ID 389 - INCREASINGLY ACTIVE MANAGEMENT OF EXTREMELY PRETERM INFANTS BORN AT HOSPITALS WITHOUT LEVEL III NEONATAL INTENSIVE CARE IN SWEDEN.

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**BACKGROUND**

A comparison of two Swedish population-based cohorts of deliveries at 22-26 weeks of gestation, 2004-2007 vs. 2014-2016 (1), showed that an increasing proportion occurred in hospitals with level III neonatal care (inborn infants). However, a number of extremely preterm infants (13% in 2014-2016) are still born in hospitals without neonatal level III facilities. We examined the management and outcomes of these outborn infants.

**METHODS**

Data was retrieved from two population-based study databases covering all births at 22+0 to 26+6 weeks of gestation during two three-year periods in Sweden. Data for live-born infants (n=1602) was analyzed by inborn/outborn status and birth cohort (2004-2007 and 2014-2016) regarding selected birth characteristics and ante-/perinatal interventions. Primary outcome was survival to one year. Secondary outcomes included severe IVH (grade 3-4), NEC (Bell’s stage 2 or higher), severe BPD, severe ROP (grades 3-5), and survival without any of these morbidities.

**RESULTS**

In outborn infants, 1-year survival increased from 57% to 71% (p=0.021). Prenatal characteristics of outborn infants changed over time, with chorioamnionitis, preterm prelabor rupture of membranes and fetal growth restriction being less common in the second time period. Delivery room deaths decreased markedly (from 22% to 5%, p<0.001) and a higher proportion of infants received surfactant <2 h after birth during 2014-2016 (47% vs. 80%, p<0.001); these differences were most pronounced in infants born at 22-23 weeks of gestation. Severe IVH was more common in outborn than in inborn infants during both time periods (22% vs. 14% in 2004-2007, p=0.05, and 22% vs. 13% in 2014-2016, p=0.03), but there were no other differences in major morbidities between inborn and outborn infants. While 1-year survival without major morbidity increased from 33% to 40% (p=0.005) in infants born at level III, it remained unchanged in infants born at level I-II (29% vs. 34%, p=0.50).
CONCLUSION
The observed changes in prenatal characteristics, delivery room deaths, and postnatal interventions in outborn infants reflect a more active approach to the management of extremely preterm births in level I-II hospitals, markedly for the most preterm infants. The higher rate of severe IVH in outborn infants is a remaining issue.

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None of the authors have any conflicts of interest to declare.
Background:
The Dutch Surveillance Center of Pediatrics (NSCK) registry on Sudden Unexpected Postnatal Collapse (SUPC) was set up in April 2019 and will run for three years. SUPC is caused by a variety of underlying diseases, and SUPC may result from postural asphyxia: accidental suffocation due to an obstructed airway. From the first data of eight SUPC cases that has been presented at the JENS in September 2019 we concluded that SUPC occurs in the Netherlands. Pediatricians and midwives were encouraged to register every possible SUPC case in the near future. Meanwhile, awareness of SUPC and early recognition of possible airway compromise during skin-to-skin contact was stressed as being essential. With the registry we aim to determine the incidence of SUPC and associated factors in the Netherlands.

Methods:
All pediatricians nationwide are asked to voluntarily report on cases of SUPC via a web-based questionnaire. The case definition of SUPC is: a newborn ≥ 35 weeks of gestational age with an Apgar score ≥ 8 after 5′ who presents with cardiorespiratory collapse necessitating resuscitation within 24 h of birth. Resuscitation also includes airway management.

Results:
In total, 36 SUPC cases have been registered in 24 months: 15 and 21 in the first and second year, respectively (Table). The corresponding incidence varies from 0.09/1000 (1/11,000) to 0.13/1000 (1/8000) live born newborn infants ≥ 35 weeks’ gestation. Six occurred at home, 30 in the hospital (24 in the delivery room), usually after a spontaneous vaginal delivery. Newborn infants were frequently found on their mother’s breast or chest after 85 [10-1420] minutes. Underlying cause: possible obstructed airway (n=9), obstructed airway (n=7), pulmonary hypertension (n=6), delayed transition (n=4), infection (n=3), other (n=7). Outcome: Five infants died, 31 are alive of whom 5 may suffer neurological sequelae.

