What is the best treatment for gastroesophageal reflux in an infant?

Evidence-Based Answer
Thickened feedings may be useful, but position changes and proton pump inhibitors (PPIs) do not appear to be helpful. Metoclopramide may be beneficial, but adverse effects may outweigh those benefits (SOR: B, systematic reviews of inconsistent RCTs).

A Cochrane review of 20 RCTs (N=771) examined the effects of positioning, thickened feedings, and metoclopramide on gastroesophageal reflux in children younger than 2 years. Five RCTs (N=158) evaluated elevating the head of infants and did not show any change in esophageal pH measurements (results not pooled due to heterogeneity).

Compared with unthickened feeds, thickened feeds demonstrated reduced regurgitation scores (2 trials, N=48; standardized mean difference [SMD] –0.94; 95% CI, –1.4 to –0.52) and reduced frequency of emesis (3 trials, N=88; SMD –0.91; 95% CI, –1.2 to –0.61). No reduction in reflux index score (% of time pH is <4) was found (2 trials, N=61; weighted mean difference [WMD] 0.48; 95% CI, –3.3 to 4.2). Rice cereal and carob bean gum were used as thickeners. Compared with placebo, metoclopramide (0.1–0.3 mg/kg TID orally for at least 1 week) resulted in fewer daily symptoms (2 trials, N=101; SMD –0.72; 95% CI, –0.98 to –0.45) and a lower reflux index (2 trials, N=99; SMD –0.43; 95% CI, –0.72 to –0.14). More adverse effects were noted with metoclopramide, but the difference did not reach statistical significance (4 trials, N=120; risk difference 0.26; 95% CI, –0.02 to 0.53). Irritability was the most common adverse effect. Drowsiness and extrapyramidal symptoms were also reported.

A 2006 systematic review that included 5 RCTs (N=343) of infants with reflux evaluated metoclopramide versus no treatment or placebo. Various outcomes were measured including pH probe parameters, gastric emptying, weight gain, and symptom scores. Due to the small sample size and heterogeneity between studies, no conclusions could be drawn about efficacy or toxicity.

In a 2011 systematic review of 5 RCTs (N=170) for infants with reflux, 4 studies found that PPIs were not effective in reducing reflux symptoms. One trial (N=15) reported PPIs decreased reflux symptoms compared with hydrolyzed formula, but the methodological quality was poor and follow-up was lacking. The authors concluded that PPIs in infants were not effective. Because of the heterogeneity of the studies a meta-analysis could not be performed.

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What are the fetal risks of Coxsackie virus infection in a pregnant woman?

Evidence-Based Answer
Gestational exposure to Coxsackie B virus (CBV) may be associated with spontaneous abortion and fetal morbidity and mortality (SOR: C, case-control trials).

CBV may be transmitted to the fetus during pregnancy through placental infection or during delivery.

A case-control trial of 124 pregnant women in Sweden examined the prevalence of CBV-IgM antibodies in pregnant women with and without miscarriages. The study tested maternal blood samples from women in the same county matched to age and time of year and found CBV-IgM antibodies in 33% (16 of 48) of women who had a spontaneous abortion, compared with only 8% (3 of 37) of the gestational age–matched controls (P<.025).

A case-control trial of 22 patients examined placental tissue from 7 newborn infants with severe respiratory failure compared with 10 controls and 5 placentas with known viral diseases (Cytomegalovirus, herpes, and parvovirus). Using PCR and RNA probes, CBV was identified in 86% (6 of 7) of the severe respiratory failure study group, and none of the 15 in the known viral and control cases (no P value provided). All of the CBV-positive infants who survived had developmental delay.

A blinded case-control trial examined the placentas of 60 neonates with complications (idiopathic fetal or neonatal death, severe respiratory distress, or CNS symptoms) and 17 neonate controls. An infectious