

Publications Working Group

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Section on Neonatal-Perinatal Medicine

ARTICLES OF INTEREST – August, 2023

Survival and long-term outcomes of children who survived after end-of-life decisions in a neonatal intensive care unit

Béatrice Boutillier, Valérie Biran, Annie Janvier, et al. *J Pediatr*.

<https://pubmed.ncbi.nlm.nih.gov/37076039/>

To investigate long-term outcomes of infants who survive despite life-and-death discussions with families and a decision to withdraw or withhold life-sustaining interventions (WWLST) in one neonatal intensive care unit. When a WWLST decision was made in our cohort, 21% of the infants survived to discharge. By 2 years of age, the majority of these infants had died or had major functional limitations. This highlights the uncertainty of WWLST decisions during neonatal intensive care and the importance of ensuring that parents are informed of all possibilities. Additional studies including longer-term follow-up and ascertaining the family's views will be important.

Two-year outcomes following a randomised platelet transfusion trial in preterm infants

Carmel Maria Moore, Angela D'Amore, Suzanne Fustolo-Gunnink, et al. *Arch Dis Child Fetal Neonatal Ed*.

<https://pubmed.ncbi.nlm.nih.gov/36810309>

Objective is to assess mortality and neurodevelopmental outcomes at 2 years of corrected age in children who participated in the PlaNeT-2/MATISSE (Platelets for Neonatal Transfusion - 2/Management of Thrombocytopenia in Special Subgroup) study, which reported that a higher platelet transfusion threshold was associated with significantly increased mortality or major bleeding compared to a lower one. Infants randomised to a higher platelet transfusion threshold of $50 \times 10^9/L$ compared with $25 \times 10^9/L$ had a higher rate of death or significant neurodevelopmental impairment at a corrected age of 2 years. This further supports evidence of harm caused by high prophylactic platelet transfusion thresholds in preterm infants.

Effect of leuprolide acetate, a GnRH agonist, on neuroinflammation and anxiety-like behavior after mild hypoxic-ischemic encephalopathy in rat model

Karina Alejandra Pedroza-García, Denisse Calderón-Vallejo, Daniel Cervantes-García, et al.

Neuroimmunomodulation.

<https://www.ncbi.nlm.nih.gov/pubmed/37607495>

The aim of this study was to evaluate the immunomodulatory effect of leuprolide acetate (LA) in the acute phase of mild HIE and its effects in motor activity and behavior in a subacute phase.

Forty-five Wistar rats on postnatal day 7 were divided into Sham, HIE treated with saline solution (HIE-SS) and HIE-LA. The expression of the inflammatory cytokines interleukin (IL)-1beta, tumor necrosis factor (TNF)-alpha, interferon (IFN)-gamma, and the chemokine CXCL-1

were evaluated 72 h after HIE by RT-qPCR and the motor activity and behavior were evaluated by open field test at postnatal day 33. HIE-SS animals showed increased expression of IL-1beta, TNF-alpha, IFN-gamma and CXCL-1 genes in injured tissue. However, the HIE-LA group exhibited similar expression levels of IL-1beta and TNF-alpha to the Sham group, while IFN-gamma and CXCL-1 mRNA expression were attenuated with LA treatment. LA treatment also prevented anxiety-like behavior in the open field test. Treatment with LA partially reverses HIE-induced neuroinflammation and prevents anxiety-like behavior in neonatal rats.

Overactivated epithelial NF-kappaB disrupts lung development in congenital diaphragmatic hernia

Florentine Dylong, Jan Riedel, Gaurang M Amonkar, et al. *Am J Respir Cell Mol Biol*.

<https://www.ncbi.nlm.nih.gov/pubmed/37552822>

Recent studies discovered that inflammatory processes, and specifically NF-kappaB associated pathways are enriched in human and experimental CDH. Using sections and hypoplastic lung explant cultures from the nitrofen rat model of CDH and human fetal CDH lungs, the authors demonstrate that NF-kappaB and its downstream transcriptional targets are hyperactive during abnormal lung formation in CDH. Fetal rat lung explants had impaired pseudoglandular airway branching after exposure to nitrofen, together with increased phosphorylation and transcriptional activity of NF-kappaB. Dexamethasone, the broad and clinically applicable anti-inflammatory NF-kappaB antagonist, rescued lung branching and normalized NF-kappaB signaling in hypoplastic lung explants. These results indicate that NF-kappaB is aberrantly activated in human and nitrofen CDH lungs. Anti-inflammatory treatment with dexamethasone and/or specific NF-kappaB inhibition should be investigated further as a therapeutic avenue to target lung hypoplasia in CDH.

Antenatal steroids, prophylactic indomethacin, and the risk of spontaneous intestinal Perforation

Abbot R Laptook, Heather Weydig, Luc P Brion, et al. *J Pediatr*.

