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Section on Neonatal-Perinatal Medicine

ARTICLES OF INTEREST – May 2021

Association of continuous opioids and/or midazolam during early mechanical ventilation with survival and sensorimotor outcomes at age 2 years in premature infants: results from the French prospective national EPIPAGE 2 cohort

Marie-Amélie de Tristan, Laetitia Martin-Marchand, Jean-Michel Roué, et al. J Pediatr.
This observational study included infants from the French EPIPAGE 2 cohort and compared infants born before 32 weeks who were intubated before one hour of life and were treated with continuous opioid and/or midazolam infusion (n=450) versus infants who were intubated and did not receive opioid and/or midazolam infusion (n=472). The authors found that survival at age 2 years was significantly higher in the infusion treated group (92.5% vs 87.9%, risk difference, 4.7%; 95% CI, 0.3-9.1; P = .037) but found no significant difference between groups for survival without moderate or severe neuromotor or sensory impairment at 2 years (86.6% vs 81.3%; risk difference, 5.3%; 95% CI -0.3 to 11.0; P = .063).

Acute delivery room resuscitation of neonates exposed to selective serotonin reuptake inhibitors

Kendall A Ulbrich, Katelyn Zumpf, Jody D Ciolino, et al. J Pediatr.
This single-institution retrospective cohort study compared neonates who were exposed with neonates who were not exposed to a SSRI in utero. Of 4933 full-term singleton neonates, 3.3% were exposed to a SSRI in utero. Respiratory support was initiated significantly more often in SSRI exposed (12.9%) than unexposed (4.2%) neonates (covariate-adjusted OR, 4.04; 95% CI, 2.40-6.49). In utero SSRI exposure was associated with a higher rate of NICU admission (covariate-adjusted OR, 2.19; 95% CI, 1.30-3.50) and 1-minute Apgar score of ≤5 (covariate-adjusted OR, 3.51; 95% CI, 2.07-5.67).

Early extubation to noninvasive respiratory support of former preterm lambs improves long-term respiratory outcomes

Mar Janna Dahl, Chiara Veneroni, Anna Lavizzari, et al. Am J Physiol Lung Cell Mol Physiol.
Given that invasive mechanical ventilation (IMV) contributes to lung injury, the authors compared durations of IMV (3h vs 6d) during the first week of life in preterm lambs (85% gestation) to test the hypothesis that shorter duration of IMV improves long-term respiratory outcomes. Shorter IMV duration improved baseline respiratory function and decreased airway reactivity at 3 months. These physiologic changes coincided with less airway smooth muscle and better alveolarization at the 5 months corrected age compared to 6d IMV group.

Early nutrition during hospitalization in relation to bone health in preterm infants at term age and six months corrected age

Alexandra K Calor, Dana F J Yumani and Mirjam M van Weissenbruch. Nutrients.
The authors evaluated the association of macronutrient intake in the first postnatal weeks on bone mineral content (BMC) and bone mineral density (BMD) in preterm infants using dual-energy X-ray absorptiometry whole body scan at term corrected age (TCA) and 6 months corrected age. They found that fat intake in the first four postnatal weeks was positively associated with BMC and BMD at term. At 6 months, protein and fat intake in the first weeks of life were both predictors for BMD. They conclude that early nutritional intervention after birth and during early infancy is important for bone health in early life.

Changes in neurodevelopmental outcomes from age 2 to 10 years for children born extremely preterm

Genevieve L Taylor, Robert M Joseph, Karl C K Kuban, et al. Pediatrics.
This study was designed to determine the relationship between neurodevelopmental assessment at 2 years and assessment at 10 years. 2- and 10-year follow-up data were available for 802 patients enrolled in the ELGAN study. Using validated neurodevelopmental scales, 2-year outcomes were classified as profound, modaterate-severe, or non-mild neurodevelopmental impairment (NDI). Similar classifications were developed by an expert panel to categorize 10-year outcomes. 67% of children had stable NDI from 2 to 10 years. 27% of children had improvement in NDI, and 5% worsened. The authors suggest that neurodevelopmental outcomes at 2 years of age may be a poor outcome marker for neonatal clinical trials, and a hopeful message can be shared with parents of high-risk infants that a high proportion of infants with NDI have improvement over time.

