ABSTRACT

Correlation Between Serum High Sensitivity C-Reactive Protein with Dietary Intake of Indonesian Lactating Mothers

Karin Wiradarma,1 Diana Sunardi,1 Ninik Mudjihartini2

1. Department of Nutrition, Faculty of Medicine, Universitas Indonesia, Cipto Mangunkusumo Hospital, Jakarta, Indonesia
2. Department of Biochemistry and Molecular Biology, Faculty of Medicine, Universitas Indonesia

Background and Objectives: Chronic low-grade inflammation has emerged as important pathophysiology of non-communicable diseases, which can cause negative effects to mother and baby. Dietary intake has been known as important factor to affect inflammation, which can be measured by high-sensitivity C-reactive protein (hs-CRP). This study aimed to examine the correlation between serum hs-CRP with dietary intake in lactating mothers.

Methods: A cross-sectional study was conducted by consecutively enrolling 71 lactating mothers, 3-6 months post-partum, age 20-35 years old, visiting Grogol Petamburan and Cilincing community health center between February and April 2019. Dietary assessment was conducted using semi-quantitative food frequency questionnaire. Anthropometric measurements included were pre-pregnancy weight, post-partum weight, and body height. Serum hs-CRP was measured by immunoturbidimetry method. Spearman correlation was used, with p<0.05 considered significant.

Results: Correlation was found between serum hs-CRP and energy (r = 0.372, p = 0.001), carbohydrate (r = 0.295, p = 0.013), and vitamin B6 (r = -0.285, p = 0.016) intake. We also found that serum hs-CRP was correlated with pre-pregnancy (r = 0.296, p = 0.012) and post-partum BMI (r = 0.430, p<0.001).

Conclusion: Energy, carbohydrate, and vitamin B6 intakes are positively correlated with serum hs-CRP level.

Keywords: C-reactive protein, dietary intake, breastfeeding

Corresponding author:
Karin Wiradarma
Taman Golf Timur Blok B1 No 17, Pantai Indah Kapuk, Penjaringan, North Jakarta, 14460
Email address: karin.wiradarma@gmail.com