<https://pubmed.ncbi.nlm.nih.gov/37172814/>

This retrospective cohort study was conducted on 6851 infants, gestational age 22 0 -28 6 weeks or birth weight of 401-1000 g to assess if the odds of spontaneous intestinal perforation (SIP) are increased when antenatal steroids (ANS) given close to delivery are combined with indomethacin on day 1 after birth (Indo-D1). Of 6851 infants, 243 had SIP (3.5%). ANS exposure occurred in 6393 infants (93.3%) and IndoD1 was given to 1863 infants (27.2%). The time (median, IQR) from last dose of ANS to delivery was 32.5 hours (6-81) vs 37.1 hours (7-110) for infants with or without SIP, respectively (P = .10). Indo-D1 was given to 51.9 vs 26.3% of infants with SIP vs no SIP, respectively (P < .0001). Adjusted analysis indicated no interaction between time of last ANS dose and Indo-D1 for SIP (P = .7). Indo-D1 but not ANS was associated with increased odds of SIP (aOR: 1.73, 1.21-2.48, P = .003). The results from this study suggest that Indomethacin on day 1 after birth and not timing of ANS is associated with SIP.

Hyperbilirubinemia among infants born preterm: peak levels and association with neurodevelopmental outcomes

Gonzalo Solis-Garcia, Kamini Raghuram, Sajit Augustine, et al. *J Pediatr*.

<https://pubmed.ncbi.nlm.nih.gov/37172811/>

This multi-center retrospective cohort study describes the distribution of peak bilirubin levels among infants born before 29 weeks of gestation in the first 14 days of life and to study the association between quartiles of peak bilirubin levels at different gestational ages and neurodevelopmental outcomes. A total of 12,554 Neonates born preterm at 22 0/7 to 28 6/7 weeks of gestation born between 2010 and 2018 were included. The median peak bilirubin values

increased as gestational age increased. Significant neurodevelopmental impairment was identified in 1116 of 6638 (16.8%) of children. Multivariable analyses identified an association between peak bilirubin in the highest quartile and neurodevelopmental impairment (aOR 1.27, 95% CI 1.01-1.60) and receipt of hearing aid/cochlear implant (aOR 3.97, 95%CI: 2.01-7.82) compared with the lowest quartile. This study suggests that peak bilirubin values in the highest gestational age-specific quartile were associated with significant neurodevelopmental and hearing impairments. A major limitation of the study is that they did not have access to data regarding phototherapy treatment, and different phototherapy thresholds for different gestational ages may have played a role in the results.

Early-life exposure to analgesia and 18-month neurodevelopmental outcomes in very preterm infants

Thiviya Selvanathan, Pearl Zaki, Mia A McLean, et al. *Pediatr Res*.

<https://pubmed.ncbi.nlm.nih.gov/36859445/>

Preterm infants are exposed to painful procedures during a period of rapid brain development. This multicenter prospective study showed that in very preterm neonates, both early-life exposure to pain and analgesia are associated with adverse neurodevelopment and altered brain maturation. Specifically, for morphine, the interaction between duration of early morphine exposure and number of invasive procedures ($p = 0.01$) was significantly associated with lower Motor scores. However, this association is attenuated for infants with short morphine exposure (≤ 7 days). No significant associations were seen with fentanyl exposure.

Response to aerosolized calfactant in infants with respiratory distress syndrome; a post-hoc analysis of AERO-02 trial

Dinushan C Kaluarachchi, Henry A Zapata, Heather L Becker, et al. *J Perinatol*.

<https://pubmed.ncbi.nlm.nih.gov/37429958/>

AERO-02 trial originally showed aerosolized calfactant (AC) group had reduced intubation and surfactant instillation by nearly one-half compared to usual care (UC) group. This post hoc analysis assessed response to AC among infants born 28 0/7–36 6/7 weeks with RDS from time of randomization to 72 hours. FiO₂, MAP, and RSS were lower in the UC group. This is likely due to early and higher rate of liquid surfactant administration in the UC group. FiO₂ decrease was seen after the first AC dose.

Rectal acetaminophen improves shunt volume and reduces patent ductus arteriosus ligation in extremely preterm infants

Michael P Castaldo, Elaine Neary, Adrienne R Bischoff, et al. *Am J Perinatol*.

<https://pubmed.ncbi.nlm.nih.gov/34583409/>

In this retrospective matched case-control study the authors sought to evaluate the efficacy of rectal acetaminophen in modulating the risk of PDA ligation. Forty infants (20 cases and 20 controls) < 29 weeks' gestation with evidence of hsDA, with similar demographic and echocardiographic features, were compared. Rectal acetaminophen was associated with improvement in echocardiographic indices of PDA shunt volume, a 50% reduction in PDA ligation rates and a reduction in the composite outcome of death or severe BPD. Pharmacologic and further prospective clinical studies are needed.