Conclusion:
SUPC occurs mainly in the first hours in the delivery room, but also at home. Antenatal information to parents on safe of skin-to-skin practices (without airway compromise), and close observation of apparently healthy newborn infants in the first few hours after birth are essential.
<table>
<thead>
<tr>
<th>Place of SUPC</th>
<th>SUPC (n=36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>30</td>
</tr>
<tr>
<td>Home</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of delivery</th>
<th>SUPC (n=36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal vaginal delivery</td>
<td>26</td>
</tr>
<tr>
<td>Instrumental vaginal delivery</td>
<td>4</td>
</tr>
<tr>
<td>C-Section</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time, minutes</th>
<th>85 [10-1420]</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (in first blood gas after collapse)</td>
<td>7.13 [6.54-7.41]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Underlying cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible airway obstruction</td>
</tr>
<tr>
<td>Airway obstruction</td>
</tr>
<tr>
<td>Pulmonary hypertension</td>
</tr>
<tr>
<td>Delayed transition</td>
</tr>
<tr>
<td>Infection</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death</td>
</tr>
<tr>
<td>Alive</td>
</tr>
<tr>
<td>Suspected for long-term sequelae</td>
</tr>
<tr>
<td>Probably no long-term sequelae</td>
</tr>
</tbody>
</table>

Data are expressed as numbers or median [ranges];
SUPC, sudden unexpected postnatal collapse

Table. Characteristics of infants with SUPC
None declared
ID 260 - MEASURING SEVERE NEONATAL MORBIDITY USING HOSPITAL DISCHARGE DATA IN FRANCE

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Objective
Our aim was to adapt the Neonatal Adverse Outcome Indicator (NAOI), which measures severe neonatal morbidity using hospital discharge data, to a French context and to describe its prevalence and risk factors in France.

Methods
We constituted a cohort of live births ≥24 weeks’ gestational age (GA) in Metropolitan France from 2014-2015 using hospital discharge, insurance claims and cause of death data. Outlier hospitals were identified with funnel plots of standardised morbidity ratios and their coding patterns were assessed. We compared the NAOI and its component codes with published English and Australian data and estimated unadjusted and adjusted risk ratios (RR / aRR) for known risk factors of neonatal morbidity.

Results
The cohort included 1,459,123 births in 511 hospitals. Twenty-eight hospitals (4.4% of births, 10.6% of NAOI cases) were above 98% funnel-plot control limits. Newborns with NAOI morbidities in outlier hospitals had lower mortality and shorter stays than in other hospitals. Among within-limit hospitals, NAOI prevalence was 4.9%, comparable to Australia (4.6%) and England (5.4%). Most individual components were similar, with differences for respiratory support, intravenous fluid procedures and infection. NAOI was lowest at 39 weeks GA (2.2%) with higher risks associated with maternal age over 40 (RR [95% confidence interval] = 1.46 [1.42-1.51]), state medical assistance (1.59 [1.52-1.67]), male sex (1.21 [1.19-1.23]) and birthweight <3rd percentile (4.60 [4.51-4.69]).

Conclusion
The NAOI provides valuable information on population prevalence of severe neonatal morbidity and its risk factors; further work to harmonize coding will improve national and international benchmarking.

