Oral Sucrose Eases Immunization Pain in Infants

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Oral sucrose is known to be an effective analgesic for neonates and infants undergoing painful procedures. Now a new study has shown that sucrose significantly decreases pain and distress when given to infants before immunizations.

The study comprised 83 infants, aged 2 months and 4 months. The infants were randomized, with careful blinding of the investigators and parents, to either 24% oral sucrose or to sterile water, just before receiving a series of three immunization injections.

The results showed a 60% decrease in the mean pain score after the first injection for the 38 infants given sucrose, compared with the mean score of the 45 infants given sterile water, and a 78% decrease in the mean pain score at 2 minutes after the third injection, reported Linda A. Hatfield, Ph.D., of Pennsylvania State University, University Park, and her colleagues.

The highest mean pain scores for both groups of infants were seen at the pain assessment at 7 minutes, which was immediately after the third injection, Dr. Hatfield and colleagues reported (Pediatrics 2008;121:e327-34). At that point, the sucrose group had a mean pain score 21% lower than controls. And 2 minutes after that last injection, when the difference in the mean pain scores was 78%, the sucrose-treated group had returned to showing no pain response.

The pain scale used in the study was the University of Wisconsin Children's Hospital Pain Scale, which uses five criteria to score pain responses: cry, facial expression, behavioral, body movement, and sleep.

The 24% sucrose solution was delivered orally from a syringe, after which the infants were given a pacifier to suck. The dose given was 0.6 mL/kg, with the weight based on the average birth weight, and therefore equaled about a 2-mL dose.

The immunizations given were a combined diphtheria, tetanus, acellular pertussis, hepatitis B, and polio vaccine; a *Haemophilus influenzae* type B vaccine; and the heptavalent pneumococcal conjugate vaccine. Each was given 2 minutes apart.

Dr. Hatfield and her colleagues noted that sucrose already has been shown to be an effective analgesic for term and preterm infants having venipuncture and heel lance procedures, and that the American Academy of Pediatrics recommends sucrose for minor painful procedures in neonates.

They also noted that it works very quickly, so that it can be given just 2 minutes before any procedure or injection.

Based on the pain scores from their study, the number needed to treat to have one infant who showed minimal distress—wincing, but easy to console—at 2 minutes after sucrose administration was four. The number needed to treat to have one infant with minimal distress 2 minutes after a third injection was two.

"Thus, pediatric care providers would need only a small number of infants to document the efficacy of oral sucrose in reducing pain associated with immunization," Dr. Hatfield and her colleagues said.

The authors reported that they had no financial relationships to disclose. ■

Merck Freezes Vaqta Orders Because of Production Delay

A production delay has caused Merck & Co. to temporarily stop accepting orders for the pediatric and adult vial formulations of Vaqta, the hepatitis A vaccine. It is estimated that the pediatric formulation of Vaqta will be available in the early third quarter this year while the adult formulation will be available in the fourth quarter.

In the meantime, the Centers for Disease Control and Prevention reported, the pediatric and adult formulations of GlaxoSmithKline's hepatitis A vaccine Havrix, and its adult hepatitis A/hepatitis B combination vaccine (Twinrix) "are currently in good supply to meet demand."

GlaxoSmithKline plans to increase production of both vaccines to help ensure uninterrupted supply for the United States market.

There has been no change in the routine recommendations for hepatitis A vaccinations, the CDC said.

—Doug Brunk

Pages 20a—20b