TITLE: EFFECT OF BREAST MILK AND SUCROSE ON PAIN AND PERFUSION INDEX DURING EXAMINATION FOR RETINOPATHY OF PREMATURENESS

AUTHORS: Ozden Turan 1, Imren Akkoyun 2, Deniz Anuk Ince 1, Beyza Doğanay 3, Ali Ulas Tugcu 1, Ayse Ecevit 1

AFFILIATIONS: 1 Paediatric Department, Division of Neonatology, University Hospital of Baskent, Ankara, Turkey
2 Ophtalmology Department, University Hospital of Baskent, Ankara, Turkey
3 Biostatistics Department, University Hospital of Ankara, Ankara, Turkey

CONTENT:

Retinopathy of prematurity (ROP) is a condition with unknown pathogenesis developing due to abnormal proliferation of retinal vessels in premature infants. Many etiologic factors have been considered to play roles in the development of ROP. Birth weight and low gestational age are the best known risk factors. In our country, all newborns born before the 32nd gestational week and below 1500 g in weight are examined for ROP. Perfusion index (PI) indicates the ratio of pulsatile blood flow to non-pulsatile blood flow. Peripheral tissue perfusion may be measured in a noninvasive manner continuously through PI. The aim of the present study is to investigate the effect of breast milk and sucrose on pain scores and perfusion index and to evaluate the alteration in pain and PI during ROP examination.

Methods

The preterm infants who would undergo ROP examination were allocated to three groups according to simple randomization method as follows: Group 1 (n:17): Only local anesthetic eye drops, proparacaine HCl ophthalmic solution 0.5%, group 2 (n:17): proparacaine HCl ophthalmic solution 0.5% plus breast milk, and group 3 (n:17): proparacaine HCl ophthalmic solution 0.5% plus sucrose 24%. Postductal perfusion index (PI), transcutaneous oxygen saturation (SpO2) and heart rate (HR) values were measured before the eye examination (0), at the 30th, 60th, and 90th seconds(s) of the eye examination and 30 s after termination of the examination in all infants. Measurements were made using the Masimo Set Radical 7 pulse-oximeter device. Pain was evaluated using Neonatal Infant Pain Scale (NIPS).

The mean gestational week of the groups was 30.41 ± 1.42 weeks, 30.12 ± 2.20 weeks and 28.47 ± 2.21 weeks; the mean birth weight was 1384.12 ± 351.80 g, 1449.71 ± 348.95 g, 1144.12 ± 368.56 g for groups proparacaine HCl, breast milk and sucrose, respectively. Gestational age was lower in sucrose group than in proparacain HCl group (p=0.01). Birth weight was lower in sucrose group than in breast milk group (p=0.03). Table 1 shows the comparison of HR, SpO2, PI and NIPS score values. In the intergroup comparisons, the 120th s PI values were found to be lower in the sucrose group compared to the proparacaine HCl group (p=0.03). The NIPS scores were found to be higher in the sucrose group compared to the proparacaine HCl group at the 60th s of the examination and higher than that in the breast milk group at the 90th s of the examination (p=0.02 and p=0.01, respectively).

This is the first report in the literature that investigates the perfusion index together with pain during the ROP examination. The present study revealed that the perfusion index, heart rate and oxygen saturation changed during the ROP examination and that breast milk, sucrose and topical anesthetics are insufficient for reducing pain. More effective treatment methods are required for reducing pain during the ROP examination in newborns.

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COI: No
ID: 348

TITLE: CREATING ROOM AND OPPORTUNITIES ON WARDS FOR NEWBORNS AND THEIR FAMILIES - THE CROWN INITIATIVE. AN INTERNATIONAL STUDY ON IMPLEMENTING CLOSENESS AND FAMILY INTEGRATED CARE IN NEONATAL WARDS IN EUROPE

AUTHORS: Nicole R van Veenendaal 1; Sophie RD van der Schoor 1; Anne AMW van Kempen 1; Johannes B van Goudoever 2 on behalf of the CROWN study group.

