

# Korelasi skor dietary inflammatory index ibu laktasi dengan kadar High Sensitivity C-Reactive Protein Serum dan air susu ibu 3-6 bulan post partum di Jakarta = Correlation between dietary inflammatory index score with Serum and Breast Milk C-Reactive Protein in 3-6 Months Post Partum Mothers in Jakarta

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## Abstrak

Peningkatan berat badan selama hamil dan indeks massa tubuh (IMT) ibu laktasi yang berlebihan berhubungan dengan inflamasi kronis derajat rendah yang dapat menyebabkan dampak negatif bagi kesehatan ibu maupun bayi. Asupan nutrisi diketahui sebagai salah satu faktor utama yang mempengaruhi perubahan berat badan (BB), IMT, serta inflamasi pada ibu laktasi. Inflamasi kronis derajat rendah dapat diukur dengan high sensitivity C-Reactive Protein (hs-CRP), baik di serum maupun ASI. Selain dengan pemeriksaan laboratorium, status inflamasi juga dapat diprediksi oleh skor Dietary Inflammatory Index (DII), suatu alat yang dapat memprediksi potensi inflamasi diet individu.

Penelitian ini bertujuan untuk mengetahui korelasi antara skor DII ibu laktasi dengan kadar hs-CRP serum dan ASI ibu 3-6 bulan post partum di Jakarta. Penelitian ini adalah studi potong lintang dengan menggunakan consecutive sampling yang melibatkan 71 subjek ibu laktasi 3-6 bulan post partum yang datang ke Puskesmas Cilincing dan Grogol Petamburan, Jakarta, pada bulan Februari-April 2019. Penilaian asupan nutrisi dilakukan dengan semi-kuantitatif Food Frequency Questionnaires, pemeriksaan antropometri meliputi BB prakehamilan, BB saat pengambilan data, dan tinggi badan, serta pengambilan sampel serum (dengan metode imunoturbidimetri) dan ASI (dengan metode ELISA) untuk pemeriksaan hs-CRP. Median CRP serum adalah 1,74 mg/L dan CRP ASI 6221,17 pg/mL, sementara rerata skor DII adalah 0,624. Ditemukan korelasi positif antara hs-CRP serum dan ASI ( $r = 0,269$ ,  $p = 0,023$ ), namun pada penelitian ini tidak didapati korelasi antara skor DII dengan kadar hs-CRP serum maupun ASI ( $r = -0,124$ ,  $p = 0,301$  dan  $r = 0,129$ ,  $p = 0,283$ ).

Excessive gestational weight gain (GWG) and body mass index (BMI) in lactating mothers are associated with chronic low-grade inflammation which can cause negative effects to mother and baby. Nutrient intake has been known as important factor to affect inflammation, which can be measured by high sensitivity C-reactive protein (hs-CRP). Beside laboratory assessment, level of inflammation can be determined by Dietary Inflammatory Index (DII) score, a tool developed to predict inflammation potential in diet consumed.

This study aimed to examine the correlation between DII score with serum and breast milk hs-CRP in lactating mothers. 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 on February-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, and breast milk hs-CRP by ELISA method. Median of serum and breast milk CRP were 1,74 mg/L and 6221,17 pg/mL, respectively. Mean of DII score was 0,624. Positive correlation was found between serum and breast milk hs-CRP ( $r =$

0,269,  $p = 0,023$ ), but we can not find correlation between DII score with serum and breast milk hs-CRP ( $r = -0,124$ ,  $p = 0,301$  and  $r = 0,129$ ,  $p = 0,283$ ). There is no correlation between DII score with serum and breast milk hs-CRP.