



September 17th, 2021 08:30 - 10:30

PARALLEL SESSION 25 – UENPS 2

ID 367. CASE REPORT OF SEPTIC PULMONARY EMBOLIZATION IN A NEONATE: COULD IT BE A MANIFESTATION OF MIS-N?

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Background: Multisystem inflammatory syndrome in children is characterized by fever, MODS and elevated inflammatory markers following COVID-19 infection. So far, 3 cases of Neonatal MIS-C (MIS-N) are reported. A 33week preterm with pericardial effusion and two cases of neonates with respiratory failure and pulmonary hypertension. All mothers had COVID-19 infection, and neonates had elevated inflammatory markers, reported as possible MIS-N. Micro-organisms can cause pulmonary cavities either by entering via oropharynx, causing necrotizing pneumonia, or via the bloodstream as septic pulmonary emboli. We report a neonate who had multiple cavitory lesions in lung, which we suspect could be a presentation of MIS-N.

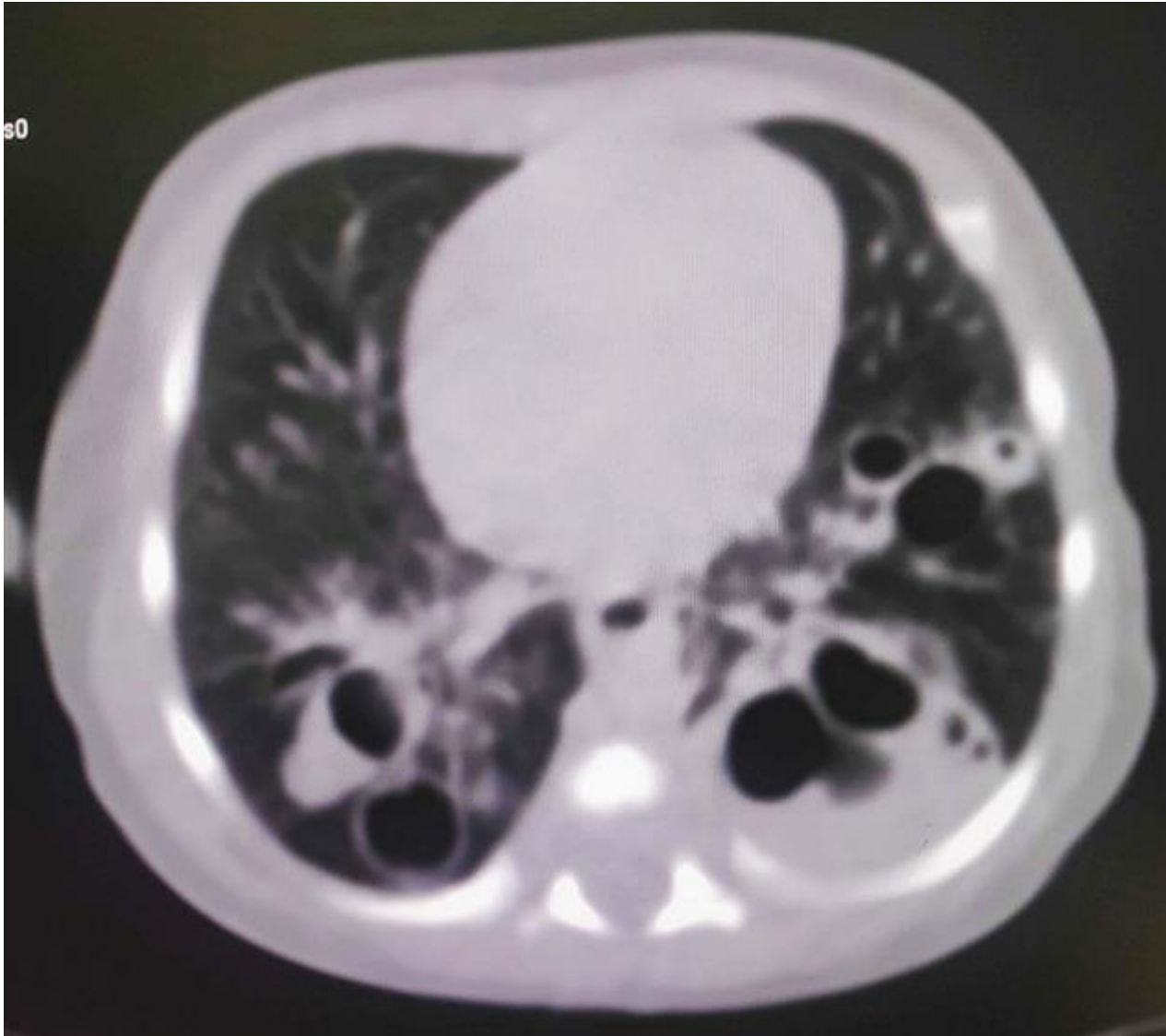
Case report: Term, male, 2.4kg, born by C-Section, referred on 8th day with fever and fast breathing. Mother positive for COVID-19 in 29th week of pregnancy. Neonate was started on Oxygen in view of 89% saturation. The total leukocyte count was 31200/cu.mm, CRP 9.8mg% and procalcitonin 6.34ng/ml. Antibiotics were started, but BACTEC, Urine and CSF cultures were sterile. Chest-radiograph showed bilateral, perihilar opacities. COVID-19 RT-PCR was negative. In view of persisting fever and history of maternal COVID infection, baby was investigated for Inflammatory syndrome. The COVID antibodies were positive with raised Ferritin and LDH. Echocardiogram normal. The HRCT thorax showed multiple nodules with evidence of cavitation in both lungs, suggestive of septic emboli. Workup for tuberculosis was negative. Full body contrast scan to rule out rare possibility of metastatic spread did not find anything significant. Since the cultures were negative and neonate was not responding to antibiotics, along with raised inflammatory markers, a possible diagnosis of MIS-N was made. Intravenous Immunoglobulin was administered to the neonate after which resolution of respiratory symptoms was noted.

