September 20th, 2023 15:00 - 17:00

PARALLEL SESSION 11 - ESPR nursing and healthcare professionals

ID 382. EFFECT OF SKIN-TO-SKIN CONTACT AT BIRTH FOR VERY PRETERM INFANTS ON QUALITY OF MOTHER-INFANT INTERACTION AT 4 MONTHS – A SECONDARY OUTCOME FROM THE IMMEDIATE PARENT-INFANT SKIN-TO-SKIN STUDY (IPISTOSS)

Mrs Siri Lilliesköld[1,2], Mrs Karoline Lode–Kolz[3,4,5], Doctor Siren Rettedal[3,4], Mrs Johanna Lindstedt[6], Doctor Agnes Linnér[2,7], Mrs Hanne Markhus Pike[3], Doctor Sari Ahlqvist–Björkroth[6,8], Professor Ulrika Ådén[1,2,9], Doctor Wibke Jonas[1]

[1]Department of Women's and Children's Health, Karolinska Institutet, Stockholm, Sweden, [2]Department of Neonatology, Astrid Lindgren Children's Hospital, Karolinska University Hospital, Stockholm, Sweden, [3]Department of Paediatrics, Stavanger University Hospital, Stavanger, Norway, [4]Faculty of Health Sciences, University of Stavanger, Stavanger, Norway, [5]Department of Clinical Neurophysiology, Stavanger University Hospital, Stavanger, Norway, [6]Department of Psychology and Speech–Language Pathology, University of Turku, Turku, Finland, [7]Department of Clinical Science, Intervention and Technology, Karolinska Institutet, Stockholm, Sweden, [8]Department of Clinical Medicine, University of Turku, Turku, Finland, [9]Department of Biomedical and Clinical Sciences, Linköping University, Linköping, Sweden

Background

Good quality of mother–infant interaction has protective effects on the infant's socio–emotional and behavioural development. It is especially critical to the very preterm infant with a risk of vulnerabilities related to immaturity early in life. Skin–to–skin contact (SSC) in general has been found to improve mother–preterm infant

interaction, but little evidence exists regarding benefits when initiated immediately at birth. Thus, the objective was to determine the impact of immediate SSC at birth for very preterm infants on mother–infant interaction at 4 months of corrected age.

Methods

This study is part of the Immediate Parent–Infant Skin–TO–Skin Study (IPISTOSS), a randomized clinical trial. IPISTOSS was conducted in three neonatal units in Sweden and Norway from 04/2018 to 06/2021 and included very preterm infants and their parents. The intervention was SSC initiated at birth and continued throughout the first six hours post–birth with either parent versus standard care in incubator. One of the secondary outcomes was the quality of mother–infant interaction as measured with the Parent—Child Early Relational Assessment (PCERA), based on a five–minute free play situation between the mother–infant dyad videorecorded at a follow–up visit at 4 months.

Results

A total of 71 infants born between 28+4 — 32+6 weeks + days of gestation and 56 mothers were included in the analysis; 34 mother–infant dyads allocated to SSC group and 37 mother–infant dyads allocated to control group at birth. Improved quality of mother–infant interaction was found in the SSC group when compared to standard care, both for Infant Positive Affect, Communicative and Social Skills (Cohen's D = 0.67, p = 0.008) and for Dyadic Emotional Tone, Reciprocity, and Regulation (Cohen's D = 0.56, p = 0.02). No additional accumulated effect of SSC on mother–infant interaction was found after the first six hours.

Conclusion

Immediate parent–infant SSC after a very preterm birth is beneficial for the developing mother–infant relationship and should be supported in the clinical setting alongside other nursing and medical care provided at birth. Further, the results support the notion of an early sensitive period at birth that might provide a window of opportunity for long–term impact on infant's development.

None declared

ID 948. 'Scan the Line' QIP – Point of Care Ultrasound Scan (POCUS) for long line (CVL) tip confirmation in NICU.

