seating area for a welcoming environment. We will co-create virtual art-work with local YP for display. We will collate ongoing feedback on our changes from the YP using established methods. We will monitor attendance figures as a proxy for engagement with services and ultimately improve our patients' experience.

British Association of Perinatal Medicine and Neonatal Society

1252 NEONATAL SARS-COV-2 ANTIBODIES AT DAY 14 OF LIFE, 3.5-FOLD HIGHER THAN HER COVID-19 ASYMPTOMATIC MOTHER

¹James EG Charlesworth, ²ReeThee Bhatt, ³Poonam Kapila, ²Indranil Misra. ¹Department of Paediatrics, Milton Keynes University Hospital NHS Foundation Trust; ²Department of Paediatrics, Milton Keynes University Hospital NHS Foundation Trust; ³Department of Microbiology, Milton Keynes University Hospital NHS Foundation Trust

10.1136/archdischild-2021-rcpch.510

Background Throughout the COVID-19 pandemic, it has been unclear how SARS-CoV-2 infection (by vertical transmission or natural infection) would affect neonates, with a significant number of case reports and series identifying neonates requiring respiratory support. A single report suggests that paediatric multisystem inflammatory syndrome was demonstrated in a 24-day-old.

Together, these concerns justify screening for SARS-CoV-2 RNA and antibodies in unwell neonates without clear infective focus, particularly with high community prevalence. Maternal SARS-CoV-2 antibodies usually match those observed in the neonate.

We present a 14-day-old neonate with SARS-CoV-2 anti-nucleocapsid antibodies at a 3.5-fold greater concentration than her mother.

Objectives To describe differential SARS-CoV-2 antibody titres in a neonate and her asymptomatic mother.

Methods We conducted a retrospective review of clinical notes, with the mother's consent.

Results A female neonate was admitted on day 14 of life with fever and 1 day of jittery movements noted by her mother. She had a history of bilateral aniridia (partially observed in her father and brother, currently under clinical genetics investigations) and haemolytic anaemia (DAT positive at birth, on folic acid treatment). She had no syndromic features and was otherwise well. Born at term, by spontaneous vaginal delivery with an uneventful antenatal history.

Clinical examination was normal, other than a fever up to 39 degrees. She underwent a full septic screen including urinalysis, blood cultures and a lumbar puncture. Bloods demonstrated CRP 106 (maximally 136 at 24 hours), with normal full blood count. CSF microscopy showed significant white blood cells (WBC 347/ μ L with 65% neutrophils, RBC 105/ μ L), and no microorganisms. No microorganisms were demonstrated in CSF by BioFire[®] meningitis/encephalitis panel (including SARS-CoV-2 using BioFire[®] respiratory panel), or subsequent culture. However, admission urine was leukocyte, nitrite and glucose positive (WBC 21/ μ L by microscopy), growing *E. coli* and *Enterococcus*. US KUB was normal. Chest X-ray demonstrated hazy opacification but nil focal.

Given the presentation, the patient was treated with 7 days of IV cefotaxime and amoxicillin, covering for bacterial meningitis, clinically improving by day 2.

Due to presentation at the height of the second-wave of the COVID-19 pandemic, there was initial concern of SARS-CoV-2 infection. Her mother was asymptomatic, with negative nasopharyngeal swabs. Nasopharyngeal swabs for SARS-CoV-2 RNA in our patient were negative on day 0, 2 and 3 of admission. However, SARS-CoV-2 anti-nucleocapsid (1.84 AU/mL, positive threshold ≥ 1.4 AU/mL) IgG was demonstrated. Given the unexpected result, her mother was tested, initially reported as negative, later revised to borderline (0.53 AU/mL). Both were re-tested 10 days from discharge. Anti-nucleocapsid results were reproduced, whereas both mother and patient had significant anti-spike IgG (312.4 and 98.3 AU/mL, respectively, positive threshold ≥ 50 AU/mL), without vaccination.

Conclusions We highlight the need to corroborate SARS-CoV-2 antibodies in neonates with paired maternal samples, and to explore both anti-spike serology with discordant anti-nucleocapsid results. Our case results from an asymptomatic infection, likely close to birth, producing differential active transport of anti-nucleocapsid antibodies across the placenta, producing 3.5-fold higher neonatal titres.

British Association of Perinatal Medicine and Neonatal Society

1253 NONINVASIVE CONTINUOUS STROKE VOLUME MONITORING IN TERM AND LATE PRETERM NEONATES USING WHOLE BODY ELECTRICAL BIOIMPEDANCE: A CLINICAL VALIDATION STUDY

¹Roshni Mansfield, ²Sundar Sathiyamurthy, ³Christoph Lees, ⁴Jayanta Banerjee. ¹Department of Neonatology, Queen Charlotte's and Chelsea Hospital, Imperial College Healthcare NHS Trust; Biomedical Research Centre, Imperial College London; ²Department of Neonatology, Queen Charlotte's and Chelsea Hospital, Imperial College Healthcare NHS Trust; ³Institute of Reproductive and Developmental Biology, Department of Metabolism, Digestion and Reproduction Faculty of Medicine, Imperial College London; Department of Fetal Medicine, Queen Charlotte's and Chelsea Hospital, Imperial College Healthcare NHS Trust; ⁴Department of Neonatology, Queen Charlotte's and Chelsea Hospital, Imperial College Healthcare NHS Trust; Institute of Reproductive and Developmental Biology, Department of Metabolism, Digestion and Reproduction Faculty of Medicine; Origins of Child Health and Disease, Centre for Paediatrics and Child Health, Imperial College London

10.1136/archdischild-2021-rcpch.511

Background Non-invasive, continuous monitoring of cardiac output (CO) could transform care of sick neonates through earlier detection and improved targeted management of cardiovascular compromise. Whole body electrical bioimpedance (WBEB) has been developed for non-invasive CO measurement but has yet to be validated for use in neonates. WBEB may have significant advantages over intermittent, operator-dependent echocardiography.

Objectives This study aimed to validate WBEB (NICaS monitor, NI Medical, Israel) for use in healthy, term and late preterm neonates, compared to echocardiography.

Methods Well neonates <12 hours old born to healthy mothers at ≥ 35 weeks gestational age were recruited. Two NICaS monitor pads were applied to supine babies in a left wrist-right ankle configuration for two hours; an echo was performed during this time by a consultant neonatologist trained in echocardiography. Left ventricular (LV) stroke volume (SV)