

Human Milk Feeding as a Protective Factor for Retinopathy of Prematurity: A Meta-analysis

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Abstract

CONTEXT: Studies have suggested that human milk feeding decreases the incidence of retinopathy of prematurity (ROP); however, conflicting results have been reported.

OBJECTIVE: The aim of this meta-analysis was to pool currently available data on incidence of ROP in infants fed human milk versus formula.

DATA SOURCES: Medline, PubMed, and EBSCO were searched for articles published through February 2015.

STUDY SELECTION: Longitudinal studies comparing the incidence of ROP in infants who were fed human milk and formula were selected. Studies involving donor milk were not included.

DATA EXTRACTION: Two independent reviewers conducted the searches and extracted data. Meta-analysis used odds ratios (ORs), and subgroup analyses were performed.

RESULTS: Five studies with 2208 preterm infants were included. Searches including various proportions of human milk versus formula, any-stage ROP, and severe ROP were defined to pool data for analyses. For any-stage ROP, the ORs (95% confidence intervals [CIs]) were as follows: exclusive human milk versus any formula, 0.29 (0.12 to 0.72); mainly human milk versus mainly formula, 0.51 (0.26 to 1.03); any human milk versus exclusive formula, 0.54 (0.15 to 1.96); and exclusive human milk versus exclusive formula, 0.25 (0.13 to 0.49). For severe ROP, they were 0.11 (0.04 to 0.30), 0.16 (0.06 to 0.43), 0.42 (0.08 to 2.18), and 0.10 (0.04 to 0.29), respectively.

LIMITATIONS: Prospective randomized studies being impossible because of ethical issues, we chose observational studies for analysis. A few studies involving subgroup analyses presented high heterogeneity.

CONCLUSIONS: Based on current limited evidence, in very preterm newborns, human milk feeding potentially plays a protective role in preventing any-stage ROP and severe ROP.