative data for neonatal abstinence syndrome https://www.ncbi.nlm.nih.gov/pubmed/30514781 Developmental outcomes in duarte galactosemia https://www.ncbi.nlm.nih.gov/pubmed/30593450 Neonatal intubation practice and outcomes: an international registry study https://www.ncbi.nlm.nih.gov/pubmed/30538147 Early caffeine administration and neurodevelopmental outcomes in preterm infants https://www.ncbi.nlm.nih.gov/pubmed/30518670 Mupirocin for staphylococcus aureus decolonization of infants in neonatal intensive care units https://www.ncbi.nlm.nih.gov/pubmed/30587533 Clinical practice guideline for the management of infantile hemangiomas https://www.ncbi.nlm.nih.gov/pubmed/30584062 Room air for initiating term newborn resuscitation: a systematic review with meta-analysis https://www.ncbi.nlm.nih.gov/pubmed/30578325 Initial oxygen use for preterm newborn resuscitation: a systematic review with meta-analysis https://www.ncbi.nlm.nih.gov/pubmed/30578326 Efficacy and safety of Emla cream for pain control due to venipuncture in infants: a meta-analysis https://www.ncbi.nlm.nih.gov/pubmed/30587535 Developmental dysplasia of the hip https://www.ncbi.nlm.nih.gov/pubmed/30587534 In-hospital neonatal falls: an unintended consequence of efforts to improve breastfeeding

https://www.ncbi.nlm.nih.gov/pubmed/30593451

Journal of Pediatrics

Antenatal detection of treatable critical congenital heart disease is associated with lower morbidity and mortality

https://www.ncbi.nlm.nih.gov/pubmed/30292491

Body mass index is a better indicator of body composition than weight-for-length at age 1 month <u>https://www.ncbi.nlm.nih.gov/pubmed/30268397</u>

Intermittent hypoxemia in infants born late preterm: a prospective cohort observational study. https://www.ncbi.nlm.nih.gov/pubmed/30287066

Weaning of moderately preterm infants from the incubator to the crib: a randomized clinical trial https://www.ncbi.nlm.nih.gov/pubmed/30337189

Effects of prone sleeping on cerebral oxygenation in preterm infants https://www.ncbi.nlm.nih.gov/pubmed/30297295

A longitudinal healthcare use profile of children with a history of neonatal abstinence syndrome https://www.ncbi.nlm.nih.gov/pubmed/30270164

Racial and ethnic disparities in the use of mother's milk feeding for very low birth weight infants in Massachusetts

https://www.ncbi.nlm.nih.gov/pubmed/30274926

Bronchopulmonary dysplasia in very preterm infants with symptomatic congenital cytomegalovirus infection: a propensity score-matched analysis

https://www.ncbi.nlm.nih.gov/pubmed/30270170

Airway microbiome and development of bronchopulmonary dysplasia in preterm infants: a systematic review

https://www.ncbi.nlm.nih.gov/pubmed/30297287

Behavioral deficits at 18-22 months of age are associated with early cerebellar injury and cognitive and language performance in children born extremely preterm

https://www.ncbi.nlm.nih.gov/pubmed/30292492

Ambient noise production by high-frequency neonatal ventilators

https://www.ncbi.nlm.nih.gov/pubmed/30268396

Detecting 22q11.2 deletion syndrome in newborns with low T cell receptor excision circles from severe combined immunodeficiency screening

https://www.ncbi.nlm.nih.gov/pubmed/30268402

Prognostic factors and management of patients with choanal atresia

https://www.ncbi.nlm.nih.gov/pubmed/30291020

Pediatric Research

Brain imaging in preterm infants <32 weeks gestation: a clinical review and algorithm for the use of cranial ultrasound and qualitative brain MRI

https://www.ncbi.nlm.nih.gov/pubmed/30315272

Robust increases in erythropoietin production by the hypoxic fetus is a response to protect the brain and other vital organs

https://www.ncbi.nlm.nih.gov/pubmed/29895839

Impaired antimicrobial response and mucosal protection induced by ibuprofen in the immature human intestine