None declared
ID 135 - VALIDATION OF AN AUTOMATIC SURVEILLANCE SYSTEM TO MONITOR CRITICAL OUTCOMES AND ADHERENCE TO QUALITY INDICATORS FOR PRETERM INFANTS

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¹Radboudumc, Nijmegen, Netherlands, ²Erasmusmc, Rotterdam, Netherlands

Background
The Neonatal Intensive Care Unit (NICU) of Radboudumc Amalia’s Children’s hospital has implemented a quality improvement initiative with development of a database automatically extracting data from electronic patient chart system (EPIC). The objective of this study is to evaluate the validity of the present database and to study whether adherence to four evidence-based practices in care for very preterm infants can be calculated using this database. These four practices are: 1) delivery in a tertiary centre, 2) administration of antenatal corticosteroids (ACS), 3) prevention of admission hypothermia and 4) surfactant administered within two hours of birth or early nasal CPAP in infants born before 28 weeks’ gestation.

Methods
This is a cross-sectional validation study of a sample of newborns admitted between 01-01-2015 and 01-06-2020. Initially, 29 variables of the database were compared to the corresponding data entered in EPIC, with EPIC-data as reference standard. For all data validity was assessed by determining agreement (percentage) and completeness (percentage missing). In addition, sensitivity and specificity were calculated for key variables. Subsequently, adherence to the four evidence-based practices was calculated and a syntax was created for automatic surveillance in the future.

Results
13 of the 25 clinical variables examined showed an excellent agreement of 100% and no missing data. For other variables, the majority showed a high agreement (>93%) with data missing at times, indicating scope for improvement. Only 2 variables scored a lower agreement (table 1). Recommendations to enhance the data quality registered in EPIC and the automatic extraction will be presented. The assessment of the adherence to the evidence-based practices showed a lower level of adherence when using data from the database (46,4%) than using data manually extracted from EPIC (62,5%), indicating that calculations of data from the database result in an underestimation of the adherence.

Conclusion
Many clinical variables of the database had excellent validity. Some variables warrant strengthening through improved definitions, algorithm coding changes and improved registration in EPIC. With use of the recommendations and the created syntax, we show that automatic surveillance is feasible.
Table 1: Validation measures data from the database, using data from EPIC as reference standard.

<table>
<thead>
<tr>
<th></th>
<th>% Agreement (N)</th>
<th>% Missing (N)</th>
<th>% Sensitivity (95% CI)</th>
<th>% Specificity (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>100 (350)</td>
<td>0 (0)</td>
<td>100 (-)</td>
<td>100 (-)</td>
</tr>
<tr>
<td>Date of birth</td>
<td>100 (350)</td>
<td>0 (0)</td>
<td>100 (-)</td>
<td>100 (-)</td>
</tr>
<tr>
<td>Multiple birth (twin or higher order)</td>
<td>100 (350)</td>
<td>0 (0)</td>
<td>100 (-)</td>
<td>100 (-)</td>
</tr>
<tr>
<td>Gestational age (weeks)</td>
<td>100 (350)</td>
<td>0 (0)</td>
<td>100 (-)</td>
<td>100 (-)</td>
</tr>
<tr>
<td>Birth weight (grams)</td>
<td>100 (350)</td>
<td>0 (0)</td>
<td>100 (-)</td>
<td>100 (-)</td>
</tr>
<tr>
<td>First weight measured in 24 hours (grams)</td>
<td>31.7 (113)</td>
<td>68.3 (239)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apgar score 5 minutes</td>
<td>100 (350)</td>
<td>0 (0)</td>
<td>100 (-)</td>
<td>100 (-)</td>
</tr>
<tr>
<td>Mortality</td>
<td>100 (350)</td>
<td>0 (0)</td>
<td>100 (-)</td>
<td>100 (-)</td>
</tr>
<tr>
<td>Date and time of death</td>
<td>100 (350)</td>
<td>0 (0)</td>
<td>100 (-)</td>
<td>100 (-)</td>
</tr>
<tr>
<td>Diagnosis ROP</td>
<td>97.7 (342)</td>
<td>2.3 (8)</td>
<td>0 (-)</td>
<td>100 (-)</td>
</tr>
<tr>
<td>Diagnosis NEC</td>
<td>99.1 (347)</td>
<td>0.3 (1)</td>
<td>97.4 (86.52-99.94)</td>
<td>99.4 (97.70-99.92)</td>
</tr>
<tr>
<td>Diagnosis IVH</td>
<td>85.4 (299)</td>
<td>10.9 (38)</td>
<td>55.3 (44.41-66.09)</td>
<td>95.1 (91.76-97.36)%</td>
</tr>
<tr>
<td>First location of admission</td>
<td>100 (350)</td>
<td>0 (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Admission temperature</td>
<td>100 (350)</td>
<td>0 (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Admission temperature date and time</td>
<td>100 (350)</td>
<td>0 (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st administration of ACS</td>
<td>97.4 (341)</td>
<td>2.6 (9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd administration of ACS</td>
<td>97.4 (341)</td>
<td>2.6 (9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd administration of ACS</td>
<td>98.9 (346)</td>
<td>1.1 (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd administration of ACS</td>
<td>98.9 (346)</td>
<td>1.1 (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surfactant administration</td>
<td>98.3 (344)</td>
<td>1.7 (6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surfactant administration</td>
<td>97.7 (342)</td>
<td>1.7 (6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPAP initiation</td>
<td>99.7 (349)</td>
<td>0.3 (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NICU admission (date and time)</td>
<td>100 (350)</td>
<td>0 (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NICU discharge (date and time)</td>
<td>100 (350)</td>
<td>0 (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital admission mother</td>
<td>93.1 (326)</td>
<td>6.9 (24)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Missing data is defined as missing or blank data in the database, whereas these data were present in the medical record in EPIC.
ID 273 - INCIDENCE OF PERINATAL ASPHYXIA AND HYPOXIC-ISCHEMIC ENCEPHALOPATHY BEFORE AND AFTER IMPLEMENTATION OF THERAPEUTIC HYPOTHERMIA – A POPULATION-BASED STUDY