Increasing volume-targeted ventilation use in the NICU

L Dupree Hatch, Christa Sala, Wendy Araya, et al. Pediatrics.
This report describes a QI initiative at a large academic NICU to reduce BPD by increasing the use of volume-targeted ventilation. The patient population included all patients on mechanical ventilation with exclusions of high-frequency ventilation, congenital lung anomalies, excessive ETT leak, and tracheostomy. 1269 infants were studied for >13000 ventilator days. Baseline use of any volume-targeted mode was 84% with improvement to 95% over 3 years. Despite an increase in volume-targeted ventilation, there were no changes to outcomes including BPD or death. The authors describe steps taken to improve volume-targeted use and to reduce the use of unsynchronized ventilation.

Comparison of standard versus high-dose ibuprofen for the treatment of hemodynamically significant patent ductus arteriosus in preterm infants

Katelyn Hillier, Karlee Jones, Melanie MacInnis, et al. J Perinatol.
This is a retrospective study in 60 preterm infants where the authors evaluated the effectiveness and safety of standard (10-5-5 mg/kg/day) vs. high-dose (postnatal age 1-3 days: 10-5-5 mg/kg/day; 3-5 days: 15-7.5-7.5 mg/kg/day; >5 days: 20-10-10 mg/kg/day) ibuprofen for the treatment of hemodynamically significant patent ductus arteriosus (hs-PDA). Infants had a mean birthweight of 898.2 (±262.6) g and mean GA of 26.3 (±0.6) weeks. High-dose ibuprofen was associated with a 21% absolute reduction in PDA ligation compared to standard-dose ibuprofen with no differences in oliguria, NEC, or BPD between groups. The authors conclude that use of high-dose ibuprofen may significantly reduce PDA ligations, with no difference in safety profile compared to standard dose.

Necrotising enterocolitis in newborns receiving diazoxide

Laura A Prado, Marina Castro, Dany E Weisz, et al. Arch Dis Child Fetal Neonatal Ed.
This multicenter retrospective cohort study investigated the occurrence of NEC in infants receiving diazoxide for neonatal hypoglycemia from three tertiary Canadian NICUs. Among 55 neonates exposed to diazoxide (between 2012-2017), 18 (33%) showed signs of feeding intolerance, and 7 (13%) developed NEC, most (6 of 7, 86%) within 7 days of starting diazoxide. Diazoxide-exposed infants had higher rates of NEC compared to non-exposed infants of similar gestational age (OR 5.07, 95% CI 2.27 to 11.27; p<0.001), and greatest among infants born at 33-36 weeks' gestation (OR 13.76, 95% CI 3.77 to 50.23; p<0.001). The authors suggest a possible association between diazoxide exposure and the development of NEC in neonates.

Resuscitation of non-vigorous neonates born through meconium-stained amniotic fluid: post policy change impact analysis

Vinod Idicula Oommen, Viraraghavan Vadakkencherry Ramaswamy, Edgardo Szyld, et al. Arch Dis Child Fetal Neonatal Ed.
This single-center pre-post cohort study compared routine endotracheal suctioning of non-vigorous neonates born through meconium-stained amniotic fluid (retrospective group, August 2015-July 2016) to immediate non-invasive respiratory support (prospective group, October 2016-September 2017) after policy change. Of 1138 neonates analyzed, no differences were found between the groups with the incidence of meconium aspiration syndrome, requirement of mechanical ventilation, inhaled nitric oxide or surfactant therapy. Prospective cohort had less NICU admissions compared to the retrospective group (19.1% vs 55.6%, p<0.05). The study concluded that the policy change was not associated with an increase in the local incidence of MAS and was associated with fewer NICU admissions.

Umbilical cord milking vs delayed cord clamping and associations with in-hospital outcomes among extremely premature infants

Neha Kumbhat, Barry Eggleston, Alexis S Davis, et al. J Pediatr.
In order to compare in-hospital outcomes after placental transfusion among infants <29 weeks of gestation, the authors retrospectively studied 1834 infants exposed to umbilical cord milking (23.6%) or delayed cord clamping (76.4%). Infants exposed to umbilical cord milking had higher odds of severe IVH. This analysis of extremely preterm infants suggests that delayed cord clamping is the preferred practice for placental transfusion, as umbilical cord milking exposure was associated with an increase in the adverse outcome of severe IVH.