Conclusion: MIS-N can occur following in-utero exposure to SARS-CoV-2. It's known that hyperinflammatory state of MIS-C predisposes thromboembolic complications, including pulmonary emboli. After having ruled out bacterial sepsis, the case reported by us, could be a possible Inflammatory response to antenatal exposure to COVID-19 causing pulmonary emboli. Hence, in future, neonates exposed to COVID-19 should also be evaluated for thromboembolic complications.



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None Declared



ID 99. SARS-CoV-2 status and immune profiling of breastmilk in pregnant women: A case-control study.

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BACKGROUND

Transmission of SARS-CoV-2 through human milk has not been documented. However, more data are needed on its safety and efficacy in providing immune compounds in infected woman. This research aims to address questions related on the safety and the efficacy of breastmilk feeding of neonates born to mothers with non-severe SARS-CoV-2 infection: the prevalence of viral RNA in breastmilk according to SARS-CoV-2 status, the impact of SARS-CoV-2 infection on the milk profile of cytokines, chemokines and growth factors, and the evolution of the concentrations of such immune compounds during the first five weeks of lactation.

METHODS:

This multicenter prospective case-control study was conducted in 37 clinically stable, SARS-CoV-2 positive term pregnant women (study group), and in 45 SARS-CoV-2 negative women in identical conditions (control group), using consecutive sample. Participants collected and stored breastmilk every 72h during the first month postpartum. Reverse transcription polymerase chain reaction (RT-PCR) was used for viral detection. Thirty soluble immune factors in colostrum and mature breastmilk were measured by magnetic bead-based multiplex immunoassays.

RESULTS:

Demographics and relevant clinical data of mother-infant dyads were comparable between groups. Symptomatic infection was present in 56.8% of mothers in the study group. All breastmilk samples were negative for SARS-CoV-2 RNA. Colostrum-transition breastmilk of the study group showed higher concentrations of most factors (interferon- γ , interleukins -1ra, 4, 6, 7, 9,13-, tumor necrosis factor- α , Eotaxin, interferon produced protein-10, macrophage inflammatory protein-1 α , regulated on activation normal T-cells expressed and secreted, fibroblast growth factor, granulocyte-macrophage colony stimulating factor, and platelet-derived growth factor BB) compared to controls. These compounds tended to decreased in mature milk, particularly in the control group. Time of nasopharyngeal RT-PCR to become negative but not disease severity, influenced the immune compound milk profile.