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²Department of Pediatrics, St. Olavs Hospital, Trondheim University Hospital, Trondheim, Norway

Background:
Perinatal asphyxia leading to hypoxic-ischemic encephalopathy (HIE) is the leading cause of brain injury in term infants. Therapeutic hypothermia (TH) has been reported to reduce adverse outcomes after moderate/severe HIE with 25% and was implemented in Norway in 2007. However, there are no recent studies on the incidence of HIE, and the effect of implementation of TH in Norway is unknown.

Methods:
This is a retrospective population-based observational study of term and near-term infants born between 2003 and 2011 in the county of Sør-Trøndelag and admitted to the neonatal intensive care unit (NICU), St. Olavs Hospital, Norway for more than 24 hours with a diagnosis and clinical history consistent with perinatal asphyxia. Medical data were collected from hospital records and the Cerebral Palsy Registry of Norway. Adverse outcome was defined as death or survival with cerebral palsy. TH was implemented in June 2007, and results before and after this time were compared.

Results:
Of 35,081 live born infants, 258 (7.4 per 1000) were admitted to the NICU with perinatal asphyxia and included in the study (116 before (7.1 per 1000) and 142 after TH (7.6 per 1000)). In total, 118 infants (3.4 per 1000) were diagnosed with HIE, and 48 infants (1.4 per 1000) had moderate/severe HIE. Among included infants, significantly more infants were diagnosed with HIE after implementation of TH (36.2% versus 53.5%, p=0.005). There was no difference in the proportion of infants having moderately/severely abnormal MRI between the two time periods (6.0% before vs 5.6% after TH, p=0.891). A total of 20 infants (7.8% of included infants or 0.57 per 1000 live born) died or survived with cerebral palsy. Adverse outcome occurred in 1.5%, 2.9% and 34.8% of infants with no, mild and moderate/severe HIE, respectively. There was no significant difference before and after implementation of TH.

Conclusion:
Despite similar admission rates related to perinatal asphyxia, there was an increase in the incidence of HIE after implementation of TH. This may be related to an increased attention to neurological status as this is the main inclusion criteria for TH.