OTHER NOTEWORTHY PUBLICATIONS – August, 2023

COVID-19

Breastfeeding success and newborn health before and during the COVID-19 pandemic: a single-centre comparative study

<https://pubmed.ncbi.nlm.nih.gov/37054687>

Pediatrics

Parent-reported clinical utility of pediatric genomic sequencing

<https://pubmed.ncbi.nlm.nih.gov/37470118/>

Pre-flight hypoxemia challenge testing in bronchopulmonary dysplasia

<https://pubmed.ncbi.nlm.nih.gov/37503557/>

Social determinants of health ICD-10 code use in inpatient pediatrics

<https://pubmed.ncbi.nlm.nih.gov/37431596/>

Fathers, breastfeeding, and infant sleep practices: findings from a state-representative survey

<https://pubmed.ncbi.nlm.nih.gov/37325869/>

Evidence and recommendation for guanidinoacetate methyltransferase deficiency newborn screening

<https://pubmed.ncbi.nlm.nih.gov/37465909/>

A multicenter collaborative to improve postoperative pain management in the NICU

<https://pubmed.ncbi.nlm.nih.gov/37409386/>

Journal of Pediatrics

Pulmonary vascular phenotypes of prematurity: the path to precision medicine

<https://pubmed.ncbi.nlm.nih.gov/37105409/>

Caffeine for apnea of prematurity: too much or too little of a good thing

<https://pubmed.ncbi.nlm.nih.gov/37201684/>

Survival and long-term outcomes of children who survived after end-of-life decisions in a neonatal intensive care unit

<https://pubmed.ncbi.nlm.nih.gov/37076039/>

Nailfold capillaroscopy: a promising, noninvasive approach to predict retinopathy of prematurity

<https://pubmed.ncbi.nlm.nih.gov/37182664/>

Antenatal steroids, prophylactic indomethacin, and the risk of spontaneous intestinal perforation

<https://pubmed.ncbi.nlm.nih.gov/37172814/>

Psychosocial support provided to parents of infants in neonatal intensive care units: an international survey

<https://pubmed.ncbi.nlm.nih.gov/37172808/>

Neurodevelopmental outcomes among infants born preterm fed with mother's own milk: a comparison of singletons and twins

<https://pubmed.ncbi.nlm.nih.gov/37196779/>

Ranking future outcomes most important to parents of children with bronchopulmonary dysplasia

<https://pubmed.ncbi.nlm.nih.gov/37172804/>

Behavioral and emotional outcomes in children with congenital heart disease: effects of disease severity, family life stress, disease-related chronic stress, and psychosocial adaptation

<https://pubmed.ncbi.nlm.nih.gov/37164178/>

The potential impact of preemptive pharmacogenetic genotyping in the neonatal intensive care unit

<https://pubmed.ncbi.nlm.nih.gov/37201679/>

Hyperbilirubinemia among infants born preterm: peak levels and association with neurodevelopmental outcomes

<https://pubmed.ncbi.nlm.nih.gov/37172811/>

Treprostinil in neonates with congenital diaphragmatic hernia-related pulmonary hypertension

<https://pubmed.ncbi.nlm.nih.gov/37059388/>

Estimating preterm lung volume: a comparison of lung ultrasound, chest radiography, and oxygenation

<https://pubmed.ncbi.nlm.nih.gov/37088185/>

Early-life outcomes in relation to social determinants of health for children born extremely preterm

<https://pubmed.ncbi.nlm.nih.gov/37105408/>

Sex-specific differences in congenital diaphragmatic hernia mortality

<https://pubmed.ncbi.nlm.nih.gov/37196780/>

Pediatric Research

Eye-tracking during simulated endotracheal newborn intubation: a prospective, observational multi-center study

<https://pubmed.ncbi.nlm.nih.gov/36932183/>

Developing a design-based concept to improve hand hygiene in the neonatal intensive care unit

<https://pubmed.ncbi.nlm.nih.gov/36694024/>

Glycemic control in gestational diabetes and impact on biomarkers in women and infants

<https://pubmed.ncbi.nlm.nih.gov/36650305/>

Development of gut mycobiome in infants and young children: a prospective cohort study

<https://pubmed.ncbi.nlm.nih.gov/36670159/>

Fetal anemia and elevated hepcidin in a mouse model of fetal alcohol spectrum disorder

<https://pubmed.ncbi.nlm.nih.gov/36702950/>

Dual inhibition of complement C5 and CD14 attenuates inflammation in a cord blood model

<https://pubmed.ncbi.nlm.nih.gov/36725909/>

Elevated human placental heat shock protein 5 is associated with spontaneous preterm birth

<https://pubmed.ncbi.nlm.nih.gov/36788289/>

Neonatal prophylactic antibiotics after preterm birth affect plasma proteome and immune development in pigs

<https://pubmed.ncbi.nlm.nih.gov/36804504/>

Hypothermia increases cold-inducible protein expression and improves cerebellar-dependent learning after hypoxia ischemia in the neonatal rat

<https://pubmed.ncbi.nlm.nih.gov/36810641/>

Patent ductus arteriosus and the risk of bronchopulmonary dysplasia-associated pulmonary hypertension

<https://pubmed.ncbi.nlm.nih.gov/36804505/>

Current pain management practices for preterm infants with necrotizing enterocolitis: a European survey

<https://pubmed.ncbi.nlm.nih.gov/36828969/>

Impact of race on heart rate characteristics monitoring in very low birth weight infants

