

**ABSTRACT****Effect of Vitamin A Supplementation on Breastmilk Retinol and Serum retinol on Chronic Energy Deficiency and Non Chronic Energy Deficiency Postpartum Women**

Vitamin A supplementation for postpartum women can raise the amount of vitamin A in breast milk retinol and serum retinol. The aims of this study were to identify the characteristics of postpartum women and family characteristics and analyze the effect of vitamin A supplementation on serum retinol level and retinol breastmilk on postpartum women who CED and non CED. This study was observational analytic cohort study design (prospective) because there were observations on two groups of postpartum women (CED and non CED) who were given high doses of vitamin A. The variables studied were breast milk retinol and serum retinol were measured three times. Maternal characteristics and family characteristics were measured using questionnaire instruments. Consumption patterns were measured using food frequency questionnaire while consumption levels were measured using once 24-hour recall questionnaires. Data analysis used independent samples t-test to understand difference among CED group and non CED group pre-supplementation, 1-month and 2-months post-supplementation. Paired samples t-test to understand difference among pre-supplementation and post-supplementation in both of groups. Result showed that no significant difference between pre-supplementation, 1-months and 2-months post-supplementation on breastmilk retinol ( $p = 0,517$ ;  $p= 0,209$ ;  $p=0,990$ ). The result showed that there were no significant difference pre-supplementation, 1-months and 2-months post-supplementation on serum retinol ( $p=0,945$ ;  $p=0,732$ ;  $p=0,661$ ). Conclusion: there was lack of the benefits on breastmilk retinol and serum retinol after high dose vitamin A supplementation among CED and non CED postpartum women. It can be recommended that need for improving knowledge of nutrition by the programs in women and their family primarily associated with the consumption of energy, protein and vitamin A. Moreover, nutrition improvement program is needed especially on postpartum women.

**Keywords** : vitamin A supplementation, CED, breastmilk retinol, postpartum women