CONCLUSION:

This study confirms no viral RNA and a distinct immunological profile in breastmilk according to mother's SARS-CoV-2 status indicating efficient reaction, being especially suitable to protect the recipient children. None declared



ID 438. THREE PEAKS COVID-CHALLENGE AND NEONATAL OUTCOMES IN A LARGE UK TERTIARY CENTRE WITH A HIGH BAME POPULATION

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BACKGROUND

The risk of perinatal transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been eluded to but still remains somewhat unknown. COVID-19 has caused significant morbidity and mortality particularly within Black, Asian and Minority Ethnic (BAME) population. Yet published evidence of perinatal outcomes of affected BAME pregnancies is limited.

METHODS

Retrospective cohort study was conducted of all neonates born to mothers testing positive for SARS-CoV-2 within 7 days of delivery at a large perinatal centre between March 2020-March 2021 encompassing the three peaks in the UK of SARS-CoV-2. A subgroup analysis on BAME pregnancies was also performed. Since May 2021, all mothers were swabbed at admission with RT-PCR (prior to this, only symptomatic women were tested with RT-PCR). All infants admitted to NNU born to positive or suspected mothers were swabbed on day 3 and day 5. Routine weekly RT-PCR of admitted neonates began in Nov 2021.

RESULTS

Of approximately 9000 births during the study period, 88 COVID positive mothers delivered 89 neonates. 67 mothers (76%) were from BAME groups. Of the 89 neonates, 13 (15%) required NNU admission, 5 of which were pre-term. 8 had respiratory distress syndrome requiring respiratory support, all but one of these were born to BAME mothers. These infants followed usual neonatal clinical course. Only two infants tested positive during this time- one tested positive at day 3 and day 5 and remained positive till day 20 which is likely vertical transmission. The other infant tested positive at 2 months of age having previously tested negative; likely horizontal transmission however was asymptomatic during the time and were picked on routine weekly PCR swabs. No other infants tested positive on symptomatic screening for COVID. The other 76 babies remained well and stayed on the postnatal wards with their mothers. 55% of infants were breast fed, none of whom went on to develop symptoms of COVID.

CONCLUSION

The BAME pregnancies appear to have been disproportionately affected by COVID-19, significant numbers delivered prematurely and needing admission to neonatal unit. However, reassuringly, insignificant perinatal transmission and severity was noted in neonates and breast feeding appeared safe with appropriate infection control measures.

None declared



ID 368. Extremely preterm infant admissions within the SafeBoosC-III consortium during the COVID-19 lockdown