<https://pubmed.ncbi.nlm.nih.gov/36650306/>

A predictive model for prognosis in very low birth weight infants with late-onset sepsis

<https://pubmed.ncbi.nlm.nih.gov/36725910/>

Premature infants born <28 weeks with acute kidney injury have increased bronchopulmonary dysplasia rates

<https://pubmed.ncbi.nlm.nih.gov/36759749/>

Critical congenital heart disease beyond HLHS and TGA: neonatal brain injury and early neurodevelopment

<https://pubmed.ncbi.nlm.nih.gov/36782067/>

Early prediction of severe retinopathy of prematurity requiring laser treatment using physiological data

<https://pubmed.ncbi.nlm.nih.gov/36788288/>

*Echocardiography performed by the neonatologist: the impact on the clinical management

<https://pubmed.ncbi.nlm.nih.gov/36807613/>

Early-life exposure to analgesia and 18-month neurodevelopmental outcomes in very preterm infants

<https://pubmed.ncbi.nlm.nih.gov/36859445/>

Trends in fetal and neonatal outcomes during the COVID-19 pandemic in Alabama

<https://pubmed.ncbi.nlm.nih.gov/36879081/>

Prenatal and perinatal factors associated with neonatal neurobehavioral profiles in the ECHO Program

<https://pubmed.ncbi.nlm.nih.gov/36841884/>

Risk factors for cerebral palsy and movement difficulties in 5-year-old children born extremely preterm

<https://pubmed.ncbi.nlm.nih.gov/36694025/>

Archives of Disease in Childhood - Fetal & Neonatal Edition

‘Keeping the beat’: What is the best way to perform neonatal chest compressions?

<https://pubmed.ncbi.nlm.nih.gov/37328255/>

Introducing physician associates: a new wave of health professionals in neonatology

<https://pubmed.ncbi.nlm.nih.gov/37423712/>

Chest compressions in newborn infants: a scoping review

<https://pubmed.ncbi.nlm.nih.gov/36456175/>

Two-year outcomes following a randomised platelet transfusion trial in preterm infants

<https://pubmed.ncbi.nlm.nih.gov/36810309/>

Change in neurodevelopmental outcomes for extremely premature infants over time: a systematic review and meta-analysis

<https://pubmed.ncbi.nlm.nih.gov/36270779/>

Cumulative risk factors contributing to hearing loss in preterm infants

<https://pubmed.ncbi.nlm.nih.gov/36564163/>

Does donor sex influence the potential for transfusion with washed packed red blood cells to limit transfusion-related immune responses in preterm newborns?

<https://pubmed.ncbi.nlm.nih.gov/36690436/>

Late-onset sepsis in very preterm infants in Norway in 2009–2018: a population-based study

<https://pubmed.ncbi.nlm.nih.gov/36732047/>

Gestational age and hospital admission costs from birth to childhood: a population-based record linkage study in England

<https://pubmed.ncbi.nlm.nih.gov/36759168/>

Postnatal growth restriction and neurodevelopment at 5 years of age: a European extremely preterm birth cohort study

<https://pubmed.ncbi.nlm.nih.gov/36868809/>

Outcomes to 5 years of outborn versus inborn infants <32 weeks in Western Australia: a cohort study of infants born between 2005 and 2018

<https://pubmed.ncbi.nlm.nih.gov/36804194/>

Observational cohort study of use of caffeine in preterm infants and association between early caffeine use and neonatal outcomes

<https://pubmed.ncbi.nlm.nih.gov/36759167/>

Relationships between early postnatal cranial ultrasonography linear measures and neurodevelopment at 2 years in infants born at <30 weeks’ gestational age without major brain injury

<https://pubmed.ncbi.nlm.nih.gov/36958812/>

Fitness of INTERGROWTH-21st birth weight standards for Chinese-ethnicity babies

<https://pubmed.ncbi.nlm.nih.gov/36854618/>

Mucous fistula refeeding in neonates: a systematic review and meta-analysis

<https://pubmed.ncbi.nlm.nih.gov/36858828/>

Late permissive hypercapnia and respiratory stability among very preterm infants: a pilot randomised trial

<https://pubmed.ncbi.nlm.nih.gov/36914233/>

Respiratory function after birth in infants with congenital diaphragmatic hernia

<https://pubmed.ncbi.nlm.nih.gov/36400455/>

Data-driven approach to understanding neonatal palliative care needs in England and Wales: a population-based study 2015–2020

<https://pubmed.ncbi.nlm.nih.gov/36958813/>

Long bone radiographic abnormalities of congenital syphilis in a preterm infant

<https://pubmed.ncbi.nlm.nih.gov/35078780>

Long QT syndrome presenting as fetal bradycardia and 2:1 atrioventricular block in a preterm infant

<https://pubmed.ncbi.nlm.nih.gov/35172986>

Journal of Perinatology

Complications associated with incorrect use of nasal CPAP

<https://pubmed.ncbi.nlm.nih.gov/37231122>

RDS-NExT workshop: consensus statements for the use of surfactant in preterm neonates with RDS

