

# Analisis 8 iso prostaglandin f2a dan hubungannya dengan estimasi laju filtrasi glomerulus pada pasien diabetes melitus tipe 2 wanita = Analysis of 8 iso prostaglandin f2a and its correlation with estimated glomerular filtration rate in type 2 diabetes mellitus woman patients / Siti Lathifah Noor Amir

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## Abstrak

[Penyakit ginjal kronik (PGK) adalah salah satu komplikasi yang biasanya terjadi pada pasien diabetes melitus tipe 2. Pendeteksian PGK dilakukan dengan menghitung nilai estimasi laju filtrasi glomerulus (eLFG) maupun urine albumin creatinine ratio (UACR). Salah satu biomarker yang sedang diteliti adalah senyawa 8-iso-Prostaglandin F2&#945;. Tujuan dari penelitian ini adalah menganalisis kadar 8-iso-Prostaglandin F2&#945; dan hubungannya dengan eLFG. Sampel yang dianalisis adalah pasien diabetes melitus tipe 2 wanita di Puskesmas Pasar Minggu yang dikumpulkan oleh peneliti sebelumnya tahun lalu secara total sampling. Nilai eLFG diperoleh berdasarkan nilai kreatinin serum yang dihitung dengan rumus Cockroft-Gault, MDRD study, serta CKD-EPI, sedangkan kadar 8-iso-Prostaglandin F2&#945; diukur dengan menggunakan metode ELISA (Enzyme Linked Immunosorbent Assay). Kadar 8-iso-Prostaglandin F2&#945; diperoleh  $7069,38 \pm 7611,13$  pg/mg kreatinin dan nilai eLFG diperoleh  $93,15 \pm 37,65$  (Cockroft-Gault);  $89,47 \pm 34,30$  (MDRD study); dan  $87,05 \pm 24,69$  (CKD-EPI). Hubungan antara kadar 8-iso-Prostaglandin F2&#945; dengan nilai eLFG (92 pasien) berdasarkan persamaan Cockroft-Gault ( $r = 0,396$ ;  $p = < 0,001$ ), MDRD ( $r = 0,375$ ;  $p = < 0,001$ ) dan CKD-EPI ( $r = 0,342$ ;  $p = 0,001$ ). Sehingga diketahui terdapat hubungan yang bermakna antara kadar 8-iso-Prostaglandin F2&#945; dengan nilai eLFG dengan  $p = 0,05$ .;Chronic Kidney Disease (CKD) is one of complication that most common in type 2 diabetes mellitus patients. The detection of CKD is be done by calculating estimated glomerular filtration rate (eGFR) and urine albumin creatinine ratio (UACR). One of the biomarkes being studied is 8-iso-Prostaglandin F2&#945;. The aim of this study was to analyze concentration of 8-iso-Prostaglandin F2&#945; and its correlation with estimated glomerular filtration rate (eGFR). Samples analyzed were type 2 diabetes mellitus woman patients at Pasar Minggu Local Government Clinic that collected by previous researcher last year in total sampling . eGFR was obtained based on the measurement of serum creatinine, 8-iso-Prostaglandin F2&#945; was measured by ELISA (Enzyme Linked Immunosorbent Assay) method. Concentration of 8-iso-Prostaglandin F2&#945; was  $7069,38 \pm 7611,13$  pg/mg creatinine and the eGFR values  $93,15 \pm 37,65$  (Cockroft-Gault);  $89,47 \pm 34,30$  (MDRD study); and  $87,05 \pm 24,69$  (CKD-EPI). The correlation between 8-iso-Prostaglandin F2&#945; concentration and eGFR (92 samples) is based on Cockroft-Gault ( $r = 0,396$ ;  $p = < 0,001$ ), MDRD ( $r = 0,375$ ;  $p = < 0,001$ ) and CKD-EPI ( $r = 0,342$ ;  $p = 0,001$ ). So there was a significant correlation between 8-iso-Prostaglandin F2&#945; concentration and eGFR., Chronic Kidney Disease (CKD) is one of complication that most common in type 2 diabetes mellitus patients. The detection of CKD is be done by calculating estimated glomerular filtration rate (eGFR) and urine albumin creatinine ratio (UACR). One of the biomarkes being studied is 8-iso-Prostaglandin F2&#945;. The aim of this study was to analyze concentration of 8-iso-Prostaglandin F2&#945; and its correlation with estimated glomerular filtration rate (eGFR). Samples analyzed were type

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