None declared
ID 514 - LIFE-STYLES AND USE OF LEISURE TIME IN A PROSPECTIVE AREA BASED-COHORT OF SCHOOL-AGE VERY PRETERM CHILDREN IN ITALY.

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**BACKGROUND.**
Life-styles and use of leisure time are important aspects of the life of children and adolescents. Most existing research focusses on high-risk behaviors, while wellbeing enhancing activities are less often considered. Data regarding children born preterm and very preterm (VP) are lacking.

**METHODS.**
We used the data of a prospective area-based cohort study (ACTION) carried out in Italy to analyze the activities carried out by school-age children born VP (i.e. <32 completed weeks of gestational age, GA) outside school-time. Data were collected using a structured questionnaire administered to parents at the time of follow-up assessment. The reported activities were grouped as non-sedentary (NS, i.e. any sport, gym and dance), sedentary active (SA, i.e. reading and studying extra-curricula topics including playing music, languages, arts) and sedentary passive (SP, i.e. listening to music and television viewing). 804 children in three Italian regions participated (response rate: 73.4%). For this study we excluded children with cerebral palsy (n. 58), severe vision and/or hearing impairments (n. 15). Thus, 731 cases were analyzed.

**RESULTS.**
Mean age at assessment was 9 y. Most children (n. 411, 56%) were males. Almost 19% (n. 137) had a foreign mother. The proportion of children carrying out at least one activity per group were 77, 91 and 100% for NS, SA and SP respectively. In contrast, those who did not carry out any extra-curricula activity were 156 (23%), 65 (9%) and 2 (0.3%) (Figure). Girls were significantly more likely than males to carry out SA activities (p <0.001). Cognitive score had a statistically significant positive relation with participation in both NS and SA, but not with SP activities. Children of Italian native mothers, and those of mothers with higher education, were significantly more likely to perform sports (NS).

**CONCLUSIONS**
Our study shows that most very preterm children without severe neuromotor or sensory disabilities at school age carry out a range of extra-curricula activities with high frequency. Both biological and socio-economic variables influence NS and SA participation, while SP activities are almost universal.
Figure. Proportions of children participating in extra-curricula activities. None declared.
ID 132 - PREVALENCE OF TRAUMATIC LUMBAR PUNCTURES AMONG NEONATES

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BACKGROUND

Failures in lumbar punctures (LP) in neonates are common requiring further attempts to get an eligible sample of cerebrospinal fluid (CSF). Neonatal CSF samples are often severely blood-tinged compromising the diagnostic accuracy, which can be crucial in many cases. In this study, we scrutinized factors accounting for the prevalence of traumatic LPs (TLP) among neonates.

METHODS

Using the hospital registers, we retrospectively gathered red blood cell (RBC) count data from all CSF samples collected from neonates (≤28 days old) in two university hospitals during a period from Jan 1, 2011, to May 31, 2017. RBC count data were obtained from a total of 1327 LPs of 1197 different neonates. The visual threshold for blood in CSF (≥400 RBC/µL) was chosen as the criterion of TLP. We examined specifically the associations of age at the first LP, the first LP per se, and the time since the preceding LP with the prevalence of TLP. Statistical comparison was made with the Chi-squared test.

RESULTS

The overall prevalence of TLP in all neonatal LPs was 46.9%. At the time of their first LP, neonates’ median age was 1 day (interquartile range IQR 1–2). The prevalence of TLP in the first LP did not differ between the patients who were ≤1 day old or ≥2 days old (45.1% vs. 40.4%, p=0.12). The prevalence of TLP in the patients’ first LP was 44.4% but was significantly higher (69.2%) in the subsequent LPs (p<0.0001). The median time between the subsequent LPs was 2 days (IQR 2–3). When the time since the preceding LP was ≤2 days, the prevalence of TLP was 75.0% but turned significantly lower 55.3% (p=0.027) for a longer time between the subsequent LPs.

