

How Much Breast Milk Do Young Filipino Kids Consume? Data from Vitamin A Safety Assessment Study

INTRODUCTION

Vitamin A deficiency (VAD) increases the risk of morbidity and mortality among young children. As VAD-endemic countries implement large-scale intervention programs to reduce VAD, the risk of excessive vitamin A intake due to overlapping coverage has in turn become a growing concern. The Philippines has many VA programs in place, including high-dose supplementation, micronutrient powder, large-scale fortification of staple foods, and market-driven fortification through the Sangkap Pinoy Program. Children who are breast-feeding are likely to receive adequate VA from breast milk if their mothers have adequate VA status; thus, any excessive VA intake caused by exposure to multiple vitamin A programs may be most likely among breast-feeding children.

The study aimed to determine the breast milk intake among children 12 to 18 months of age who are exposed to multiple VA intervention programs using the dose-to-mother deuterium dilution technique. The information on breast milk intake will be combined with information on VA concentration of breast milk and VA intake from complementary foods to calculate total VA intake of the children.

METHODS

Patterned after the “Super Kid” design, there were three study groups consisting of breastfeeding children who were: 1) exposed to multiple VA programs and have received a high-dose VA supplement (VAS) in the past month, 2) exposed to multiple VA programs and have received a high-dose VAS in the past 3-6 months, and 3) not exposed to multiple VA programs but have received a high-dose VAS in the past 3-6 months. Out of 481 mother-child pairs screened in Mandaluyong City, 56 breastfeeding pairs were recruited for the study. In 52 pairs who completed the protocol, average daily breast milk intake of the child over a 14-day period was estimated by modelling the data from mothers and children at each time point. The study has been approved by the FNRI Ethics Review Committee.

RESULTS

Mean (\pm SD) breast milk intake among 12- to 18-month-old urban Filipino children was 531 ± 208 g, which is close to the usual milk intake for this age group from pooled studies in developing countries, i.e., 526 ± 214 g. Breast milk intake in Group 3 (637 ± 205 g) was significantly higher ($p < 0.05$) than 451 ± 173 g and 413 ± 151 g reported in Groups 1 and 2, respectively, because the children in Group 3 were generally younger (13.7 months vs. 15.2 and 15.8 months).

CONCLUSION

The dose-to-mother deuterium dilution technique was applied to estimate the breast milk intake of children exposed to multiple VA programs. The study findings will provide guidance to program managers and public health nutrition policymakers to optimize the evaluation of their vitamin A programs, especially in the Philippines where multiple VA interventions are in place, and to enable them to improve national nutrition plans and strategies.

Country

Philippines

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Session Classification: Oral Abstract Presentations - Micronutrients

Track Classification: Assessment