for ROP screening on the basis of birth weight and/ or gestational age. Only the first screening examination for each baby was considered. Premature babies, were randomised to one of three interventions before their screening examination: group 1 (n = 27) received 24% sucrose oral, group 2 (n = 27) received 24% sucrose with pacifier, group 3 (n = 27) received sterile water with pacifier. Pain responses were scored by using the PIPP.

Results A total of 81 infants (42 males and 39 females) were enrolled in the study. The mean birth weight was 1280 ± 316 g, gestational age was 28.7 ± 2.1 weeks and corrected gestational age at examination was 34.2 ± 2.9 weeks. The mean PIPP scores in group 1, 2, and 3 were 16.7, 11.4 and 15.1, respectively. Sucrose with pacifier (group 2) had a significantly lower mean PIPP score than group 1 and 3 (p 0.014; 0.021, respectively).

Conclusions Sucrose combined with NNS and NNS itself reduce pain scores during screening examinations for ROP.

PS-195 SUCROSE VERSUS BREASTFEEDING FOR VENIPUNCTURE IN TERM INFANTS. A RANDOMISED, PROSPECTIVE, CONTROLLED STUDY WITH ANALYSIS OF THE SPECIFIC CORTICAL RESPONSE

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Background and aims Sucrose and breast milk during painful procedures are reported to decrease pain behavioural expression in neonates. Recent data showed a persistent cortical pain response while using the sucrose during a painful procedure.

To compare the efficacy of sucrose versus breast milk for specific-pain brain activity relief during a painful procedure in neonates.

Methods Randomised, prospective, controlled study. Each term newborn was randomly assigned to sucrose or breastfeeding group at day 3 during a systematic venipuncture. Change in the total haemoglobin concentration in the controlateral somatosensory cortex (Near Infra-red Spectroscoy, NIRS) was assessed 10 seconds before and after the venipuncture. Neonatal Facial Coding System (NFCS) was assessed 2 min before and at the time of the venipuncture. Groups were compared using Wilcoxon test for the variations in NIRS and Chi-square test for the NFCS scores.

Results 113 newborns were included (sucrose: 56, breastfeeding: 57) with a mean (sd) of 39.3 weeks (0.9) for gestational age and 3370 g (478) for birth weight. 103 were analysed for the NIRS (sucrose: 55, breastfeeding: 48). Median (quartiles) of total haemoglobin concentration change was -8.5 µmol/L (-34.5; 12.5) for sucrose group and 12.3 µmol/L (-23.4; 39.3) for breastfeeding group with no statistical difference (p = 0.06). NFCS scores were significantly different with 46.8% with a painful score in the breastfeeding versus 26.8% in the sucrose (p = 0.03).

Conclusions No difference were found between sucrose and breastfeeding on specific-pain brain activity during a venipuncture in term newborns. A discordance was revealed between NFCS scores and NIRS analysis.

PS-196 WITHDRAWN

PS-197 A RANDOMISED TRIAL OF ESTIMATING UMBILICAL CATHETER INSERTION DEPTH IN NEWBORNS USING BIRTH WEIGHT OR SURFACE MEASUREMENTS (ISRCTN17864069)

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Background Incorrect umbilical venous and arterial catheter (UAC and UVCs) tip position is associated with increased rate of complications.

Objective To determine whether using birth-weight (BW), rather than body surface measurement (M), to estimate ID of UVC and UACs results in more correctly placed catheters.

Methods Newborns undergoing UVC and/or UAC insertion were randomised to have ID estimated using BW [UVC: cm = (BW x 1.5) + 5; UAC: cm = (BW x 3) +9] or using shoulder to umbilicus measurement (M). The primary outcome was correct catheter tip position on X-ray (UVC T9–T10; UAC T6–T10).

Results We enrolled 101 newborns. UVC insertion was successful in 97 (96%). There was no difference in correctly placed UVCs between groups (Table). UAC insertion was attempted in 87 infants and was successful in 62 (71%). More infants in the W group had a catheter tip in the correct position (Table). We found no differences in secondary outcomes.

Abstract PS-197 Table 1

UVC	Weight (N = 53)	Weight (N = 53)
T9-T10# n (%)	16/51 (31)	13/46 (28)
Too high (<T9)#	11/51 (22)	5/46 (11)
Too low (>T10)#	10/51 (20)	20/46 (43)
UAC	Weight (N = 46)	Measure (N = 41)
T6-T10#	29/32 (91)	15/30 (50)
Too high (<T6)#	3/32 (9)	0/30 (0)
Too low (<T10)#	0/32 (0)	15/30 (50)

Conclusions UVCs often cannot be advanced to the estimated ID or are in the portal venous system on X-ray. Estimating UVC ID using BW did not result in more correctly placed UVCs. When successful, estimating UAC ID using BW results in more correctly placed catheters.

PS-198 TOPICAL GLYCERYL TRINITRATE OINTMENT TO AID UMBILICAL ARTERY CANNULATION IN NEONATES

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Background and aims Umbilical artery cannulation is a common neonatal procedure that is often challenging because umbilical arteries constrict after birth. We aimed to determine whether the topical application of a vasodilating ointment prior to cannulation increases success and decreases the time taken to cannulate.

Methods Discarded umbilical cords were collected immediately after delivery and two 3 cm sections proximal to the baby were used for the study. 0.1mL topical Glyceryl Trinitrate (GTN) ointment (0.2% w/w) was applied to the surface of one section for 5 min prior to cannulation, whereas the second section acted as the control. After ointment removal, medical staff blinded to intervention attempted to cannulate one artery in each section.