https://www.ncbi.nlm.nih.gov/pubmed/30341414

Early human brain development: insights into macroscale connectome wiring

https://www.ncbi.nlm.nih.gov/pubmed/30188500

Prenatal exposure to perfluoroalkyl substances and adipocytokines: the HOME Study

https://www.ncbi.nlm.nih.gov/pubmed/30250302

Prospective research in infants with mild encephalopathy identified in the first six hours of life: neurodevelopmental outcomes at 18–22 months

https://www.ncbi.nlm.nih.gov/pubmed/30250303

Neonatal regulatory behavior problems are predicted by maternal early pregnancy overweight and obesity: findings from the prospective PREDO Study

https://www.ncbi.nlm.nih.gov/pubmed/30305694

Neonatologist Performed Echocardiography (NPE) Special Edition

Education, training, and accreditation of neonatologist performed echocardiography in Europeframework for practice

https://www.ncbi.nlm.nih.gov/pubmed/30072809

Introduction to neonatologist-performed echocardiography https://www.ncbi.nlm.nih.gov/pubmed/30072808

The role of neonatologist performed echocardiography in the assessment and management of neonatal shock

https://www.ncbi.nlm.nih.gov/pubmed/30072807

Tissue doppler velocity imaging and event timings in neonates: a guide to image acquisition, measurement, interpretation, and reference values

https://www.ncbi.nlm.nih.gov/pubmed/30072806

Application of neonatologist performed echocardiography in the assessment and management of persistent pulmonary hypertension of the newborn

https://www.ncbi.nlm.nih.gov/pubmed/30072805

Deformation imaging and rotational mechanics in neonates: a guide to image acquisition,

measurement, interpretation, and reference values

https://www.ncbi.nlm.nih.gov/pubmed/30072804

Application of NPE in the assessment of a patent ductus arteriosus

https://www.ncbi.nlm.nih.gov/pubmed/30072803

Application of neonatologist performed echocardiography in the assessment and management of neonatal heart failure unrelated to congenital heart disease

https://www.ncbi.nlm.nih.gov/pubmed/30072802

Role of neonatologist-performed echocardiography in the assessment and management of patent ductus arteriosus physiology in the newborn

https://www.ncbi.nlm.nih.gov/pubmed/29551482

Archives of Disease in Childhood - Fetal & Neonatal Edition

Network meta-analysis explained

https://www.ncbi.nlm.nih.gov/pubmed/30425115

Using a composite morbidity score and cultural survey to explore characteristics of high proficiency neonatal intensive care units

https://www.ncbi.nlm.nih.gov/pubmed/29298857

Omphalocele: from diagnosis to growth and development at 2 years of age

https://www.ncbi.nlm.nih.gov/pubmed/29563149

Non-invasive prenatal testing of pregnancies at risk for phenylketonuria https://www.ncbi.nlm.nih.gov/pubmed/29353259

Two-year neurodevelopmental outcomes of extremely preterm infants treated with early hydrocortisone: treatment effect according to gestational age at birth

https://www.ncbi.nlm.nih.gov/pubmed/29321180

Wide variation in severe neonatal morbidity among very preterm infants in European regions <u>https://www.ncbi.nlm.nih.gov/pubmed/29353260</u>

Volume targeting levels and work of breathing in infants with evolving or established bronchopulmonary dysplasia

https://www.ncbi.nlm.nih.gov/pubmed/29305407

Preterm human milk macronutrient concentration is independent of gestational age at birth https://www.ncbi.nlm.nih.gov/pubmed/29353262

Impact of delivered tidal volume on the occurrence of intraventricular haemorrhage in preterm infants during positive pressure ventilation in the delivery room

https://www.ncbi.nlm.nih.gov/pubmed/29353261

Morbidity and mortality with early pulmonary haemorrhage in preterm neonates <u>https://www.ncbi.nlm.nih.gov/pubmed/29374627</u>

