

In some studies, the dose of intravenous soybean oil (SO) has been associated with a decreased incidence of intestinal failure-associated liver disease” Ong et al (2016).

Abstract:

Background: In some studies, the dose of intravenous soybean oil (SO) has been associated with a decreased incidence of intestinal failure-associated liver disease. The effect of lipid sparing on neurodevelopment (ND) and growth remains unknown. This study investigated the impact of SO dose on ND and growth over the first 2 years of age in preterm neonates.

Materials and Methods: This is a single-site prospective follow-up study. Neonates with a gestational age ≤ 29 weeks were randomized to low-dose (LOW) or standard-dose (CON) SO. Bayley Scales of Infant Development III and anthropometric measurements were collected at approximately 6, 12, and 24 months corrected gestational age.

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Results: Subjects were premature, with a mean (\pm SD) gestational age of 28 ± 1 and 27 ± 1 weeks ($P = .3$) for LOW and CON, respectively. Thirty subjects completed follow-up (LOW = 15, CON = 15). There were no differences for ND and growth outcomes when LOW was compared with CON, with the exception of a higher 12-month follow-up cognitive scaled score in the LOW group ($P = .02$).

Conclusion: A reduced SO dose did not adversely affect ND or growth in this cohort of preterm neonates. However, larger studies are needed to determine the long-term safety of SO dose reduction before this strategy can be adopted.

Reference:

Ong, M.L., Purdy, I.B., Levit, O.L., Robinson, D.T., Grogan, T., Flores, M. and Calkins, K.L. (2016) Two-Year Neurodevelopment and Growth Outcomes for Preterm Neonates Who Received Low-Dose Intravenous Soybean Oil. JPEN. October 21st. .



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