



Formula Thickeners for Gastroesophageal Reflux in Infants up to 6 Months: A Meta-analysis

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Introduction

Gastro-esophageal reflux is a physiologic self-resolving phenomenon in infants that does not require treatment most of the time but could become pathological when it causes complications and bothersome symptoms. Among the non-pharmacologic measures used to treat reflux in infants, many people turn towards using pre-thickened formula that are advertised as “anti-reflux”. Research on these formula thickeners are conflicting in their effect on the reduction of symptoms of regurgitation among infants.

Objectives

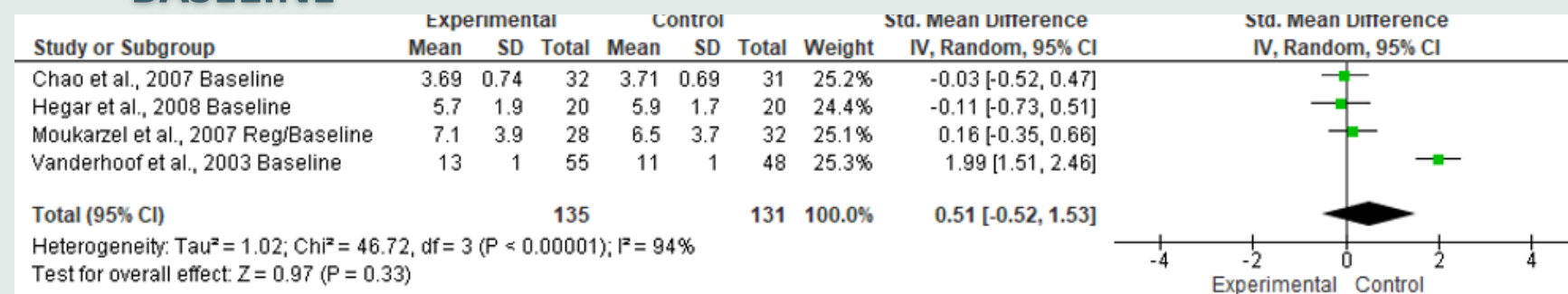
To synthesize available evidence from published studies on the effectiveness of formula thickeners in the management of symptoms of GER in infants up to six months

Methodology

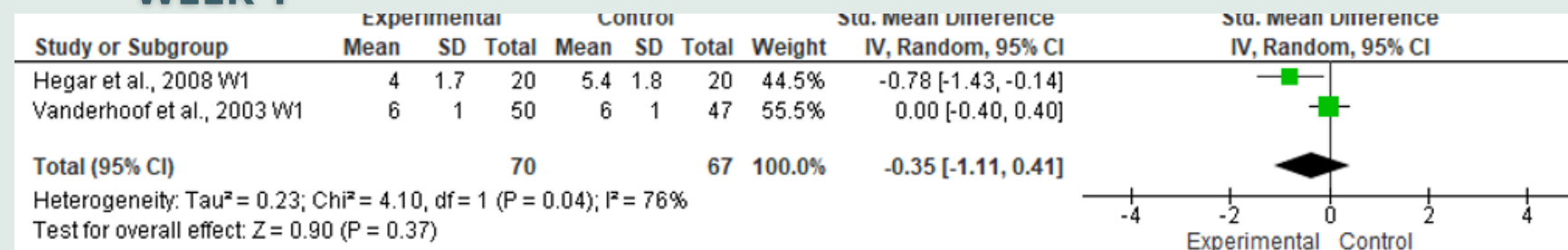
A meta-analysis was done using randomized controlled trials published up to 2020 which compared the effectiveness of pre-thickened formula in decreasing the symptoms of GER. A database search using The Cochrane Library, PubMed®, Medline, Embase, and Google Scholar, was done by the investigators. Pooled estimates of Risk Ratio for quit rates was computed using DerSimonian and Laird random-effects model.

Results

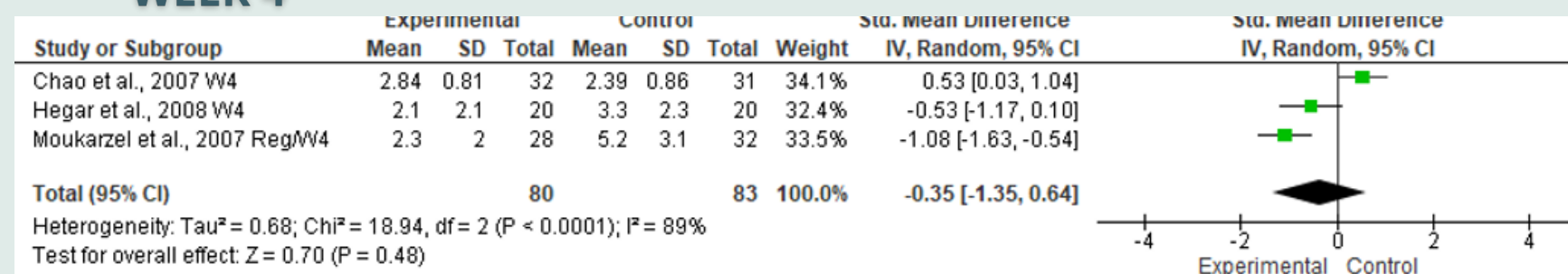
BASELINE



WEEK 1



WEEK 4



Conclusion

The results of this meta-analysis revealed inconclusive evidence that formula thickeners decrease the frequency of regurgitation among infants up to six months old. However, the current study had several limitations and factors affecting the data analysis. Recommendations to future studies exploring the same topic include: a) doing subgroup analysis comparing the effect of different types of formula thickeners and different duration of intervention on the frequency of regurgitation, b) using other outcomes such as esophageal pH and manometry findings, and c) exploring other non-pharmacologic co-intervention such as parental reassurance, positional therapy, and adjustment of timing and frequency of feedings.

KEYWORDS:

Gastroesophageal reflux, infants, formula thickeners, pre-thickened formula, regurgitation