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THE EFFECT OF ORAL DEXTROSE ON PAIN RELIEF OF NEWBORN INFANTS

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Background: In comparision with children and adults pain in the newborn infants is under assessed and under managed. Recently oral sweet solutions such as sucrose has been used for painful procedures in neonates. In this study we assessed the efficacy of 25% dextrose for managing of infants pain in neonatal peripheral venepuncture.

Methods: In a randomized controlled clinical trial, 60 term neonates were enrolled in study. They were randomized to receive oral dextrose(20%) or sterile water .Two minutes before venepuncture one group received 2 ml oral 20% dextrose and for the other group 2 ml oral sterile water was administered. Pain reactions were scored with CRIES pain scoring system, Crying time and heart rate at 5 minutes after venepuncture were recorded.

Results: There was no statistically significant difference between two groups of neonates in respect to gestational age, birth weight, gender and postnatal age. There were significantly lower pain score and shorter crying time in dextrose group after venepuncture(CRIES pain score: 2.23 ± 1.45 vs 6.17 ± 1.66 P< .001), (Duration of crying (sec) : 2.83 ± 1.64 vs 16.97 ± 8.49 P< .001) respectively. Heart rate at 5 minutes after venepuncture was not significantly different between two groups.

Conclusion: Using oral dextrose solution is a useful, non expensive and non pharmacologic method for managing pain of venepuncture in neonates.

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HAEMODYNAMICS FOLLOWING INTRAVENOUS PARACETAMOL ADMINISTRATION IN (PRE)TERM NEONATES

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Introduction: There are recent observations on the haemodynamics of intravenous paracetamol (hypotension) in adult IC setting (1). We therefore evaluated the haemodynamics following iv paracetamol loading dose (20 mg.kg^{-1}) in (pre)term neonates.

Methods: Pooled analysis of observations on heart rate and blood pressure (mean, systolic, diastolic) collected during iv paracetamol pharmacokinetic studies in neonates already reported (2,3) or collected during the ongoing PK/PD iv paracetamol study (PARANEO, NCT 00969176). Heart rate and blood pressure (arterial access) were recorded just before and 30, 60, 120, 180, 240, 300 and 360 minutes afterwards. Data by median, paired analysis (Wilcoxon).

Results: Data in 64 neonates (GA 35 weeks, PNA 2 days, weight 2.425 kg) were available. Heart rate decreased from (pre) 143 bpm to 137 (p< 0.01), 140 (p< 0.05), 137 (p< 0.01), 133 (p< 0.01), and 140 (p< 0.05) bpm at 30, 60, 120, 180, 240-360 min. Mean blood pressure decreased (pre = 46 mmHg) to 43 at 60 min, 300 and 360 minutes (p< 0.05), while there were no significant changes in systolic or diastolic blood pressure.

Conclusions: Statistical significant, clinical minor effects on heart rate (-6 to -8) and blood pressure (-3 mmHg) were documented following iv paracetamol. These changes may reflect improved analgesia, but it seems cautious to consider impaired haemodynamics to be a relative contra-indication for intravenous paracetamol.

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MODEL-BASED LIDOCAINE DOSING REGIMEN FOR SEIZURE CONTROL IN PRETERM AND TERM NEONATES

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Objectives: Lidocaine is administered as an anticonvulsant to neonates that are not responding