Reviewer's report

Title: Synbiotics, probiotics or prebiotics for full term infants: A Systematic Review

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Reviewer: H. Szajewska

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General comment
The authors' objective was to determine the effects of infant formula containing synbiotics, probiotics or prebiotics on clinical outcomes in full term infants. To answer this question, the researchers conducted a systematic review (with meta-analysis) of randomized controlled trials. They concluded that there is no enough evidence to state that supplementation of term infant formula with synbiotics, probiotics or prebiotics dose result in improved growth or clinical outcomes in term infants. There is no data to establish if synbiotics are superior to probiotics or prebiotics. The authors followed the methodology developed by the Cochrane Collaboration. Thus, there is no major criticism to it.

However, in my opinion, this systematic review does not add anything new. In 2011, the Committee on Nutrition of the European Society for Paediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN) published a document entitled 'Supplementation of Infant Formula With Probiotics and/or Prebiotics: A Systematic Review and Comment by the ESPGHAN Committee on Nutrition' (J Pediatr Gastroenterol Nutr 2011;52: 238–250).

In contrast to Mugambi et al., the ESPGHAN Committee on Nutrition did not pool the results of studies using different probiotics and/or prebiotics. This is one of the fundamental issues. Is it appropriate to pool data on different probiotic microorganisms? It is tempting for the reviewers to produce a single estimate of the treatment effect. However, in my opinion, the results of a meta-analysis of all probiotics, regardless of the microorganisms used, may be misleading. Clearly, this was also the opinion of the ESPGHAN Committee on Nutrition. Pooling data on different probiotics/prebiotics is my major criticism.

The authors stated that ‘there is not enough evidence to state that supplementation of term infant formula with synbiotics, probiotics or prebiotics does result in improved growth’. The reader may get an impression that ‘improved growth’ is better. What is the evidence that this is beneficial?

Level of interest: An article of limited interest

Quality of written English: Acceptable
**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
Nothing to declare.