Doctor Victoria Collis[1], Doctor Rashda Javed[1], Doctor Steven Abbey[1], Doctor Pri Madawala[1], Doctor Harsha Gowda[1]

[1]Heartlands Hospital, Birmingham, United Kingdom

Background:

Central venous line / long line placement in neonates is a common procedure. Malpositioned lines can lead to significant morbidity and mortality. Therefore, X–rays are routinely performed to confirm correct placement of the line. Currently, X–ray is the gold standard, however, point of care ultrasound scans (POCUS) are becoming more widely used as a way of assessing line tip position. In addition, POCUS allows the clinician to manipulate the line to the correct position in real–time.

We identified that post Long Line (LL) insertion, infants were having multiple X–rays and line adjustments which had a number of negative implications.

Aim:

Quality Improvement Project (QIP) on POCUS/Real–Time Ultrasound to confirm LL tip position.

The project specifically aims to reduce the exposure to radiation associated with LL insertion and reduce the risk of line infection or line loss by reducing the number of line adjustments required.

Methods:

Setting – Tertiary Neonatal Intensive Care Unit (NICU)

Step 1– Literature review on POCUS for LL tip position.

Step 2 – Retrospective data analysis on number of X-rays and line adjustments (October 2021–April 2022).
Step 3 – Implementation of POCUS to confirm line tip position (May 2022).
Step 4 – Prospective data collection regarding the number of X-rays and line adjustments (May 2022–April 2023).

Results:
In total, 116 long lines were analysed. 56 prior to the introduction of POCUS and 60 post introduction (29 of these lines used POCUS).
Gestation ranged from 22+6 to 37+4 weeks and birth weight from 450g to 2830g.
Post introduction of POCUS there was a reduction in the number of X-rays from 1.43/LL to 1.14/LL, and the percentage of lines requiring adjustment reduced from 40.0% to 12.5%. (Table 1)

Discussion/Conclusion:
Introduction of POCUS to confirm LL tip position in NICU significantly reduced the number of X-rays done and line adjustments. POCUS was associated with better positioned lines, decreased irradiation and cost.
The main limitation is, prospectively not all LL insertions used POCUS due to lack of POCUS-trained staff.
The next step is to develop a training package to train all medical staff on POCUS to identify LL/CVL tip position.

	Pre implementation of POCUS (Oct 2021 – Apr 2022) *N – 56*	Post implementation of POCUS (May 2022 – Apr 2023) *N - 29*
Number of X-rays done to confirm LL tip position	80 1.43/LL insertion	33 1.14/LL insertion
Number of LL adjustments required *(lines removed not included as POCUS would not have changed outcome)	40% (22) *(1 line removed)	12.5% (3) *(5 lines removed)

Table 1 – Compares number of X-rays & LL adjustments required with and without POCUS

None declared

ID 62. The COMFORT-neo scale; does the scale measure distress in extremely preterm-born infants?

Mr Hendrik Koning[1]
[1]the Academic Hospital Groningen (UMCG), Groningen, Netherlands

The COMFORT–neo scale; does the scale measure distress in extremely preterm–born infants?

H. Koning, RN; A.F. Bos, MD PhD; N.H. van Dokkum, MD PhD

Introduction

Measuring distress in infants is done using the COMFORT–neo scale. The aim of this study is to determine validity in extremely preterm infants.

Methods

We included 1022 preterm infants admitted to our Neonatal Intensive Care Unit (106 being extremely preterm, gestational age<28 weeks), between 01–01–2018 and 31–12–2022. Using item response theory, we determined 1) validity of the COMFORT–neo scale for preterm, particularly extremely preterm infants, 2) whether distress was measured, 3) wether the score was valid for ventilated and non–ventilated infants.