CONCLUSION

This large retrospective register-based analysis of RBC count data in the neonatal CSF samples corroborates that the prevalence of TLP is high affecting almost half of procedures. The first LP is associated with a lower prevalence of TLP. Likewise, a longer time between subsequent LPs is associated with a lower prevalence, whereas the neonate’s age seems not to substantially alter the prevalence of TLP.

JK and HSi are employees of Injeq Oy, a start-up company manufacturing bioimpedance spinal needles. VE, SP, HSo, and PL declare no conflict of interest.
ID 558 - URINARY TRACT INFECTIONS IN NEONATES: A 12-YEAR PERIOD RETROSPECTIVE STUDY
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1Dept. of Neonatology and NICU, University Hospital of Heraklion, Medical School, University of Crete, Heraklion, Greece

BACKGROUND:
Urinary tract infections (UTIs) in neonates have an incidence between 10.7% and 15.4% in febrile neonates, and 0.1-1.8% in total during the first days of life. Common pathogens and clinical presentation differ from older infants and underlying congenital malformations of the urinary tract may be present. No consensus exists on proper imaging of the neonate with UTI.

METHODS:
The aim of the present study was to evaluate the epidemiology as well as to identify certain features that can predict abnormal imaging findings in neonates with UTI. A thorough retrospective study was conducted on neonates’ medical records with UTI that were admitted to NICU in the University Hospital of Crete from 2009 to 2020.

RESULTS:
A total of 73 neonates were included, 60 male and 13 female. Gestational age ranged from 28+4 to 40+5 weeks (median 37+4 weeks), while the majority (71.2%) were full-term neonates. Fifty-nine percent were in good clinical condition, whereas only 16.4% were severely ill. There was a wide variety of clinical manifestations: fever was present only in 47.9%, poor feeding, vomiting, diarrhea and/or inadequate weight gain in 50.7%, grunting, tachypnea, apnea in 27.4%, and jaundice in 17.8%. The most common pathogens isolated were E. coli (41.1%), Klebsiella pneumonia (31.5%), Enterobacter cloacae (8.2%), Enterococcus faecium (8.2%), and Klebsiella oxytoca (6.8%). C-reactive protein (CRP) was positive in 41%, while 11% had cerebrospinal fluid pleocytosis. Abnormal ultrasound findings were revealed in 39.7%, and 15% had abnormal voiding cystourethrography (VCUG). Septicemia was present in 8 out of 73 neonates, of which 7 also had abnormal imaging (87.5%). Prenatal renal pelvic distension was present in 11% of the neonates, all of which also had abnormal postnatal ultrasound findings. Non-E.coli UTI and elevated CRP were also found to be predisposing factors for abnormal imaging.

CONCLUSION:
Only 15% of neonates with UTI in our NICU had abnormal VCUG findings. Further research should be done towards defining whether non-E.coli UTI, elevated CRP and concurrent sepsis could be acknowledged as risk-factors for abnormal imaging.

None declared
ID 474 - ACUTE KIDNEY INJURY AMONG SMALL FOR GESTATIONAL AGE NEONATES

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1Post Graduation Institute Of Medical Education And Research, Chandigarh, India

Background:
The incidence of renal dysfunction in neonates with small for gestational age (SGA) is currently unknown. We studied the incidence, risk factors of AKI and changes in glomerular and tubular functions in SGA neonates in the first week of life.

Methods:
We conducted this cohort study in a tertiary care referral teaching institute situated in north India from 1, April 2018 to 30, June 2019. We measured serum electrolytes, urine output, urine electrolytes, and evaluated glomerular as well as tubular functions on day 1, 3, and 7. AKI was diagnosed by neonatal KDIGO on D3 and 7. We compared the incidence of AKI measured via neonatal KDIGO criteria with pRIFLE and AKIN criteria. We measured glomerular functions by eGFR and creatinine clearance and tubular functions by fractional excretion (FE) of sodium (FENa), potassium (FEK), phosphate (FEP), and uric acid (FEUA); calcium (FECa) and albumin.

