ASSOCIATION BETWEEN ORAL SOLUTION OF 24% SUCROSE AND PROCEDURAL PAIN BY PRETERM INFANTS

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BACKGROUND

Acute pain is one of the most common adverse stimuli experienced by preterm infants. Those infants undergoing painful procedures in the neonatal intensive care unit (NICU) need help to have their pain reduced. 24% oral sucrose solution is a mild analgesic which is effective in decreasing short-term pain and distress during minor procedures such as heelstick and venipuncture.

MATERIAL AND METHODS

The sample comprised 58 preterm and low birth weight neonates who were hospitalized in the NICU of Pediatric Clinic. The neonates received 0.5 ml 24% oral sucrose. Sucrose solution was prepared in our Clinical Pharmacy. The sample was divided into two groups: group A (GA) of 29 preterm infants, 25 to 32 weeks gestational age, birth weight from 950 to 1670 grams who received oral sucrose directly into the mouth 2 min before the painful procedures and group B (GB) of 29 preterm infants, 28 to 33 weeks gestational age, birth weight from 1300 to 1730 grams who received pacifier dipped in the same amount of sucrose. The parameters that we observed were pulse, oxygen saturation and respiration before and after the procedure.

RESULTS

MedCalc version 12.6.1.0 statistical software was used. There were no statistically significant differences between groups A and B with regard to the following variables: gender (p=0.96), gestational age (p=0.062), birth weight (p=0.78), using the Mann-Whitney test. No statistically significant differences were found in oxygen saturation levels (GA p<0.0001 and GB p<0.0001) and respiratory rates (GA p=0.019 and GB p=0.055) inside the same group before and after procedures or between the groups.

Only difference was with regard to the pulse (GA p=0.0074 and GB p=0.0001) which can be explained with smaller sample

CONCLUSION

Study has demonstrated that the administration 24% oral sucrose solution is effective as a simple and safe method of pain relief for preterm infants during painful procedures from single events such as heelstick and venipuncture.