<https://pubmed.ncbi.nlm.nih.gov/37188774>

Predictors of successful treatment of respiratory distress with aerosolized calfactant

<https://pubmed.ncbi.nlm.nih.gov/37433969>

Response to aerosolized calfactant in infants with respiratory distress syndrome; a post-hoc analysis of AERO-02 trial

<https://pubmed.ncbi.nlm.nih.gov/37429958>

Pressure transmission and electrical diaphragm activity in preterm infants during nasal intermittent positive pressure ventilation—an exploratory prospective physiological study

<https://pubmed.ncbi.nlm.nih.gov/37138164>

Association of full premedication on tracheal intubation outcomes in the neonatal intensive care unit: an observational cohort study

<https://pubmed.ncbi.nlm.nih.gov/36801956/>

Validity and reliability of the behavioral signs of respiratory instability (BSRI) scale during activity for infants with bronchopulmonary dysplasia

<https://pubmed.ncbi.nlm.nih.gov/37185368>

Risk of death at home or on hospital readmission after discharge with pediatric tracheostomy

<https://pubmed.ncbi.nlm.nih.gov/37443270>

Neonatal nephrotoxic medication exposure and early acute kidney injury: results from the AWAKEN study

<https://pubmed.ncbi.nlm.nih.gov/37100984>

Association of antenatal corticosteroids with kidney function in adolescents born preterm with very low birth weight

<https://pubmed.ncbi.nlm.nih.gov/37160975>

Indomethacin patent ductus arteriosus prophylaxis in the modern era: renal implications

<https://pubmed.ncbi.nlm.nih.gov/37085522>

Current state of renal NIRS monitoring in the NICU: results from a CHNC Survey

<https://pubmed.ncbi.nlm.nih.gov/36932136>

Advocacy in neonatology: current issues and introduction to the series

<https://pubmed.ncbi.nlm.nih.gov/36725986>

The neonatal perspective of paid family medical leave (PFML)

<https://pubmed.ncbi.nlm.nih.gov/35132148>

Before the first breath: why ambient air pollution and climate change should matter to neonatal-perinatal providers

<https://pubmed.ncbi.nlm.nih.gov/36038659>

Neonatologists and vitamin K hesitancy

<https://pubmed.ncbi.nlm.nih.gov/36707666>

Medicaid and newborn care: challenges and opportunities

<https://pubmed.ncbi.nlm.nih.gov/37438483>

Effect of positive pressure ventilation on lymphatic flow in pediatric patients

<https://pubmed.ncbi.nlm.nih.gov/37005453>

Neonatology

Association between endotype of prematurity and mortality: a systematic review, meta-analysis, and meta-regression

<https://pubmed.ncbi.nlm.nih.gov/37166331>

Characteristics of meningococcal invasive disease in neonates and virulence of the corresponding isolates

<https://pubmed.ncbi.nlm.nih.gov/37279718>

A nomogram for predicting extubation failure in preterm infants with gestational age less than 29 weeks

<https://pubmed.ncbi.nlm.nih.gov/37257426>

Sedation prior to intubation at birth in infants with congenital diaphragmatic hernia: an international survey on current practices

<https://pubmed.ncbi.nlm.nih.gov/37279703>

Graphic intelligent diagnosis of hypoxic-ischemic encephalopathy using MRI-based deep learning model

<https://pubmed.ncbi.nlm.nih.gov/37231912>

Cerebral oxygenation during neonatal intubation with nasal high flow: a sub-study of the SHINE randomized trial

<https://pubmed.ncbi.nlm.nih.gov/37231978>

Essential fatty acid supplementation and early inflammation in preterm infants: secondary analysis of a randomized clinical trial

<https://pubmed.ncbi.nlm.nih.gov/37121228>

Assessment of comfort during less invasive surfactant administration in very preterm infants: a multicenter study

<https://pubmed.ncbi.nlm.nih.gov/37311430>

Combining MRI and spectral EEG for assessment of neurocognitive outcomes in preterm infants

<https://pubmed.ncbi.nlm.nih.gov/37290419>

Ending preventable neonatal deaths: multicountry evidence to inform accelerated progress to the sustainable development goal by 2030

<https://pubmed.ncbi.nlm.nih.gov/37231868>

Association of cystic periventricular leukomalacia and postnatal epilepsy in very preterm infants

<https://pubmed.ncbi.nlm.nih.gov/37071988>

Analysis of fractional cerebral oxygen extraction in preterm infants during the kangaroo care

<https://pubmed.ncbi.nlm.nih.gov/37285816>

Trends, characteristic, and outcomes of preterm infants who received postnatal corticosteroid: a cohort study from 7 high-income countries

<https://pubmed.ncbi.nlm.nih.gov/37166345>

Age-related prevalence of open ductus arteriosus in full-term newborns

<https://pubmed.ncbi.nlm.nih.gov/37285834>

Fetal high-risk APOL1 genotype increases risk for small for gestational age in term infants affected by preeclampsia