Treatment thresholds for intervention in post-hemorrhagic ventricular dilation: a randomized controlled trial

https://www.ncbi.nlm.nih.gov/pubmed/29440132

Development of a gastroschisis core outcome set

https://www.ncbi.nlm.nih.gov/pubmed/29540463

Delivery of positive end-expiratory pressure to preterm lambs using common resuscitation devices https://www.ncbi.nlm.nih.gov/pubmed/29500315

Predictors of extubation readiness in preterm infants: a systematic review and meta-analysis https://www.ncbi.nlm.nih.gov/pubmed/29519808

Heart rate changes during positive pressure ventilation after asphyxia-induced bradycardia in a porcine model of neonatal resuscitation

https://www.ncbi.nlm.nih.gov/pubmed/29778994

Supporting breathing of preterm infants at birth: a narrative review

https://www.ncbi.nlm.nih.gov/pubmed/30049727

Volume-targeted ventilation: one size does not fit all. Evidence-based recommendations for successful use

https://www.ncbi.nlm.nih.gov/pubmed/30068668

Möbius sequence with central hypoventilation in a neonate after failed elective medical termination of pregnancy

https://www.ncbi.nlm.nih.gov/pubmed/30049728

Saddle embolism in an extremely premature infant

https://www.ncbi.nlm.nih.gov/pubmed/29997165

Journal of Perinatology

Neonatal hypoglycemia: is there a neurodevelopmental impact in early childhood? https://www.ncbi.nlm.nih.gov/pubmed/30305715

Can laryngeal mask airway be used for surfactant administration in neonates? https://www.ncbi.nlm.nih.gov/pubmed/30305714

Discordant sex between fetal screening and postnatal phenotype requires evaluation https://www.ncbi.nlm.nih.gov/pubmed/30459335

Impact of elective caesarean section on neonatal retrieval in Western Australia during a 12-year period https://www.ncbi.nlm.nih.gov/pubmed/30341400

Outcomes following a comprehensive versus a selective approach for infants born at 22 weeks of gestation

https://www.ncbi.nlm.nih.gov/pubmed/30353079

Early hypoxemia burden is strongly associated with severe intracranial hemorrhage in preterm infants <u>https://www.ncbi.nlm.nih.gov/pubmed/30267001</u>

Elevated midline head positioning of extremely low birth weight infants: effects on cardiopulmonary function and the incidence of periventricular-intraventricular hemorrhage

https://www.ncbi.nlm.nih.gov/pubmed/30348960

The impact of chlorhexidine gluconate bathing on skin bacterial burden of neonates admitted to the Neonatal Intensive Care Unit

https://www.ncbi.nlm.nih.gov/pubmed/30237474

Analysis of peak inflating pressure and inflating pressure limit during neonatal volume guaranteed ventilation

https://www.ncbi.nlm.nih.gov/pubmed/30232377

Urinary tract infection is common in VLBW infants

https://www.ncbi.nlm.nih.gov/pubmed/30209351

Factors influencing decision making in neonatology: inhaled nitric oxide in preterm infants <u>https://www.ncbi.nlm.nih.gov/pubmed/30353082</u>

Does ultrasound guidance for peripherally inserted central catheter (PICC) insertion reduce the incidence of tip malposition? – A randomized trial

https://www.ncbi.nlm.nih.gov/pubmed/30348962

A pilot randomized blinded placebo-controlled trial of paracetamol for later treatment of a patent ductus arteriosus

https://www.ncbi.nlm.nih.gov/pubmed/30323322

Low rate of necrotizing enterocolitis in extremely low birth weight infants using a hospital-based preterm milk bank

https://www.ncbi.nlm.nih.gov/pubmed/30291318

Radiation exposure by digital radiographic imaging in very low birth weight infants https://www.ncbi.nlm.nih.gov/pubmed/30459389

NICU human milk dose and health care use after NICU discharge in very low birth weight infants <u>https://www.ncbi.nlm.nih.gov/pubmed/30341399</u>

Congenital solitary kidney size at birth could predict reduced eGFR levels later in life https://www.ncbi.nlm.nih.gov/pubmed/30341401

Neonatal Intensive Care Unit discharge preparedness among families with limited english proficiency <u>https://www.ncbi.nlm.nih.gov/pubmed/30341402</u>