OTHER NOTEWORTHY PUBLICATIONS – November, 2020

COVID – 19
Opsoclonus after COVID-19 in an infant
https://pubmed.ncbi.nlm.nih.gov/33662888
COVID-19 vaccine considerations during pregnancy and lactation
https://pubmed.ncbi.nlm.nih.gov/33932943
SARS-CoV-2 infection during pregnancy in a rural midwest all-delivery cohort and associated maternal and neonatal outcomes
https://pubmed.ncbi.nlm.nih.gov/33611783
Management and early outcomes of neonates born to women with SARS-CoV-2 in 16 U.S. hospitals
https://pubmed.ncbi.nlm.nih.gov/33723834

Presumptive neonatal multisystem inflammatory syndrome in children associated with coronavirus disease 2019
https://pubmed.ncbi.nlm.nih.gov/33757142
SARS-CoV-2–specific antibodies in breast milk after COVID-19 vaccination of breastfeeding women
https://jamanetwork.com/journals/jama/fullarticle/2778766
Commentary: Perinatal coronavirus disease 2019 and maternal vaccination: what more do we need to know?
https://pubmed.ncbi.nlm.nih.gov/33847296
Neonates with SARS-CoV-2 infection and pulmonary disease safely treated with Remdesivir
https://pubmed.ncbi.nlm.nih.gov/33847299
Possible impact of severe acute respiratory syndrome coronavirus-2 control measures in reducing colonization by gram-negative bacteria and Candida spp. in a neonatal intensive care unit
https://journals.lww.com/pidj/Fulltext/2021/05000/Possible_Impact_of_Severe_Acute_Respiratory.36.aspx
Case report: Severe acute respiratory syndrome coronavirus 2 (sars-cov-2) antibodies in neonatal cord blood after vaccination in pregnancy
https://journals.lww.com/greenjournal/Fulltext/2021/05000/Severe_Acute_Respiratory_Syndrome_Coronavirus_2.21.aspx
Neonates in the COVID-19 pandemic
https://pubmed.ncbi.nlm.nih.gov/32746446
COVID-19 outbreak impact on neonatal emergency transport
https://pubmed.ncbi.nlm.nih.gov/32575109
European consensus recommendations for neonatal and paediatric retrievals of positive or suspected COVID-19 patients
https://pubmed.ncbi.nlm.nih.gov/32634819
A literature review of 2019 novel coronavirus (SARS-CoV2) infection in neonates and children
https://pubmed.ncbi.nlm.nih.gov/32679582
Trends in intensive neonatal care during the COVID-19 outbreak in Japan
https://pubmed.ncbi.nlm.nih.gov/33229330
Coronavirus infection in neonates: a systematic review
https://pubmed.ncbi.nlm.nih.gov/32943533
COVID-19: neonatal–perinatal perspectives
https://pubmed.ncbi.nlm.nih.gov/33293665
Previous viral symptoms and individual mothers influenced the leveled duration of human milk antibodies cross-reactive to S1 and S2 subunits from SARS-CoV-2, HCoV-229E, and HCoV-OC43
https://pubmed.ncbi.nlm.nih.gov/33649442
Maternal and neonatal health care worker well-being and patient safety climate amid the COVID-19 pandemic
https://pubmed.ncbi.nlm.nih.gov/33727700
Impact of evolving practices on SARS-CoV-2 positive mothers and their newborns in the largest public healthcare system in America
https://pubmed.ncbi.nlm.nih.gov/33674713
Care of hospitalized infants and their families during the COVID-19 pandemic: an international survey
https://pubmed.ncbi.nlm.nih.gov/33758385
COVID-19 preparedness—a survey among neonatal care providers in low- and middle-income countries
https://pubmed.ncbi.nlm.nih.gov/33850282
Neonatal SARS-CoV-2 infections in breastfeeding mothers
https://www.ncbi.nlm.nih.gov/pubmed/33850028
Perinatal SARS-CoV-2 infection and neonatal COVID-19: a 2021 update
https://www.ncbi.nlm.nih.gov/pubmed/33931474