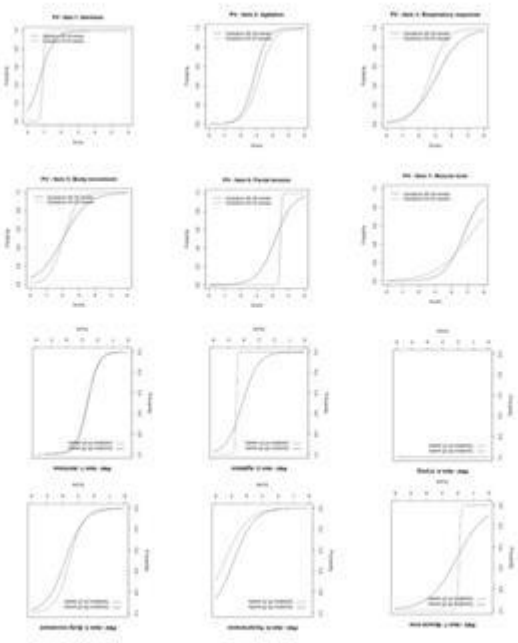
Results

For ventilated infants, the COMFORT–neo item scale Respiratory Response had a narrow range and category thresholds overlapped with Agitation and Facial Tension. For non–ventilated infants, the COMFORT–neo score adequately covered the latent construct of distress. Uniform and non–uniform differential item functioning was present between the patterns of extremely preterm and other preterm infants (Figure 1). Ventilated extremely preterm–born infants had higher risks for positive scores on Agitation and Facial Tension (factor 1.09 and 1.79, respectively, although p>0.05).

Non–ventilated, extremely preterm infants had a lower risk of scoring positive on Agitation (factor 0.5, P<0.05).

Conclusion

Several COMFORT–Neo scale items, particularly agitation and facial tension, do not contribute to measuring the latent construct of distress. For extremely preterm infants, the latent construct is not well measured at all. The COMFORT–Neo scale therefore warrants further development for this group.



Differential item function (DIF) plots for (extremely) preterm–born infants, split in a) ventilated infants; b) non–ventilated infants. In ventilated infants, sample size for item 4 (Crying) not sufficient for DIF.

Differential item function (DIF) plots for (extremely) preterm–born infants, split in a) ventilated infants; b) non–ventilated infants. In ventilated infants, sample size for item 4 (Crying) not sufficient for DIF.

none declared

ID 402. PARENTAL EXPERIENCES OF NEONATAL CARE IN SWEDEN - A NATIONWIDE STUDY ON DETERMINANTS OF EXCELLENCE

Doctor Agnes Linnér[1], Dr Ylva Thernström Blomqvist[3], Mrs Kristina Jonsson[1], **Mrs Siri Lilliesköld**[1], Professor Mikael Norman[1]

[1]Karolinska University Hospital, Stockholm, Sweden, [2]Karolinska Institutet, Stockholm, Sweden, [3]Uppsala University Hospital, Uppsala, Sweden

BACKGROUND: Infant– and family–centered neonatal care reduces adverse outcomes in infants and parents. In Sweden, infant– and family–centered neonatal care is standard. Most studies on parental outcomes have used qualitative techniques. This study aimed to determine proportions and determinants of excellence in neonatal care.

METHODS: All neonatal units report data to the Swedish Neonatal Quality Register (SNQ). In 2020, SNQ implemented a possibility for units to let parents assess neonatal care. An SMS with a link to a questionnaire was sent to the parents within two weeks after discharge. This questionnaire included 15 questions in five domains, with ratings from one to five. The study involved admissions from July 2020 to May 2022. The exposures were gestational age, length of stay, unit level and bed capacity. The outcome was the proportion of parents rating of neonatal care as excellent.