AFFILIATIONS: 1 Department of Neonatology, OLVG, Amsterdam, the Netherlands, 2 Emma Children’s Hospital, Amsterdam UMC, University of Amsterdam, Vrije Universiteit, Amsterdam, The Netherlands

CONTENT:

Mother--infant separation postnatally and during hospitalization of the infant in the neonatal ward is applied frequently. Family integrated care (FiCare) with subsequent less frequent mother--infant separation improves parent and infant outcomes during stay in the neonatal ward. However, much is unknown on the current state of neonatal wards in Europe on mother--infant separation postnatally and the integration of families into care for their infant during hospitalization, specifically. We analysed hospital settings with regard to mother--infant separation after birth and FiCare practices in large Neonatal Intensive Care Units (NICUs) in Europe. Secondly, we explored challenges NICU professionals encounter to keep mothers and infants together and to implement FiCare during hospital stay.

A cross-sectional mixed-methods study using structured interviews. (Veteran) parents of preterm and sick infants were included in the design and conduct of this study. We interviewed healthcare professionals of NICUs to describe current practice of mother and infant care, using patient valued outcomes and the pillars of FiCare (NICU environment, education, support and participation of parents in care during infant hospital stay and education of healthcare professionals).

In total, 44 units in 18 European countries and 1 unit from Canada participated. Mother--infant separation during periods of maternal or neonatal care is very common (42/45 (93%) units), due to current logistics, organization of care and architecture of wards. In 32/45 (71%) no visiting limitations were present for father and mother. Breastpumping was allowed in 44/45 (98%) units. In 17/45 units (38%) parents were allowed to participate in daily rounds without restrictions. Units reported privacy issues with presence of other parents on the wards and perceived lower efficiency as main reasons for not including parents on rounds. In 16/45 units (36%) structural education sessions for parents were offered. In 22/45 (49%) of units, a formal structured training for healthcare professionals was present.

Integrating the family into neonatal care during hospital stay and decreasing separation between parents and the infant has not been accomplished in a large number of European NICUs due to current logistics, architecture and common caring practice. Specifically including parents during daily rounds, offering parent educational sessions and education of healthcare professionals are not widely and structurally implemented.

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Countries participating in the CROWN-initiative

COI: NR van Veenendaal is supported by an unrestricted research grant, provided by Nutricia, the Netherlands.
ID: 390

TITLE: NATIONAL STUDY GROUP FOR PAIN ON NICU’S: TWENTY FIVE YEARS OF NURSING COLLABORATION IN THE NETHERLANDS, CHANGES IN COMMON HABITS AND POLICIES

AUTHORS: Joke Wielenga 1; Floor Jenken 2; Christ-jan van Ganzenwinkel 3; Dutch national study group for pain in the NICU’s

AFFILIATIONS: 1 Department of Neonatology, Amsterdam University Medical Center, location Academic Medical Center, Amsterdam, The Netherlands
2 Department of Neonatology, Wilhelmina Children’s Hospital, University Medical Center Utrecht, Utrecht, The Netherlands
3 Department of Neonatology, Maxima Medical Center Veldhoven, Veldhoven, The Netherlands.

CONTENT:

Pain received minor attention until research showed newborn infants and even preterm infants could feel and remember pain. In 1993 the Dutch National Study Group on Pain in Neonates was formed. In its 25 years of existence the main purpose of this nursing initiative was to achieve a change in knowledge and behaviour among neonatal nurses. Objective of the current study was to assess changes in neonatal pain management during these 25 years.

In 2019 a survey was performed under the supervision of the National Study Group on pain, to gain insight in common habits and policies among all ten level III NICU’s in the Netherlands. The survey aimed at yielding information on preventive, pharmacological and non-pharmacological pain interventions, pain assessment tools used, and availability of written policies and guidelines with regard to pain associated with nine (acute) care interventions, six chronic care situations, and two postoperative situations. Results were compared with similar surveys performed in 1998 and 2016.