Pediatrics

Changes in neurodevelopmental outcomes from age 2 to 10 years for children born extremely preterm
https://www.ncbi.nlm.nih.gov/pubmed/33824183
Breastfeeding, physical growth, and cognitive development
https://www.ncbi.nlm.nih.gov/pubmed/33888567
Survival trends and syndromic esophageal atresia
https://www.ncbi.nlm.nih.gov/pubmed/33911029
Intrapartum Group B Streptococcal prophylaxis and childhood allergic disorders
https://www.ncbi.nlm.nih.gov/pubmed/33833072
Safety of breastfeeding by mothers with COVID-19: new evidence from Israel
https://www.ncbi.nlm.nih.gov/pubmed/33850029
Simplifying hyperbilirubinemia risk estimation
https://www.ncbi.nlm.nih.gov/pubmed/33903165
Increasing volume-targeted ventilation use in the NICU
https://www.ncbi.nlm.nih.gov/pubmed/33863843

Journal of Pediatrics

Quality improvement and antenatal steroids
https://pubmed.ncbi.nlm.nih.gov/33388300
Population improvement bias observed in estimates of the impact of antenatal steroids to outcomes in preterm birth
https://pubmed.ncbi.nlm.nih.gov/33275981
Randomized controlled trial of early docosahexaenoic acid and arachidonic acid enteral supplementation in very low birth weight infants
https://pubmed.ncbi.nlm.nih.gov/33358843
Short-term and long-term educational outcomes of infants born moderately and late preterm
https://pubmed.ncbi.nlm.nih.gov/33412166
Association of continuous opioids and/or midazolam during early mechanical ventilation with survival and sensorimotor outcomes at age 2 years in premature infants: results from the French prospective national EPIPAGE 2 cohort
https://pubmed.ncbi.nlm.nih.gov/33395567
Diffusion tensor imaging in very preterm, moderate-late preterm and term-born neonates: a systematic review
https://pubmed.ncbi.nlm.nih.gov/33453200
Antenatal risk factors associated with spontaneous intestinal perforation in preterm infants receiving postnatal indomethacin
https://pubmed.ncbi.nlm.nih.gov/33453204
The impact of erythropoietin on short- and long-term kidney-related outcomes in neonates of extremely low gestational age. Results of a multicenter, double-blind, placebo-controlled randomized clinical trial
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Early versus late brain magnetic resonance imaging after neonatal hypoxic ischemic encephalopathy treated with therapeutic hypothermia
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Associations between early structural magnetic resonance imaging, Hammersmith infant neurological examination, and general movements assessment in infants born very preterm
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Umbilical cord milking vs delayed cord clamping and associations with in-hospital outcomes among extremely premature infants
https://pubmed.ncbi.nlm.nih.gov/33417919
Encouraging parental reading for high-risk neonatal intensive care unit infants
https://pubmed.ncbi.nlm.nih.gov/33453203
Acute delivery room resuscitation of neonates exposed to selective serotonin reuptake inhibitors
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A neonate with feathery scales
https://pubmed.ncbi.nlm.nih.gov/33516679
Labor epidural anesthesia associated with autism
https://pubmed.ncbi.nlm.nih.gov/33896458
Family integrated care reduces NICU length of stay and improves medical outcomes across China
https://pubmed.ncbi.nlm.nih.gov/33896457

Pediatric Research

Carbon dioxide as a drug in neonatology
https://pubmed.ncbi.nlm.nih.gov/32688369
Role of platelets in neonatal necrotizing enterocolitis
https://pubmed.ncbi.nlm.nih.gov/32601461
Fifty-three years of follow-up of an infant with neonatal encephalopathy treated with therapeutic hypothermia. https://pubmed.ncbi.nlm.nih.gov/33173172
α1,3-Fucosyltransferase-IX, an enzyme of pulmonary endogenous lung stem cell marker SSEA-1, alleviates experimental bronchopulmonary dysplasia
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Impact of pertussis-specific IgA, IgM, and IgG antibodies in mother's own breast milk and donor breast milk during preterm infant digestion
https://pubmed.ncbi.nlm.nih.gov/32599609
Does metabolomic profile differ with regard to birth weight?
https://pubmed.ncbi.nlm.nih.gov/32599610
DNA methylation in children with prenatal methamphetamine exposure and environmental adversity
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Maternal diabetes alters microRNA expression in fetal exosomes, human umbilical vein endothelial cells and placenta
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Cerebellar injury in term neonates with hypoxic–ischemic encephalopathy is underestimated
https://pubmed.ncbi.nlm.nih.gov/32967002
Analgesic effects of breast- and formula feeding during routine childhood immunizations up to 1 year of age
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Lactonase activity and status of paraoxonase 1 and oxidative stress in neonates of women with gestational diabetes mellitus
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Surgery requiring general anesthesia in preterm infants is associated with altered brain volumes at term equivalent age and neurodevelopmental impairment
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Biomarkers of neonatal skin barrier adaptation reveal substantial differences compared to adult skin
https://pubmed.ncbi.nlm.nih.gov/32599611
Hepcidin is a relevant iron status indicator in infancy: results from a randomized trial of early vs. delayed cord clamping
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Developmental effects on sleep–wake patterns in infants receiving a cow's milk-based infant formula with an added prebiotic blend: a randomized controlled trial
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Glucocorticoids, sodium transport mediators, and respiratory distress syndrome in preterm infants
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Spontaneous and apnea arousals from sleep in preterm infants
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The bioavailability and maturing clearance of doxapram in preterm infants
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Very preterm birth results in later lower platelet activation markers
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Archives of Disease in Childhood - Fetal & Neonatal Edition