Successful implementation of an intracranial hemorrhage (ICH) bundle in reducing severe ICH: a quality improvement project

https://www.ncbi.nlm.nih.gov/pubmed/30348961

Neonatology

Automated quantification of fragmented red blood cells: neonatal reference intervals and clinical disorders of neonatal intensive care unit patients with high values

https://www.ncbi.nlm.nih.gov/pubmed/30184540

Effect of delayed cord clamping on cerebral oxygenation in very preterm infants

https://www.ncbi.nlm.nih.gov/pubmed/30199867

Bilirubin production is increased in newborn mice exposed to isoflurane https://www.ncbi.nlm.nih.gov/pubmed/30205413

Comparison of bubble CPAP devices using RAM cannula for extubation failure in very low birth weight infants: randomized and cohort studies

https://www.ncbi.nlm.nih.gov/pubmed/30278459

Effect of delayed cord clamping of term babies on neurodevelopment at 12 months: a randomized controlled trial

https://www.ncbi.nlm.nih.gov/pubmed/30278462

Evaluation of an intubation readiness score to assess neonatal sedation before intubation https://www.ncbi.nlm.nih.gov/pubmed/30278443

Can fetal umbilical venous blood be a reliable source for admission complete blood count and culture in NICU patients?

https://www.ncbi.nlm.nih.gov/pubmed/30300890

Prognostic accuracy of heart rate variability analysis in neonatal encephalopathy: a systematic review https://www.ncbi.nlm.nih.gov/pubmed/30300885

Whole blood gene expression reveals specific transcriptome changes in neonatal encephalopathy <u>https://www.karger.com/Article/Pdf/492420</u>

Lung ultrasound for the differential diagnosis of respiratory distress in neonates

https://www.ncbi.nlm.nih.gov/pubmed/30304736

The value of autopsy in neonates in the 21st century

https://www.karger.com/Article/Pdf/493003

American Journal of Perinatology

Effect of cord blood magnesium level at birth on non-neurologic neonatal outcomes <u>https://www.ncbi.nlm.nih.gov/pubmed/29433145</u>

Risk factors for neonatal hypoxic-ischemic encephalopathy in the absence of sentinel events <u>https://www.ncbi.nlm.nih.gov/pubmed/29579759</u>

Neonatal outcomes based on duration of exposure to antenatal corticosteroids in indicated preterm deliveries

https://www.ncbi.nlm.nih.gov/pubmed/29702709

Mode of delivery in previable births

https://www.ncbi.nlm.nih.gov/pubmed/29883985

Hypertensive disorders of pregnancy and preterm birth rates among black women https://www.ncbi.nlm.nih.gov/pubmed/29980155

Outcomes after neonatal seizures in infants less than 29 weeks' gestation: a population-based cohort study

https://www.ncbi.nlm.nih.gov/pubmed/30016820

Hypertensive disorders during pregnancy and risk of bronchopulmonary dysplasia in very preterm infants

https://www.ncbi.nlm.nih.gov/pubmed/29996153

Practice variation in antenatal steroid administration for anticipated late preterm birth: a physician survey

https://www.ncbi.nlm.nih.gov/pubmed/30016819

Normal point of care glucose values after birth in the well-baby nursery https://www.ncbi.nlm.nih.gov/pubmed/30060290

Journal of Neonatal-Perinatal Medicine

The relationship of cervical microbiota diversity with race and disparities in preterm birth <u>https://www.ncbi.nlm.nih.gov/pubmed/30198877</u>