Striking were the differences in pharmacological interventions during mechanical ventilation. Nowadays drugs are only prescribed on an individual bases and not as a standard prescription. The drug of choice for pharmacological treatment of pain changed over the years and differences still exist between the ten NICU’s. EMLA was used less often, while the use of sucrose for acute interventions has increased. Nursing interventions associated with developmental care, such as supporting, containing and comforting, have become standard of care.

In 1998 none of the NICU’s used pain assessment tools whereas in 2006 five out of ten and in 2019 ten out of ten used the ComfortNeo scale. Newborns were all assessed during intensive care treatment but not always in chronic situations. The availability of protocols was rare in 1998 but increased vastly in all NICU’s.

This study showed that in the ten Dutch NICU’s, prevention, assessment and treatment of pain as well as the availability of policies regarding pain have improved over the last 25 years. However, differences with respect to prevention and treatment of pain still exist. Further research is warranted to identify the background regarding these differences, in our aim to further improve pain management.

COI: None declared
ID: 359

TITLE: THE IMMEDIATE PARENT-INFANT SKIN-TO-SKIN STUDY (IPISTOSS): A STUDY PROTOCOL FOR A RANDOMIZED CONTROLLED TRIAL ON SKIN-TO-SKIN CONTACT BETWEEN VERY PRETERM INFANTS AND THEIR PARENTS

AUTHORS: Siri Lilliesköld* (1,2), Agnes Linnér* (1,2), Karoline Lode (3), Stina Klemming (2), Siren Rettedal (3), Malin Almgren (1), Nils Bergman (1), Björn Westrup (1,2), Béatrice Skiöld (1,2), Wibke Jonas (1)
*shared authorship

AFFILIATIONS: 1. Department of Women’s and Children’s Health, Karolinska Institutet, Stockholm, Sweden
2. Neonatal Unit, Karolinska University Hospital, Stockholm, Sweden
3. Neonatal Unit, Stavanger Universitetssykehus, Stavanger, Norway

CONTENT:

Skin-to-skin contact (SSC) is an evidence-based place of care for term and stable preterm infants. Evidence is lacking on how soon after birth safe SSC can be commenced for the yet not stable preterm infant. Reviews call for randomized controlled trials (RCTs) to confirm physiological and neurobehavioral benefits of SSC also in unstable infants following birth. Thus, our primary objective in this study is to compare the cardiorespiratory stabilization in very preterm infants exposed to skin-to-skin contact during the first six hours after birth with those in conventional care in incubators. Our secondary objectives are related to short-and long-term consequences of immediate SSC.

IPISTOSS is a RCT of SSC for very preterm infants born at gestational age 28+0–32+6 weeks (n=150). Recruitment and data collection is ongoing at Karolinska University Hospital (Sweden) and Stavanger University Hospital (Norway) since 2018. Infants are randomized to either “immediate SSC” or “conventional care”. Medical care is identical in both groups – the place of care differs. In the iSSC group the infant stays in SSC with one parent continuously for the first six hours while the control group infants are cared for in an incubator. After the first six hours, both groups receive SSC according to local guidelines. Exclusion criteria are severe malformations and multiple pregnancy with triplets or more. The study has ethical approval and is registered in ClinicalTrials.gov (NCT03521310).

Primary outcome is infant cardiorespiratory stabilization during first six hours after birth and will be assessed with the “Stability of the cardio-respiratory system in the preterm (SCRIP)” score. Secondary outcomes include short- and long-term outcomes up to 24 months of corrected age such as infant physiology, nutrition and growth, breastfeeding status, infant stress reactivity, neurodevelopment and behavioral organization, mother-infant interaction and parental experiences and mental health. The infant’s epigenetic profile will also be studied. We will use descriptive statistics, regression models and mediation-moderation models. Pilot data (n=54) determined feasibility and safety of practical intervention aspects (unpublished data).

Our study has the potential of filling the knowledge gap on SSC in unstable preterm infants. It will describe the physiological effects of SSC in the very preterm infant in transition from intra-to extrauterine life. Thus, the study may have important implications for initial care of very preterm infants after birth. It will also increase our understanding of how immediate SSC affects very preterm infants and their parents up to 2 years of age.

COI: "None declared"