Results:
We enrolled 134 SGA neonates in this study. Median EGFR increased significantly from day 1 [28 (95% CI 24,31)], day 3 [35 (95%CI 31,39)] till day 7 [82 (95%CI 68,97)], p <0.001. Median creatinine clearance increased significantly from day1 [0.9 mL/min (IQR, 0.5, 1.8)], day 3 [1.3 mL/min (IQR, 0.6, 2.5)] till day 7 [2.9 mL/min (IQR, 1.3, 7.1)], p-value <0.001. Out of 134 neonates, 21 (15.7%) developed AKI in the 1st week of life (AKI-gp). We observed a statistically significant agreement between incidence of AKI according to KDIGO and AKIN criteria (p-value <0.001), but not with pRIFLE criteria (p-value 1.0). On univariate analysis, endotracheal tube insertion, invasive ventilation and vasoactive drugs were significantly higher in AKI group as compared to non-AKI group. On multivariable regression analysis, only invasive ventilation was independently associated with AKI in the first week. There was progressive improvement in the tubular functions over first week of life.(Fig 1)

Conclusion:
We observed a high incidence of AKI in SGA neonates in the first week of life. KDIGO criteria had a good agreement with AKIN criteria, but not with pRIFLE criteria. Endotracheal tube insertion showed an independent association with development of AKI in SGA neonates.
Box plots depicting median and interquartile range of Tubular functions of small for gestational age neonates on day 1, day 3, day 7
None declared
ID 596 - ASSOCIATION OF SOCIO-ECONOMIC FACTORS WITH ADHERENCE TO PREVENTIVE MEASURES IN BRAZILIAN BREASTFEEDING MOTHERS INFECTED WITH SARS-COV-2.

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Background:
Breastfeeding mothers positive for SARS-CoV-2 are a vulnerable group in the COVID-19 pandemic, especially in LMI countries. They should avoid exposing the neonate; however, it may be challenging in a home environment. This study aimed to assess the feasibility and the variables associated with adherence to preventive measures (PM) regarding COVID-19 in these dyads.

Methods:
Prospective, multicenter study with mothers tested positive for SARS-CoV-2 (PCR-RT) from 17 Brazilian hospitals between July and October 2020 (BRACOVID project). A structured questionnaire was applied on days 7 (questions about 0-7 days) and 14 (about 8-14 days) after delivery. Adherence to PM during breastfeeding at home (masks use, washing hands, and distance of neonate in no breastfeeding periods), flu-like neonate symptoms, mother’s breastfeeding practices, and social-economic factors was evaluated.

The mothers were divided into three groups:
- Complete guidelines (CG): all PM
- Partial guidelines (PG): masks, washing hands, no distance
- No guidelines (NG): no adherence to PM

Statistical correspondence analysis was performed.

Results:
117 mothers were included. Maternal age median was 27 years (12-40), family monthly income 403.5 dollars (87.7-3157.8), and the persons per room were 2 (SD 0.40). 9.4% of the mothers completed tertiary education. First seven days: 47 (40%) CG group, 14 (11.9%) PG group, and 50 (42.7%) NG group. Eight to 14 days after birth, 25 (21.3%) CG, 10 (8.5%) PG, and 61 (52.1%) NG. Breastfeeding rates were 98%.

Factors associated with no adherence to distance were monthly family income less than 92.7 dollars per person, high housing density (> 1 inhabitant per room), teenage mother, and responsive feeding. (Figure 1) Poor education was the only factor associated with a lack of total adherence to guidelines. Regarding neonate flu-like symptoms: at seven days 0%; at 14 days of life, 5% of neonate presented symptoms (NG group).

Conclusions:
Poverty is related to no distancing between the dyad. However, poor education is the only factor associated with a considerable no adherence. Education is crucial to a healthy country. Ignorance can be feeding the pandemic, influenced by Brazil’s instability due to the government’s misleading conduct to face the pandemic.