Maternal Health, Neonatology and Perinatology

Successful treatment of severe arterial hypotension and anuria in a preterm infant with renal tubular dysgenesis- a case report

https://www.ncbi.nlm.nih.gov/pubmed/30598831

Predictors of early initiation of breastfeeding among Zimbabwean women: secondary analysis of ZDHS 2015

https://www.ncbi.nlm.nih.gov/pubmed/30675366

Neoreviews

Probiotics and human milk oligosaccharides in premature infants http://neoreviews.aappublications.org/content/20/1/e1 Gastrointestinal, pancreatic, and hepatic manifestations of cystic fibrosis in the newborn http://neoreviews.aappublications.org/content/20/1/e12 Macronutrient digestion and absorption in the preterm infant http://neoreviews.aappublications.org/content/20/1/e25 Case 1: oral burns as a presentation of accidental organophosphorus poisoning in a neonate http://neoreviews.aappublications.org/content/20/1/e37 Case 2: asymmetrical frontal bossing and refractory seizures in a newborn http://neoreviews.aappublications.org/content/20/1/e41 Case 3: severe anemia in a term newborn http://neoreviews.aappublications.org/content/20/1/e45 Strip of the month: recurrent late decelerations in a patient with HELLP syndrome http://neoreviews.aappublications.org/content/20/1/e48 Neonate with a large facial swelling http://neoreviews.aappublications.org/content/20/1/e56

JAMA Pediatrics

Association of nurse workload with missed nursing care in the neonatal intensive care unit <u>https://www.ncbi.nlm.nih.gov/pubmed/30419138</u>

Sequential neuroimaging of the fetus and newborn with in utero Zika virus exposure <u>https://www.ncbi.nlm.nih.gov/pubmed/30476967</u>

Safety and immunogenicity of early Bacillus Calmette-Guérin vaccination in infants who are preterm and/or have low birth weights: a systematic review and meta-analysis. https://www.ncbi.nlm.nih.gov/pubmed/30476973

BMC Pediatrics

Developmental outcomes of preterm infants with bronchopulmonary dysplasia-associated pulmonary hypertension at 18–24 months of corrected age (PDF)

https://bmcpediatr.biomedcentral.com/track/pdf/10.1186/s12887-019-1400-3

The association between antibiotics in the first year of life and child growth trajectory (PDF) <u>https://bmcpediatr.biomedcentral.com/track/pdf/10.1186/s12887-018-1363-9</u>

The influence of gestational age in the psychometric testing of the Bernese pain scale for neonates (PDF) <u>https://bmcpediatr.biomedcentral.com/track/pdf/10.1186/s12887-018-1380-8</u>

Risk factors associated with mortality in neonatal intrahepatic cholestasis caused by citrin deficiency (NICCD) and clinical implications (PDF)

https://bmcpediatr.biomedcentral.com/track/pdf/10.1186/s12887-018-1383-5

Inhaled nitric oxide for neonates with persistent pulmonary hypertension of the newborn in the CINRGI study: time to treatment response (PDF)

https://bmcpediatr.biomedcentral.com/track/pdf/10.1186/s12887-018-1368-4

Ultrasound of the infant hip: manual fixation is equivalent to Graf's technique regarding image quality a randomized trial (PDF)

https://bmcpediatr.biomedcentral.com/track/pdf/10.1186/s12887-019-1392-z

Combination therapy with erythropoietin, magnesium sulfate and hypothermia for hypoxic-ischemic encephalopathy: an open-label pilot study to assess the safety and feasibility (PDF) https://bmcpediatr.biomedcentral.com/track/pdf/10.1186/s12887-018-1389-z

Treating extravasation injuries in infants and young children: a scoping review and survey of UK NHS practice (PDF)

https://bmcpediatr.biomedcentral.com/track/pdf/10.1186/s12887-018-1387-1

Pattern and extent of off-label and unlicensed drug use in neonatal intensive care units in Iran (PDF) <u>https://bmcpediatr.biomedcentral.com/track/pdf/10.1186/s12887-018-1370-x</u>

Ontogeny of alkaline phosphatase activity in infant intestines and breast milk (PDF) https://bmcpediatr.biomedcentral.com/track/pdf/10.1186/s12887-018-1379-1

Pediatric Critical Care Medicine

Noninvasive ventilation during pediatric and neonatal critical care transport: a systematic review https://www.ncbi.nlm.nih.gov/pubmed/30444793

Hemodynamic impact of oxygen desaturation during tracheal intubation among critically ill children with cyanotic and noncyanotic heart disease

https://www.ncbi.nlm.nih.gov/pubmed/30395028

Associations of perioperative renal oximetry via near-infrared spectroscopy, urinary biomarkers, and postoperative acute kidney injury in infants after congenital heart surgery: should creatinine continue to be the gold standard?

