To compare the effects of integrating mother’s breast milk (BM) with three different combinations of sensory stimuli on preterm infant pain during peripheral venipuncture procedures” Wu et al (2019).

Abstract:

PURPOSE: To compare the effects of integrating mother’s breast milk (BM) with three different combinations of sensory stimuli on preterm infant pain during peripheral venipuncture procedures.

DESIGN: A prospective, repeated-measures randomized controlled trial.

METHODS: Preterm infants (gestational age between 28 and 37 weeks, and in stable condition) needing venipuncture were recruited by convenience sampling (N = 140) and randomly assigned to four treatment conditions: (a) routine care (condition 1); (b) BM odor or taste (condition 2); (c) BM odor or taste + heartbeat sounds (HBs; condition 3), and (d) BM odor or taste + HBs + non-nutritive sucking (NNS; condition 4). Pain scores were assessed based on the Premature Infant Pain Profile-Revised (PIPP-R) over nine phases: baseline (phase 0, 5 min without stimuli before venipuncture), disinfecting (phase 1), during venipuncture (phase 2), and a 10-min recovery (phases 3-8).

FINDINGS: Infants who received BM odor or taste + HBs + NNS had significantly lower increases in pain scores from baseline compared with controls across phases 1 through 8. Infants treated with either condition 2 or 3 demonstrated significant reductions in mild pain during disinfecting and recovery phases, as compared with the controls. When condition 2 was used as the reference, there were no significant differences in pain scores between the infants receiving condition 3 across the nine phases, suggesting mothers’ HBs have only mild analgesic effects on venipuncture pain.

CONCLUSIONS: Integration of mother’s BM odor or taste, HBs, and tactile NNS should be considered as an intervention for alleviation of procedural pain for preterm infants.

CLINICAL RELEVANCE: Clinicians should incorporate the integrated sensory intervention into
caregiving support for preterm infants undergoing short painful procedures.

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Reference: