

Serum Vitamin A and Carotene concentration among Indonesian to full term neonates in relation to maternal nutrition status and dietary nutrients intake

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Abstrak

This study was carried out to analyze the serum vitamin A / carotene concentration among Indonesian full term neonates in relation to maternal nutritional status and nutrients intake. One hundred and eight couples' (mothers + neonates) were recruited for the study. The serum vitamin A/carotene concentration was determined by High Pressure Liquid Chromatography (HPLC) and Ultraviolet Absorbance/Spectrophotometric method (IVACG, 1982) and the dietary nutrient intake of the mothers was analyzed using a 2 day/24 hours recall method. Seventy one (67%) of the neonates were suffering from low vitamin A level (<20 g/dl), the rest 35 (33%) were at an adequate vitamin A level (>20 / g/dl) and 13 (12%) of the mothers were suffering from low vitamin A level (<20 /4g/di), the rest 95 (88%) were at an adequate vitamin A level. That mean serum vitamin A/carotene of the neonates was lower than those of their mothers. The mean serum vitamin A of the mothers was 30.7 ,wg/dl - v.53 and mean serum carotene of the mothers was 124.23g/dl - 49.66. The study concluded that there was no significant correlation between serum vitamin A of the neonates and serum vitamin A of their mothers ($p > 0.1$). It was found that? serum vitamin A concentration and serum carotene of the mothers were positively correlated; also maternal serum carotene was positively related to serum carotene of the neonates. The beta-carotene intake, fat intake, protein intake were positively related to serum vitamin A of the mothers. Further investigation using larger numbers of samples and more controlled method was suggested to -scrutinize the influences of gestational age, dietary nutrients intake on the serum of vitamin A/carotene of the mothers. The study also pointed out the importance of providing .the pregnant mothers with sound information about nutrition in pregnancy.