USE OF SUCROSE ANALGESIA IN LOW BIRTH NEWBORNS WITH CONGENITAL HEART DISEASE UNDERGOING PAINFUL MEDICAL PROCEDURES

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Background: Our objectives were to evaluate the effectiveness and safety of sucrose in newborns undergoing medical procedures within 7 days of birth.

Methods: We performed a double-blind, randomized controlled trial. We included 27 newborns (29,4±2,0 weeks gestation). Each newborn received 2 ml of a 24%-sucrose or placebo solution before all procedures. We used the Premature Infant Pain Profile to assess pain during intramuscular injection, venipuncture for the newborn screening test and the first 3 heel lances for glucose monitoring. Scores ranged from from 0 (no pain) to 18 (maximum pain).

Results: We included 21 newborns. The overall mean pain score was lower among newborns who received sucrose than among those who received a placebo (mean difference [MD] -1.42, 94% confidence interval [CI] -1.82 to -0.61). We found that pain scores during intramuscular injection did not differ significantly between the sucrose and placebo groups for newborns(1 group: MD -1.34, 96% CI -2.30 to 0.2; 2 group: MD -1.0, 90% CI -2.38 to 0.4). During venipuncture, newborns who received sucrose had lower pain scores compared with those who received a placebo (1 group: MD - 3.62, 94% CI -4.2 to -1.91; 2 group: MD -2.04, 93% CI -3.3 to -1.1).

Conclusion: We found a modest reduction of pain in newborns when sucrose was used for all medical procedures performed in the first 7 days after birth. However, when each procedure was analyzed separately, we found that the effectiveness of sucrose was limited to venipuncture for the newborn screening test.