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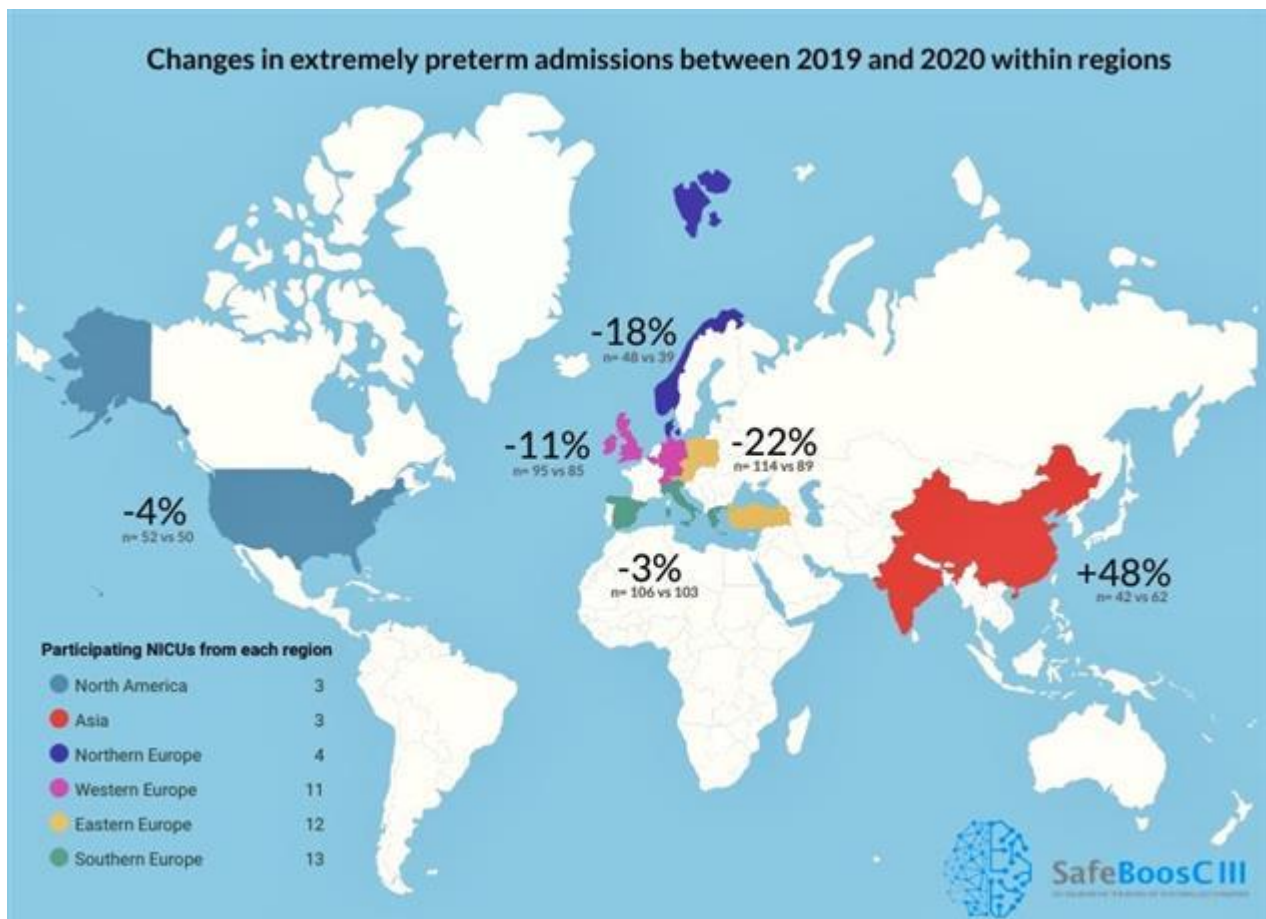


Objective: To evaluate if the number of admitted extremely preterm (EP) infants (born before 28 weeks of gestational age) differed in the neonatal intensive care units (NICUs) of the SafeBoosC-III consortium during the global lockdown when compared to the corresponding time period in 2019.

Design: This is a retrospective, observational study. Forty-six out of 79 NICUs (58%) from 17 countries participated. Principal investigators were asked to report the following information: 1) Total number of EP infant admissions to their NICU in the three months where the lockdown restrictions were most rigorous during the first phase of the COVID-19 pandemic, 2) Similar EP infant admissions in the corresponding three months of 2019, 3) the level of local restrictions during the lockdown period and 4) the local impact of the COVID-19 lockdown on the everyday life of a pregnant woman.

Results: The number of EP infant admissions during the first wave of the COVID-19 pandemic was 428 compared to 457 in the corresponding three months in 2019 (- 6.6%, 95% CI -18.2 to + 7.1%, p=0.33). There were no statistically significant differences within individual geographic regions and no significant association between the level of lockdown restrictions and the difference in the number of EP infant admissions. A post hoc analysis based on data from the 46 NICUs found a decrease of 10.3% in the total number of NICU admissions (n=7499 in 2020 vs n=8362 in 2019).

Conclusion: This ad hoc study did not confirm previous reports of a major reduction in the number of extremely preterm births during the first phase of the COVID-19 pandemic.



Change in percent in extremely preterm admissions between three months in 2020, compared to the corresponding months of 2019 in the 46 participating NICUs in the SafeBoosC-III consortium.

The authors declare that they have no competing interests