

PERBEDAAN KADAR CRP, KADAR SENG DAN KADAR IgA PADA ANAK BALITA GIZI KURANG BERDASARKAN KADAR RETINOL DI WILAYAH KERJA PUSKESMAS PENELEH KECAMATAN GENTENG KOTA SURABAYA

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Vitamin A deficiency (VAD) occurs when retinol reserve in the liver was $< 20 \mu\text{g/dl}$. Data from the Ministry of Health in 2004 showed that almost 10 million under five in Indonesia had subclinical VAD with serum retinol level $< 20 \mu\text{g/dl}$. Serum retinol level will decrease during acute phase response (CRP), which may also result from zinc deficiency. Morbidity rate due to vitamin A deficiency describes the presence of infectious process in the body, in which the severity of infection process is determined by the inflammatory level (CRP) and immunity level (IgA).

This was an analytic observational study with cross-sectional design. Sample were undernutrition children from age 24 – 60 months and sampling was performed using simple random sample, with sample size of 30 children with age range 24-60 months, divided into 2 groups (normal retinol level and below normal level of retinol). Data analysis was performed descriptively and analytically using independent t test for interval/ratio data scale, Chi-Square test for nominal data scale, and Mann-Whitney test for ordinal data scale.

Result revealed that there was no significant difference in retinol level ($p > 0.05$) toward characteristics (age and sex), and family characteristics (occupation, education, income, expense for food, number of family members, mothers' level of knowledge, breastfeeding pattern, complementary feeding food), nutrient consumption pattern (energy, carbohydrate, protein, vitamin A, and zinc). There was significant difference in fat consumption level ($p=0.035$) at under five children with undernutrition based on retinol level. There was no difference in the availability of vitamin A source in household and in the market in food taboo, environmental sanitation, housing and self hygiene, and illness frequency ($p > 0.05$). The result of Fisher's Exact analysis revealed no difference between CRP level ($p = 0.483$). Independent t test revealed no correlation between zinc level in those children ($p = 0.386$), and independent t test revealed significant difference between IgA level in underfives with undernutrition based on retinol level ($p = 0.017$).

It is suggested that education should be given to improve mothers' knowledge on the source of vitamin A and fat available in the market within the location of study. Vitamin A supplementation should be given along with zinc provision, adjusted to the suggested zinc sufficiency rate.

Keywords : CRP, zinc, IgA, Retinol.