<https://pubmed.ncbi.nlm.nih.gov/37062283>

American Journal of Perinatology

Letter to the editor: Astaxanthin reduces the severity of intestinal damage in a neonatal rat model of necrotizing enterocolitis

<https://pubmed.ncbi.nlm.nih.gov/35144285/>

Partnerships in the comprehensive management of multisystem inflammatory syndrome in neonates (MIS-N): translating 2 years of pediatric practice to the neonatal wards

<https://pubmed.ncbi.nlm.nih.gov/35240695/>

Association of surgical necrotizing enterocolitis and its timing with retinopathy of prematurity

<https://pubmed.ncbi.nlm.nih.gov/34344041/>

Early vital sign differences in very low birth weight infants with severe intraventricular hemorrhage

<https://pubmed.ncbi.nlm.nih.gov/34450675/>

Impact of catheter choice on procedural success of minimally invasive surfactant therapy

<https://pubmed.ncbi.nlm.nih.gov/34560811/>

Early neonatal mortality among babies born with spina bifida in Finland (2000–2014)

<https://pubmed.ncbi.nlm.nih.gov/34428829/>

Ultrasound-guided cannulation of the great saphenous vein in neonates: a randomized study

<https://pubmed.ncbi.nlm.nih.gov/34450674/>

Rectal acetaminophen improves shunt volume and reduces patent ductus arteriosus ligation in extremely preterm infants

<https://pubmed.ncbi.nlm.nih.gov/34583409/>

Predictive ability of the new bronchopulmonary dysplasia definition on pulmonary outcomes at 20 to 24 months' corrected age of preterm infants

<https://pubmed.ncbi.nlm.nih.gov/34492722/>

Early antibiotic exposure in low-risk late preterm and term infants

<https://pubmed.ncbi.nlm.nih.gov/34492723/>

Complicated intubations are associated with bronchopulmonary dysplasia in very low birth weight infants

<https://pubmed.ncbi.nlm.nih.gov/34500482/>

Journal of Neonatal-Perinatal Medicine

No new content

Maternal Health, Neonatology and Perinatology

Intravenous immunoglobulin treatment of congenital parvovirus B19 induced anemia - a case report

<https://pubmed.ncbi.nlm.nih.gov/37544998/>

Neoreviews

Establishing a fetal center in a freestanding pediatric hospital

<https://pubmed.ncbi.nlm.nih.gov/37525312/>

Patent ductus arteriosus in preterm infants and innovative cardiac interventions

<https://pubmed.ncbi.nlm.nih.gov/37525318/>

Nutritional strategies to optimize outcomes among infants with congenital heart disease

<https://pubmed.ncbi.nlm.nih.gov/37525313/>

Multicenter clinical research in congenital heart disease: leveraging research networks to investigate important unanswered questions

<https://pubmed.ncbi.nlm.nih.gov/37525311/>

A 12-day-old infant presents with eye discharge

<https://pubmed.ncbi.nlm.nih.gov/37525310/>

Rare cause of nonimmune hydrops and severe liver dysfunction

<https://pubmed.ncbi.nlm.nih.gov/37525315/>

A term home birth with cardiopulmonary arrest on day 6

<https://pubmed.ncbi.nlm.nih.gov/37525314/>

Twin-twin transfusion syndrome in monochorionic diamniotic twins

<https://pubmed.ncbi.nlm.nih.gov/37525317/>

An infant with an episodic vesicular rash

<https://pubmed.ncbi.nlm.nih.gov/37525316/>

In utero presentation of left ventricular aneurysm

<https://pubmed.ncbi.nlm.nih.gov/37525319/>

JAMA Pediatrics

Association of extubation failure rates with high-flow nasal cannula, continuous positive airway pressure, and bilevel positive airway pressure vs conventional oxygen therapy in infants and young children: a systematic review and network meta-analysis

<https://pubmed.ncbi.nlm.nih.gov/37273226/>

BMC Pediatrics

Real-world evidence regarding the growth of very premature infants with small for gestational age after birth: a multicenter survey in China

<https://pubmed.ncbi.nlm.nih.gov/37653371/>

Factors influencing fathers' involvement in the care of hospitalized preterm newborns in Balaka, Malawi

<https://pubmed.ncbi.nlm.nih.gov/37644490/>

Physical activity and associations with health-related quality of life in adults born small for gestational age at term: a prospective cohort study

<https://pubmed.ncbi.nlm.nih.gov/37641030/>

Impact of prematurity on long-stay paediatric intensive care unit admissions in England 2008-2018

<https://pubmed.ncbi.nlm.nih.gov/37620856/>

Prognosis and clinical issues of esophageal atresia in extremely low birth weight neonates: a case series

<https://pubmed.ncbi.nlm.nih.gov/37587404/>

Maternal mental health after infant discharge: a quasi-experimental clinical trial of family integrated care versus family-centered care for preterm infants in U.S. NICUs

<https://pubmed.ncbi.nlm.nih.gov/37563722/>

Perinatal factors impacting echocardiographic left ventricular measurement in small for gestational age infants: a prospective cohort study

<https://pubmed.ncbi.nlm.nih.gov/37553638/>

Developmental outcomes of very low birth weight infants with catch-up head growth: a nationwide cohort study

