Interventions to Reduce Pain during Vaccination in Infancy

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Objective

To investigate interventions that affect pain reduction during vaccination in infants and children attending a well-child unit.

Study design

A consecutive sample of 243 children between age 0 and 48 months receiving their routine vaccinations was randomly assigned to 1 of the study groups. A total of 158 infants under age 6 months were randomly assigned to breast-feeding or no breast-feeding during immunization, and 85 children age 6 to 48 months were randomly assigned to receive 12% sucrose solution, lidocaine-prilocaine cream, or no intervention. All children were evaluated for crying time and pain score by a pediatrician using the Neonatal Infant Pain Scale (NIPS) for those under age 12 months and the Children's Hospital of Eastern Ontario Pain Scale (CHEOPS) for those over age 12 months.

Results

Breast-feeding in infants under age 6 months and use of sucrose or lidocaine-prilocaine in children age 6 to 48 months significantly reduced crying time and pain scores compared with controls. No difference in outcome was seen between the sucrose and lidocaine-prilocaine treatment groups.

Conclusions

Here we expand on previous findings by demonstrating that breast-feeding may have an analgesic effect up to age 6 months and that in older children, both sucrose and lidocaine-prilocaine reduce vaccination pain.
Abbreviations: CHEOPS, *Children's Hospital of Eastern Ontario Pain Scale*, CI, *Confidence interval*, NIPS, *Neonatal Infant Pain Scale*, OR, *Odds ratio*

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