Corrected fortification approach improves the protein and energy content of preterm human milk compared with standard fixed-dose fortification
https://pubmed.ncbi.nlm.nih.gov/33067263
Withholding or withdrawing life-sustaining treatment in extremely low gestational age neonates
https://pubmed.ncbi.nlm.nih.gov/33082153
Challenges of a simplified opt-out consent process in a neonatal randomised controlled trial: qualitative study of parents' and health professionals' views and experiences
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Survival and causes of death in extremely preterm infants in the Netherlands
https://pubmed.ncbi.nlm.nih.gov/33158971
Observational study of parental opinion of deferred consent for neonatal research
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Continued improvement in morbidity reduction in extremely premature infants
https://pubmed.ncbi.nlm.nih.gov/33109606
Association of maternal diabetes mellitus with preterm infant outcomes: a systematic review and meta-analysis
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Two-year outcomes after dextrose gel prophylaxis for neonatal hypoglycaemia
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Duration of and trends in respiratory support among extremely preterm infants
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Poor postnatal weight growth is a late finding after sepsis in very preterm infants
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Necrotising enterocolitis in newborns receiving diazoxide
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Changes in heart rate from 5 s to 5 min after birth in vaginally delivered term newborns with delayed cord clamping
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Variation in very preterm extrauterine growth in a European multicountry cohort
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Resuscitation of non-vigorous neonates born through meconium-stained amniotic fluid: post policy change impact analysis
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Supraglottic airway devices for administration of surfactant to newborn infants with respiratory distress syndrome: a narrative review
https://pubmed.ncbi.nlm.nih.gov/32989046
Images in neonatal medicine: Ischaemic limb injury and autoamputation complicating peripheral cannula insertion
https://pubmed.ncbi.nlm.nih.gov/33184129
Images in neonatal medicine: Bowel loop sign in a newborn
https://pubmed.ncbi.nlm.nih.gov/32631848

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The impact of maternal obesity on childhood neurodevelopment
https://pubmed.ncbi.nlm.nih.gov/33249428

Predictors of successful patent ductus arteriosus closure with acetaminophen in preterm infants
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Maternal dietary fat intake during pregnancy and newborn body composition
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In-hospital mortality and morbidity among extremely preterm infants in relation to maternal body mass index
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Antenatal and neonatal factors contributing to extra uterine growth failure (EUGR) among preterm infants in Boston Birth Cohort (BBC)
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Breastfeeding and growth trajectory from birth to 5 years among children exposed and unexposed to gestational diabetes mellitus in utero
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Falling insulin requirement in late pregnancy: association with obstetric and neonatal outcomes
https://pubmed.ncbi.nlm.nih.gov/33664468
Quality improvement project designed to reduce disproportionate growth in extremely low gestational age neonates: cognitive neurodevelopmental outcome at 18–41 months
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Body adiposity and oral feeding outcomes in infants: a pilot study
https://pubmed.ncbi.nlm.nih.gov/33597738
Influence of different breast expression techniques on human colostrum macronutrient concentrations
https://pubmed.ncbi.nlm.nih.gov/33795790
Changes in macronutrients of human milk after bolus feeding: a simulation study
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Migration of cyclohexanone and 3,3,5-trimethylcyclohexanone from a neonatal enteral feeding system into human milk
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The effects of probiotic supplementation on the gene expressions of immune cell surface markers and levels of antibodies and pro-inflammatory cytokines in human milk
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The impact of a vegan diet on pregnancy outcomes
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Patent ductus arteriosus shunt elimination results in a reduction in adverse outcomes: a post hoc analysis of the PDA RCT cohort
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Comparison of standard versus high-dose ibuprofen for the treatment of hemodynamically significant patent ductus arteriosus in preterm infants
https://pubmed.ncbi.nlm.nih.gov/33795792
Prolonged transitional neonatal hypoglycaemia: characterisation of a clinical syndrome
https://pubmed.ncbi.nlm.nih.gov/33279942
The use of intramuscular glucagon to prevent IV glucose infusion in early neonatal hypoglycemia
https://pubmed.ncbi.nlm.nih.gov/33564107
Improving timeliness of newborn screens in the neonatal intensive care unit: a quality improvement initiative

https://pubmed.ncbi.nlm.nih.gov/33758386
Journal Club: Does a lower interventional glucose threshold affect neurodevelopment in at-risk neonates?
https://pubmed.ncbi.nlm.nih.gov/33547409

Neonatology
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Insulin dosing, glycemic control, and perinatal outcomes in pregnancies complicated by type-2 diabetes
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Anemia of prematurity and oral feeding milestones in premature infants
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The association between gestational weight gain in each trimester and pregnancy outcomes in twin pregnancies
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Executive functions and academic outcomes of low birthweight infants: a prospective longitudinal U.S. cohort
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Primary pulmonary vein stenosis: a new look at a rare but challenging disease
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Acetaminophen therapy for persistent patent ductus arteriosus
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Case 1: Intracranial calcifications associated with hepatosplenomegaly and thrombocytopenia
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Case 2: Seizures in a neonate
https://www.ncbi.nlm.nih.gov/pubmed/33931479
Case 3: Three occurrences of a rare phenomenon in the premature population with varying outcomes
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Triple the risk: a case of trichorionic triplets with preeclampsia
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A neonate with an abnormally shaped head
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Neonate receiving mechanical ventilation with continuous bubbling coming through the orogastric tube
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JAMA Pediatrics
Optimizing neonatal nutrition in resource-constrained settings
https://pubmed.ncbi.nlm.nih.gov/33346820
Contribution of glucose meter error to misclassification of neonatal glycemic status
https://pubmed.ncbi.nlm.nih.gov/33464311
Association of eviction during pregnancy with birth outcomes: an issue of health equity
https://pubmed.ncbi.nlm.nih.gov/33646262
Association between preterm-birth phenotypes and differential morbidity, growth, and neurodevelopment at age 2 years: results from the INTERBIO-21st newborn study
https://pubmed.ncbi.nlm.nih.gov/33646288
Association of eviction with adverse birth outcomes among women in Georgia, 2000 to 2016
https://pubmed.ncbi.nlm.nih.gov/33646291
Novel variant findings and challenges associated with the clinical integration of genomic testing: an interim report of the Genomic Medicine for Ill Neonates and Infants (GEMINI) study
https://pubmed.ncbi.nlm.nih.gov/33587123

BMC Pediatrics
Spinal arteriovenous malformation in a pediatric patient with a history of congenital syphilis: a case report
https://pubmed.ncbi.nlm.nih.gov/34011293
Neonatal intrahepatic cholestasis caused by citrin deficiency with no hepatic steatosis: a case report
https://pubmed.ncbi.nlm.nih.gov/34006251
Risk factors for metabolic bone disease among preterm infants less than 32 weeks gestation with bronchopulmonary dysplasia
https://pubmed.ncbi.nlm.nih.gov/34001070
Short-term outcomes in infants with mild neonatal encephalopathy: a retrospective, observational study
https://pubmed.ncbi.nlm.nih.gov/33962618

Pediatric Critical Care Medicine
Hyperoxia during cardiopulmonary bypass is associated with mortality in infants undergoing cardiac surgery
https://pubmed.ncbi.nlm.nih.gov/33443979
Serial Neurologic Assessment in Pediatrics (SNAP): a new tool for bedside neurologic assessment of critically ill children
https://pubmed.ncbi.nlm.nih.gov/33729729
Improving “neuro checks” in neonatal ICU and PICU is a serial neurologic assessment in pediatrics
https://pubmed.ncbi.nlm.nih.gov/33953135

New England Journal of Medicine
No relevant articles

Lancet
Time to integrate congenital CMV testing into hearing screening for newborn babies (PDF)
https://www.thelancet.com/action/showPdf?pii=S0140-6736%2821%2900946-6