<https://pubmed.ncbi.nlm.nih.gov/37553623/>

Early neurological and motor function in infants born moderate to late preterm or small for gestational age at term: a prospective cohort study

<https://pubmed.ncbi.nlm.nih.gov/37553581/>

Pediatric Critical Care Medicine

Centrifugal or roller blood pumps for neonatal venovenous extracorporeal membrane oxygenation: extracorporeal life support organization database comparison of mortality and morbidity

<https://pubmed.ncbi.nlm.nih.gov/37102713/>

Enteral nutrition during extracorporeal membrane oxygenation in the neonatal and pediatric populations: a literature review

<https://pubmed.ncbi.nlm.nih.gov/37039511/>

New England Journal of Medicine

Defining the neurologic consequences of preterm birth

<https://www.ncbi.nlm.nih.gov/pubmed/37530825>

Lancet

Planned delivery or expectant management for late preterm pre-eclampsia in low-income and middle-income countries (CRADLE-4): a multicentre, open-label, randomised controlled trial

<https://www.ncbi.nlm.nih.gov/pubmed/37393919>

JAMA

Cervical pessary for prevention of preterm birth in individuals with a short cervix: the TOPS randomized clinical trial

<https://www.ncbi.nlm.nih.gov/pubmed/37490086>

Prenatal intravenous magnesium at 30-34 weeks' gestation and neurodevelopmental outcomes in offspring: the MAGENTA randomized clinical trial

<https://www.ncbi.nlm.nih.gov/pubmed/37581672>

BMJ

Association between antenatal corticosteroids and risk of serious infection in children: nationwide cohort study

<https://www.ncbi.nlm.nih.gov/pubmed/37532264>

Pediatric Infectious Disease Journal

Bacterial colonization of the lower airways in children with esophageal atresia

<https://www.ncbi.nlm.nih.gov/pubmed/37171938>

Community versus vertically acquired neonatal sars-cov-2 infection: The EPICENTRE cohort study

<https://www.ncbi.nlm.nih.gov/pubmed/37463390>

Newborn exposed to the monkeypox virus: A brief report

<https://www.ncbi.nlm.nih.gov/pubmed/37079556>

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Medium-term outcome of prenatally diagnosed hypoplastic left-heart syndrome and impact of a restrictive atrial septum diagnosed in-utero

<https://pubmed.ncbi.nlm.nih.gov/37219587/>

Hemodynamic and echocardiographic characteristics and the presence of pulmonary hypertension in patent ductus arteriosus patients who underwent transcatheter closure

<https://pubmed.ncbi.nlm.nih.gov/37029813/>

Risk of in-hospital deterioration for children with single ventricle physiology

<https://pubmed.ncbi.nlm.nih.gov/37249601/>

A prospective evaluation of arrhythmias in a large tertiary neonatal intensive care unit

<https://pubmed.ncbi.nlm.nih.gov/36418551/>

Standardizing prostaglandin initiation in prenatally diagnosed ductal-dependent neonates; a quality initiative

<https://pubmed.ncbi.nlm.nih.gov/36538050/>

Timing of balloon atrial septostomy in patients with D-TGA and association with birth location and patient outcomes

<https://pubmed.ncbi.nlm.nih.gov/36565310/>

The utility of CT angiography in neonates with pulmonary atresia with intact ventricular septum and concern for right ventricular dependent coronary circulation: case series

<https://pubmed.ncbi.nlm.nih.gov/36729238/>

Safety and short-term outcomes for infants < 2.5 kg undergoing PDA device closure: a c3po registry study

<https://pubmed.ncbi.nlm.nih.gov/36995404/>

Pediatric Neurology

Fetal neurology practice survey: current practice and the future directions

<https://pubmed.ncbi.nlm.nih.gov/37290231/>

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Prenatal exposure to cannabis and risk of major structural birth defects: A systematic review and meta-analysis

<https://www.ncbi.nlm.nih.gov/pubmed/37473409>

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Long-term neurodevelopmental follow-up of children exposed to pravastatin in utero

<https://pubmed.ncbi.nlm.nih.gov/36842489/>

Hospital Pediatrics

Discharge best practices of high-risk infants from regional children's hospital NICU's

<https://pubmed.ncbi.nlm.nih.gov/37395085/>

BASIC SCIENCE SELECTIONS

MALAT1 binds to miR-188-3p to regulate ALOX5 activity in the lung inflammatory response of neonatal bronchopulmonary dysplasia

<https://www.ncbi.nlm.nih.gov/pubmed/37385102>

Targeting miR-146b-5p to regulate KDM6B expression aggravates bronchopulmonary dysplasia

<https://www.ncbi.nlm.nih.gov/pubmed/37584827>

Regulating NLRP3 inflammasome-induced pyroptosis via Nrf2: TBHQ limits hyperoxia-induced lung injury in a mouse model of bronchopulmonary dysplasia

