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Feed thickeners can help to reduce gastro-oesophageal reflux in infants up to 6 months

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Clinical question: Does the use of feed thickeners reduce gastro-oesophageal reflux in infants up to 6 months, compared to not using feed thickeners?

Context: Gastro-oesophageal reflux (GOR) is a common condition in babies. It is often self-limiting, but can sometimes be troublesome and require treatment. Feed thickeners are thought to be a simple method to treat the symptoms of GOR, by increasing the 'stickiness' and weight of the liquid, hence retaining the food in the stomach. The effectiveness of this procedure is however uncertain.

This Cochrane review included randomised controlled trials investigating the effectiveness of thickened feeds, compared to unthickened feeds (no treatment or placebo) in treating GOR in term infants up to 6 months (or corrected gestational age for preterm infants). The outcomes of interest of this study were a) signs and symptoms of GOR, b) reflux episodes (on pH probe, intraluminal impedance or a combination of both) and c) histological evidence of oesophagitis.

Summary of the results: Eight trials with 637 infants were identified, with follow-up ranging from 1 to 8 weeks. Evidence from 6 trials (442 infants) suggests that treatment with feed thickeners seems effective to reduce the daily number of reflux episodes, compared to control (MD: - 1.97 episodes, 95% CI^a from -2.32 to -1.61). In addition, the proportion of asymptomatic infants at the end of the treatment period was reported in 2 studies (186 infants) and may be larger in the treatment group than in the control group (RR^b: 2.50, 95% CI from 1.38 to 4.51).

Two studies measured the oesophageal pH with a probe and reported the reflux index (percentage of time with pH < 4), the number of reflux episodes > 5 min and duration of the longest reflux episode. All were found to be lower in infants treated with thickened feeds, compared to control.

Failure to thrive was not reported in any of the included trials.

The occurrence of diarrhoea as an adverse event was poorly reported, but 4 studies reported no difference in diarrhoea incidence or stooling frequency. No other adverse events were noted, but the included studies had short follow-up times and were not powered to detect adverse events.

Remarks: The evidence collected in this review was judged to be of moderate (daily number of reflux episodes) to low (proportion asymptomatic infants, oesophageal reflux outcomes, occurrence of diarrhoea) quality. Reasons for downgrading the evidence include limitations in study design (risk of bias) and imprecise results (limited number of studies with small sample sizes and wide confidence intervals).

Conclusion: Moderate to low quality evidence suggests that feed thickeners seem to decrease the daily number of reflux episodes, may increase the proportion of asymptomatic infants after

treatment and may decrease oesophageal pH parameters. Low quality evidence suggests there may be no difference in the occurrence of diarrhoea. Insufficient information was available to make judgments about which feed thickener is superior.

Implications for practice: Gastro-oesophageal reflux is a common, but often self-limiting disorder. In severe cases where treatment is warranted, feed thickeners may be considered as a simple, safe and beneficial treatment option.

Reference: Kwok TC, Ojha S, Dorling J. Feed thickener for infants up to six months of age with gastro-oesophageal reflux. Cochrane Database Syst Rev. 2017 Dec 5;12:CD003211.

Access the full text of these reviews via the Cebam Digital Library for Health (www.cebam.be/nl/cdlh or www.cebam.be/fr/cdlh)

* MD: mean difference

^ CI: confidence interval

‡ RR: relative risk