JAMA
No relevant articles

BMJ
Neurodevelopmental outcomes at age 5 among children born preterm: EPIPAGE-2 cohort study (PDF)
https://www.bmj.com/content/bmj/373/bmj.n741.full.pdf

Pediatric Infectious Disease Journal
Benzylpenicillin serum concentrations in neonates with Group B Streptococci sepsis or meningitis a descriptive cohort study
https://pubmed.ncbi.nlm.nih.gov/33181784
Ampicillin pharmacokinetics during first week of life in preterm and term neonates
https://pubmed.ncbi.nlm.nih.gov/33591074
Fulminant necrotizing soft-tissue infection in an extremely low gestational age infant
https://pubmed.ncbi.nlm.nih.gov/33480664

Pediatric Cardiology
Hypoplastic left heart: stage-I will be performed interventionally, soon
https://pubmed.ncbi.nlm.nih.gov/33871681
Effect of temporal and spatial smoothing on speckle–tracking-derived strain in neonates
https://pubmed.ncbi.nlm.nih.gov/33492429
Survival outcomes of two-stage intracardiac repair in large ventricular septal defect and trisomy 18
https://pubmed.ncbi.nlm.nih.gov/33515091
Precordial ECG amplitudes in the days after birth: electrocardiographic changes during transition from fetal to neonatal circulation
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Association of fetal atrial flutter with neonatal atrioventricular re-entry tachycardia involving accessory pathway: a link to be remembered
https://pubmed.ncbi.nlm.nih.gov/33512546
Determinants of physical fitness in children with repaired congenital heart disease
https://pubmed.ncbi.nlm.nih.gov/33484289
A fetal presentation of a ruptured right ventricular diverticulum
https://pubmed.ncbi.nlm.nih.gov/33725147

Pediatric Neurology
Ocular motor paroxysmal events in neonates and infants: a review of the literature
https://pubmed.ncbi.nlm.nih.gov/33581391
The role of fetal MRI for suspected anomalies of the posterior fossa
https://pubmed.ncbi.nlm.nih.gov/33607354
Brain-derived neurotrophic factor in neonatal seizures
https://pubmed.ncbi.nlm.nih.gov/33773288
Objective and clinically feasible analysis of diffusion MRI data can help predict dystonia after neonatal brain injury
https://pubmed.ncbi.nlm.nih.gov/33677143
Early identification of cerebral palsy using neonatal MRI and general movements assessment in a cohort of high-risk term neonates
https://pubmed.ncbi.nlm.nih.gov/33714922
Longitudinal stability of spatial inattention in children with perinatal stroke
https://pubmed.ncbi.nlm.nih.gov/33714923

Obstetrics and Gynecology
No relevant articles

American Journal of Obstetrics & Gynecology
Brain death in pregnancy: a systematic review focusing on perinatal outcomes
https://pubmed.ncbi.nlm.nih.gov/33600780
Balancing risks: making decisions for maternal treatment without data on fetal safety
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The coronavirus disease 2019 vaccine in pregnancy: risks, benefits, and recommendations
https://pubmed.ncbi.nlm.nih.gov/33529575
Embryo biopsy and perinatal outcomes of singleton pregnancies: an analysis of 16,246 frozen embryo transfer cycles reported in the Society for Assisted Reproductive Technology Clinical Outcomes Reporting System
https://pubmed.ncbi.nlm.nih.gov/33129765
Prenatal chromosomal microarray analysis in 2466 fetuses with ultrasonographic soft markers: a prospective cohort study
https://pubmed.ncbi.nlm.nih.gov/33122027
Impact of new definitions of preeclampsia at term on identification of adverse maternal and perinatal outcomes
https://pubmed.ncbi.nlm.nih.gov/33166504
Perinatal outcomes in women with elevated blood pressure and stage 1 hypertension
https://pubmed.ncbi.nlm.nih.gov/33157064
Intrauterine fetoscopic laser surgery versus expectant management in stage 1 twin-to-twin transfusion syndrome: an international randomized trial
https://pubmed.ncbi.nlm.nih.gov/33248135
Gardnerella vaginalis promotes group B Streptococcus vaginal colonization, enabling ascending uteroplacental infection in pregnant mice
https://pubmed.ncbi.nlm.nih.gov/33248136