<https://www.ncbi.nlm.nih.gov/pubmed/37556072>

ETS1 ameliorates hyperoxia-induced bronchopulmonary dysplasia in mice by activating Nrf2/HO-1 mediated ferroptosis

<https://www.ncbi.nlm.nih.gov/pubmed/37490064>

Effect of leuprolide acetate, a GnRH agonist, on neuroinflammation and anxiety-like behavior after mild hypoxic-ischemic encephalopathy in rat model

<https://www.ncbi.nlm.nih.gov/pubmed/37607495>

Astragaloside IV regulates TL1A and NF-kappaB signal pathway to affect inflammation in necrotizing enterocolitis

<https://www.ncbi.nlm.nih.gov/pubmed/37413858>

Overactivated epithelial NF-kappaB disrupts lung development in congenital diaphragmatic hernia

<https://www.ncbi.nlm.nih.gov/pubmed/37552822>

SYVN1 promotes STAT3 protein ubiquitination and exerts antiangiogenesis effects in retinopathy of prematurity development

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Transcription factor EGR1 Facilitates neovascularization in mice with retinopathy of prematurity by regulating the miR-182-5p/EFNA5 Axis

<https://www.ncbi.nlm.nih.gov/pubmed/37530910>

ADDITIONAL JOURNAL SELECTIONS

Reduced pulmonary oxygen diffusion at 36 weeks of postmenstrual age in small-for-gestational-age preterm infants of less than 32 weeks without bronchopulmonary dysplasia

<https://www.ncbi.nlm.nih.gov/pubmed/37594147>

Five-year follow-up of phase II trial of stromal cells for bronchopulmonary dysplasia

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Risk factors of transient tachypnea of the newborn developing into pulmonary hypertension of the newborn: a case-control study

<https://www.ncbi.nlm.nih.gov/pubmed/37551353>

Clinical decision thresholds for surfactant administration in preterm infants: a systematic review and network meta-analysis

<https://www.ncbi.nlm.nih.gov/pubmed/37538537>

Rigid versus soft catheter for less invasive surfactant administration: A crossover randomized controlled manikin trial

<https://www.ncbi.nlm.nih.gov/pubmed/37154505>

Surfactant administration during endotracheal CPAP: Feasibility, risk factors for failure and short-term outcomes of DD-SURF

<https://www.ncbi.nlm.nih.gov/pubmed/36946356>

Renal oximetry for early acute kidney injury detection in neonates with hypoxic ischemic encephalopathy receiving therapeutic hypothermia

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Educational achievement of children with selected major congenital anomalies and associated factors: a Finnish registry-based study

<https://www.ncbi.nlm.nih.gov/pubmed/37594898>

Fecal calprotectin as a non-invasive marker for the prediction of post-necrotizing enterocolitis stricture

<https://www.ncbi.nlm.nih.gov/pubmed/37594554>

Prediction of GutCheck NEC and its relation to severity of illness and measures of deterioration in necrotizing enterocolitis

<https://www.ncbi.nlm.nih.gov/pubmed/37339581>

Antenatal neuroprotective magnesium sulfate in very preterm infants and its association with feeding intolerance

<https://www.ncbi.nlm.nih.gov/pubmed/37580867>

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Bovine colostrum to supplement the first feeding of very preterm infants: The PreColos randomized controlled trial

<https://www.ncbi.nlm.nih.gov/pubmed/37437359>

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Validation of point-of-care ultrasound in the diagnosis of a diaphragmatic hernia

<https://www.ncbi.nlm.nih.gov/pubmed/37558049>

Long-term functional outcomes at 1-year after hospital discharge in critically ill neonates with congenital diaphragmatic hernia

<https://www.ncbi.nlm.nih.gov/pubmed/37098788>

Prospective longitudinal comparative study showed that breastfeeding outcomes were comparable in preterm twins and singleton infants

<https://www.ncbi.nlm.nih.gov/pubmed/37151109>

The importance of iron deficiency in pregnancy on fetal, neonatal, and infant neurodevelopmental outcomes

<https://www.ncbi.nlm.nih.gov/pubmed/37538010>

An analysis of factors affecting survival in prenatally diagnosed omphalocele

<https://www.ncbi.nlm.nih.gov/pubmed/37531153>

Neonatal thrombocytopenia: differing characteristics of NAIT versus Non-NAIT

<https://www.ncbi.nlm.nih.gov/pubmed/37027241>

Expectant management of patent ductus arteriosus for preterm infants: a meta-analysis of randomized controlled trials

<https://www.ncbi.nlm.nih.gov/pubmed/37567354>

Acetaminophen versus indomethacin for patent ductus arteriosus management in premature infants: systematic review and meta-analysis of randomized controlled trials

<https://www.ncbi.nlm.nih.gov/pubmed/37484043>

The association between hemodynamically significant patent ductus arteriosus and 25-hydroxyvitamin d levels in preterm infants \leq 32 weeks gestational age

<https://www.ncbi.nlm.nih.gov/pubmed/37477281>

Hemodynamic and echocardiographic characteristics and the presence of pulmonary hypertension in patent ductus arteriosus patients who underwent transcatheter closure

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