https://www.ncbi.nlm.nih.gov/pubmed/30395106

Accuracy of reported tidal volume during neonatal ventilation with airway leak: a lung model study https://www.ncbi.nlm.nih.gov/pubmed/30335665

New England Journal of Medicine

Treating disease at the RNA level with oligonucleotides. https://www.ncbi.nlm.nih.gov/pubmed/30601736 Randomized trial of platelet-transfusion thresholds in neonates https://www.ncbi.nlm.nih.gov/pubmed/30387697 Platelet transfusions in neonates — less is more https://www.ncbi.nlm.nih.gov/pubmed/30650325 Evolving board certification — glimpses of success https://www.ncbi.nlm.nih.gov/pubmed/30625058 Ophthalmia neonatorum https://www.ncbi.nlm.nih.gov/pubmed/30625059 Next-generation sequencing to diagnose suspected genetic disorders https://www.ncbi.nlm.nih.gov/pubmed/30628428 RVU medicine, technology, and physician loneliness. https://www.ncbi.nlm.nih.gov/pubmed/30673554 Separation of craniopagus twins by a multidisciplinary team. https://www.ncbi.nlm.nih.gov/pubmed/30673542 A randomized trial of endometrial scratching before in vitro fertilization https://www.ncbi.nlm.nih.gov/pubmed/30673547 Scratching the endometrium in in vitro fertilization — time to stop https://www.ncbi.nlm.nih.gov/pubmed/30673538

<u>Lancet</u>

Maternal mortality ratios in 2852 Chinese counties, 1996–2015, and achievement of millennium development goal 5 in China: a subnational analysis of the global burden of disease study 2016 https://www.ncbi.nlm.nih.gov/pubmed/30554785

JAMA

Optimized arylomycins may help address antibiotic resistance <u>https://www.ncbi.nlm.nih.gov/pubmed/30620353</u> Rethinking how antibiotics are prescribed incorporating the 4 moments of antibiotic decision making into clinical practice <u>https://www.ncbi.nlm.nih.gov/pubmed/30589917</u> Evaluation and management of penicillin allergy a review. <u>https://www.ncbi.nlm.nih.gov/pubmed/30644987</u>

<u>BMJ</u>

How to get started in quality improvement <u>https://www.ncbi.nlm.nih.gov/pubmed/30655245</u> Acute maternal confusion and neonatal seizure postpartum <u>https://www.ncbi.nlm.nih.gov/pubmed/30655247</u>

Pediatric Infectious Disease Journal

Human parechovirus 3 in infants; expanding our knowledge of adverse outcomes <u>https://www.ncbi.nlm.nih.gov/pubmed/30204658</u> Epidemiology of meningitis and encephalitis in infants and children in the United States, 2011–2014 <u>https://www.ncbi.nlm.nih.gov/pubmed/30531527</u>

Reduction of inappropriate antimicrobial prescriptions in a tertiary neonatal intensive care unit after antimicrobial stewardship care bundle implementation https://www.ncbi.nlm.nih.gov/pubmed/30531528

Delayed sero-reversion in HIV-exposed uninfected infants

https://www.ncbi.nlm.nih.gov/pubmed/30239474

HIV viremia during pregnancy and neurodevelopment of HIV-exposed uninfected children in the context of universal antiretroviral therapy and breastfeeding: a prospective study

https://www.ncbi.nlm.nih.gov/pubmed/30234792

Population pharmacokinetics of intravenous linezolid in premature infants https://www.ncbi.nlm.nih.gov/pubmed/29634620

The mission is remission: hope for controlling HIV replication without art in early-treated perinatally HIV-infected children

https://www.ncbi.nlm.nih.gov/pubmed/30346368

Pediatric Cardiology

Incidence, risk factors, and comorbidities of vocal cord paralysis after surgical closure of a patent ductus arteriosus: a meta-analysis

https://www.ncbi.nlm.nih.gov/pubmed/30167748

Blalock–Taussig shunt size: should it be based on body weight or target branch pulmonary artery size? <u>https://www.ncbi.nlm.nih.gov/pubmed/30121861</u>