Hospital Pediatrics
Vaccinations, not vaccines, save lives: quality improvement for newborn vaccination
https://pubmed.ncbi.nlm.nih.gov/33879504
Improving timeliness of hepatitis b vaccine birth dose administration
https://pubmed.ncbi.nlm.nih.gov/33879503
Prevalence and predictors of medical complexity in a national sample of VLBW infants
https://pubmed.ncbi.nlm.nih.gov/33906959

BASIC SCIENCE SELECTIONS
Brief hypoxia in late gestation sheep causes prolonged disruption of fetal electrographic, breathing behaviours and can result in early labour
Ana A Baburamani, Nhi T Tran, Margie Castillo-Melendez, et al. J Physiol.

Selective intra-arterial brain cooling induces cerebral protection against ischemia/reperfusion injury through SENP1-Sirt3 signaling
Heng Cai, Xiyun Bian, Liangyu Chen, et al. Free Radic Biol Med.

Consecutive daily administration of intratracheal surfactant and human umbilical cord-derived mesenchymal stem cells attenuates hyperoxia-induced lung injury in neonatal rats
Hsiu-Chu Chou, Chien-Hsiang Chang, Chien-Han Chen, et al. Stem Cell Res Ther.

Early extubation to noninvasive respiratory support of former preterm lambs improves long-term respiratory outcomes
Mar Janna Dahl, Chiara Veneroni, Anna Lavizzari, et al. Am J Physiol Lung Cell Mol Physiol.

Adverse neural effects of delayed, intermittent treatment with rEPO after asphyxia in preterm fetal sheep
Simerdeep K Dhillon, Guido Wassink, Christopher A Lear, et al. J Physiol.

L-citrulline increases arginase II protein levels and arginase activity in hypoxic piglet pulmonary artery endothelial cells
Matthew S Douglass, Yongmei Zhang, Mark R Kaplowitz, et al. Pulm Circ.

Chorioamnionitis induces hepatic inflammation and time-dependent changes of the enterohepatic circulation in the ovine fetus
Cathelijne Heymans, Marcel den Dulk, Kaatje Lenaerts, et al. Sci Rep.

Effect of neuroprotective magnesium sulfate treatment on brain transcription response to hypoxia ischemia in neonate mice
Bérénice Le Dieu-Lugon, Nicolas Dupré, Céline Derambure, et al. Int J Mol Sci.

Effects of omega 3 polyunsaturated fatty acids, antioxidants, and/or non-steroidal inflammatory drugs in the brain of neonatal rats exposed to intermittent hypoxia
Alex Manlapaz-Mann, Charles L Cai, Darren Bodkin, et al. Int J Dev Neurosci.

Sub-clinical necrotizing enterocolitis-induced systemic immune suppression in neonatal preterm pigs
Shuqiang Ren, Xiaoyu Pan, Yan Hui, et al. Am J Physiol Gastrointest Liver Physiol.

ADDITIONAL JOURNAL SELECTIONS

Duration of mechanical ventilation is more critical for brain growth than postnatal hydrocortisone in extremely preterm infants
Chloé Rousseau, Marine Guichard, Elie Saliba, et al. Eur J Pediatr.

Diuretic therapy and acute kidney injury in preterm neonates and infants
Tahagod H Mohamed, Brett Klamer, John D Mahan, et al. Pediatr Nephrol.

Oral dextrose gel to prevent hypoglycaemia in at-risk neonates
Taygen Edwards, Gordon Liu, Joanne E Hegarty, et al. Cochrane Database Syst Rev.

Early nutrition during hospitalization in relation to bone health in preterm infants at term age and six months corrected age
Alexandra K Calor, Dana F J Yumani and Mirjam M van Weissenbruch. Nutrients.

Breast milk protein content at week 3 after birth and neurodevelopmental outcome in preterm infants fed fortified breast milk
Clair-Yves Boquien, Helene Billard, Laure Simon, et al. Eur J Nutr.

Is intravenous fish oil associated with the neurodevelopment of extremely low birth weight preterm infants on parenteral nutrition?
Chiara Biagetti, Alessio Correani, Rita D'Ascenzo, et al. Clin Nutr.

3-D Echo brain volumes to predict neurodevelopmental outcome in infants: a prospective observational follow-up study
Maria Cristina Aisa, Antonella Barbati, Benito Cappuccini, et al. Ultrasound Med Biol.