RESULTS: A total 4,475/13,108 (34%) parents responded. The proportions rating the care excellent varied from 65–90%. The domain “Overall Impression” reached the highest proportions of excellence, whereas involvement in decision–making and information–issues reached the lowest. The largest variation in excellence between neonatal units (range 43—80%) was found for the domain “Participation and

Involvement". The proportion that had an excellent experience was significantly lower among parents of extremely preterm than term infants, with the largest difference relating to a question about recommending the unit to someone else in the same situation (73% vs 89%, adjusted odds ratio=0.32 [95% confidence interval=0.21–0.49]). Confidence in the staff was also lower in parents of extremely preterm than term infants (56% vs 83%, adjusted odds ratio=0.33 [95% confidence interval=0.23–0.47]). Longer hospital stay affected the experience of neonatal care adversely, but level of care and bed capacity were overall unrelated to the parental experience. A higher proportion of parents of moderately preterm infants reported an excellent experience than parents of term and extremely preterm infants.

CONCLUSION: A majority of parents rated neonatal care in Sweden as excellent. The less frequent ratings of excellence for some aspects of care and among parents of extremely preterm infants indicate that more could be done to optimize parental involvement and support.

Domains and questions	Experience of excellence in neonatal care, inter-hospital range (%)	Experience of excellence in neonatal care, n/N (%)	Experience of excellence in adult somatic care n/N (%)	p-value for different experience in neonatal vs adult care
Respect and Treatment				
Q1 Did the staff treat your baby[c] with compassion and care?	80 – 95	3959/4470 (88.6)	30295/39480 (76.7)	<0.001
Q2. Were you[b] treated with respect and dignity?	65 – 89	3590/4467 (80.4)	30658/36190 (84.7)	<0.001
Q3. When the staff talked to each other about your baby[c], were you involved in the conversation?	54 – 75	2722/4117 (66.1)	13133/27406 (47.9)	<0.001
Information and Knowledge				
Q4. Did you receive enough information about your baby´s[c] care/treatment?	53 – 79	2992/4466 (67.0)	24294/38588 (63.0)	<0.001
Q5. Did you receive sufficient information about where to turn after discharge from the hospital (if you needed help or had further questions)?	61 – 84	2997/4169 (71.9)	23391/36879 (63.4)	<0.001
Q6. Did the doctor/nurses (the staff) explain the treatment in a way that you[b] understood?	55 – 84	3360/4450 (75.5)	23853/36561 (65.2)	<0.001
Participation and Involvement				
Q7. Did the staff involve you in the decisions regarding your baby's[c] care or treatment?	43 – 78	2755/4270 (64.5)	23149/36350 (63.7)	0.28
Q8. Did the staff take into account your own experiences and views[b] on your baby's[c] health condition?	49 – 83	2867/3967 (72.3)	23449/34670 (67.6)	<0.001
Q9. Were you involved in the decisions regarding your baby's[c] care and treatment to the extent you wanted?	43 – 80	2995/4196 (71.4)	20855/34004 (61.3)	<0.001
Continuity, Trust/Emotional Support and Pain-Relief				
Q10. Before you[b] were discharged from hospital, was a decision made on the next step in the baby's (your) care or treatment?	61 – 85	2922/3858 (75.7)	23117/34809 (66.4)	<0.001
Q11. Did you have confidence in the staff caring for your baby?	66 – 89	3560/4466 (79.7)	NA	
Q12. If your baby experience pain during your stay in the neonatal unit, did she/he quickly receive help with pain relief?	62 – 95	2133/2596 (82.2)	NA	
Overall Impression				
Q13. Do you think that your baby´s[c] current needs for care and treatment has been met?	84 – 98	4006/4460 (89.8)	28313/38550 (73.4)	<0.001
Q14. How did you experience the stay in the neonatal unit as a whole?	64 – 82	3227/4461 (72.3)	NA	
Q15. Would you[b] recommend this unit/hospital to anyone else in your situation?	73 – 93	3889/4444 (87.5)	29133/38719 (75.2)	<0.001

Table: Parental experience of excellence in neonatal care and patient experience of adult somatic care.

Table: Parental experience of excellence in neonatal care and patient experience of adult somatic care.

None declared