Variation in anticoagulation practices in the congenital cardiac catheterization lab: results of a multinational PICES survey

https://www.ncbi.nlm.nih.gov/pubmed/30121864

Prenatal diagnosis of single ventricle physiology impacts on cardiac morbidity and mortality <u>https://www.ncbi.nlm.nih.gov/pubmed/30121866</u>

Immediate postnatal ventricular performance is associated with mortality in hypoplastic left heart syndrome

https://www.ncbi.nlm.nih.gov/pubmed/30178190

Pediatric Neurology

Behavioral and physiological signs for pain assessment in preterm and term neonates during a nociception-specific response: a systematic review

https://www.ncbi.nlm.nih.gov/pubmed/30449602

Incidence of epilepsy and associated risk factors in perinatal ischemic stroke survivors https://www.ncbi.nlm.nih.gov/pubmed/30409458

Obstetrics and Gynecology

Diagnostic validity of the proposed Eunice Kennedy Shriver national institute of child health and human development criteria for intrauterine inflammation or infection

https://www.ncbi.nlm.nih.gov/pubmed/30531562

Amnio-infusion compared with no intervention in women with second-trimester rupture of membranes: a randomized controlled trial

https://www.ncbi.nlm.nih.gov/pubmed/30531572

Prenatal marijuana use by self-report and umbilical cord sampling in a state with marijuana legalization <u>https://www.ncbi.nlm.nih.gov/pubmed/30531577</u>

Planned mode of delivery of preterm twins and neonatal and 2-year outcomes

https://www.ncbi.nlm.nih.gov/pubmed/30531574

Draft opioid-prescribing guidelines for uncomplicated normal spontaneous vaginal birth https://www.ncbi.nlm.nih.gov/pubmed/30531583

Evaluation of a quality improvement intervention that eliminated routine use of opioids after cesarean delivery

https://www.ncbi.nlm.nih.gov/pubmed/30531571

ACOG committee opinion no. 752: prenatal and perinatal human immunodeficiency virus testing <u>https://www.ncbi.nlm.nih.gov/pubmed/30575656</u>

ACOG committee opinion no. 761 summary: cesarean delivery on maternal request <u>https://www.ncbi.nlm.nih.gov/pubmed/30575671</u>

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Zika virus and the nonmicrocephalic fetus: why we should still worry https://www.ncbi.nlm.nih.gov/pubmed/30171843 Prenatal exposure to selective serotonin reuptake inhibitors and serotonin norepinephrine reuptake inhibitors and risk for persistent pulmonary hypertension of the newborn: a systematic review, metaanalysis, and network meta-analysis https://www.ncbi.nlm.nih.gov/pubmed/30170040 Early preterm preeclampsia outcomes by intended mode of delivery https://www.ncbi.nlm.nih.gov/pubmed/30273585 Gestational diabetes mellitus is associated with adverse outcomes in twin pregnancies https://www.ncbi.nlm.nih.gov/pubmed/30595142 Maternal biomarkers for fetal heart failure in fetuses with congenital heart defects or arrhythmias https://www.ncbi.nlm.nih.gov/pubmed/30273582

BASIC SCIENCE SELECTIONS

Genipin attenuates hyperoxia-induced lung injury and pulmonary hypertension via targeting glycogen synthase kinase-3 beta in neonatal rats Li J, Shi J, Li P, et al. Nutrition.

https://www.ncbi.nlm.nih.gov/pubmed/30196116

Synbiotics combined with glutamine stimulate brain development and the immune system in preterm pigs

Andersen AD, Nguyen DN, Langhorn L, et al. J Nutr. <u>https://www.ncbi.nlm.nih.gov/pubmed/30608604</u>

Rapid cerebral metabolic shift during neonatal sepsis is attenuated by enteral colostrum supplementation in preterm pigs Alinaghi M, Jiang PP, Brunse A, et al. Metabolites. <u>https://www.ncbi.nlm.nih.gov/pubmed/30641988</u>

Effect of vasopressin on a porcine model of persistent pulmonary hypertension of the newborn Amer R, Elsayed YN, Graham MR, et al. Pediatr Pulmonol. <u>https://www.ncbi.nlm.nih.gov/pubmed/30644649</u>

Anti-secretogranin III therapy of oxygen-induced retinopathy with optimal safety Tang F, LeBlanc ME, Wang W, et al. Angiogenesis. https://www.ncbi.nlm.nih.gov/pubmed/30644010

ADDITIONAL JOURNAL SELECTIONS

Longitudinal study of neonatal brain tissue volumes in preterm infants and their ability to predict neurodevelopmental outcome Gui L, Loukas S, Lazeyras F, et al. Neuroimage. <u>https://www.ncbi.nlm.nih.gov/pubmed/29908311</u>

Changes in neonatal regional brain volume associated with preterm birth and perinatal factors Alexander B, Kelly CE, Adamson, et al. Neuroimage. <u>https://www.ncbi.nlm.nih.gov/pubmed/30016676</u> Dose-dependent exacerbation of ventilation-induced lung injury by erythropoietin in preterm newborn lambs

Allison BJ, LaRosa DA, Barton SK, et al. J Appl Physiol. https://www.ncbi.nlm.nih.gov/pubmed/30382807

Systemic multipotent adult progenitor cells improve long-term neurodevelopmental outcomes after preterm hypoxic-ischemic encephalopathy Barkhuizen M, Van Mechelen R, Vermeer M, et al. Behav Brain Res. https://www.ncbi.nlm.nih.gov/pubmed/30639607

Late-onset sepsis in preterm infants can be detected preclinically by fecal volatile organic compound analysis: a prospective, multicenter cohort study Berkhout DJC, van Keulen BJ, Niemarkt HJ, et al. Clin Infect Dis. https://www.ncbi.nlm.nih.gov/pubmed/29931245

Enteral docosahexaenoic acid and retinopathy of prematurity: a randomized clinical trial Bernabe-García M, Villegas-Silva R, Villavicencio-Torres A, et al. JPEN J Parenter Enteral Nutr. https://www.ncbi.nlm.nih.gov/pubmed/30614004

High-dose human milk feedings decrease oxidative stress in premature infant Chen Y, Fantuzzi G, Schoeny M, et al. JPEN J Parenter Enteral Nutr. <u>https://www.ncbi.nlm.nih.gov/pubmed/29761879</u>

Enteral lactoferrin supplementation for very preterm infants: a randomized placebo-controlled trial Griffiths J, Jenkins P, Vargova M, et al. Lancet. <u>https://www.ncbi.nlm.nih.gov/pubmed/30635141</u>

Inhibition of macrophage migration inhibitory factor attenuates inflammation and fetal kidney injury in a rat model of acute pancreatitis in pregnancy Li M, Yu J, Zhao L, et al. Int Immunopharmacol. https://www.ncbi.nlm.nih.gov/pubmed/30622028

Influence of human milk and parenteral lipid emulsions on serum fatty acid profiles in extremely preterm infants Nilsson AK, Löfqvist C, Najm S, et al. JPEN J Parenter Enteral Nutr. <u>https://www.ncbi.nlm.nih.gov/pubmed/29679529</u>

Combination therapy with erythropoietin, magnesium sulfate and hypothermia for hypoxic-ischemic encephalopathy: an open-label pilot study to assess the safety and feasibility Nonomura M, Harada S, Asada Y, et al. BMC Pediatr. https://www.ncbi.nlm.nih.gov/pubmed/30621649

Early life predictors of brain development at term-equivalent age in infants born across the gestational age spectrum Thompson DK, Kelly CE, Chen J, et al. Neuroimage. <u>https://www.ncbi.nlm.nih.gov/pubmed/29660514</u>

Early breast milk exposure modifies brain connectivity in preterm infants Blesa M, Sullivan G, Anblagan D, et al. Neuroimage. https://www.ncbi.nlm.nih.gov/pubmed/30240903