

HUBUNGAN KADAR BUN TERHADAP KEJADIAN GANGGUAN GERAK PADA PENYAKIT GINJAL KRONIS DI RSUP DR. SARDJITO YOGYAKARTA

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INTISARI

Penyakit Ginjal Kronis (PGK) merupakan penurunan fungsi ginjal bersifat persisten dan *irreversible*. Komplikasi neurologis yang memiliki risiko tinggi terjadi pada pasien PGK stadium terminal dan uremia adalah gangguan gerak, dapat berupa mioklonus, tremor, parkinsonisme, dan *restless legs syndrome* (RLS). *Blood Urea Nitrogen* (BUN) adalah jumlah nitrogen urea dalam darah. Pada penurunan laju filtrasi glomerulus (LFG) <20 ml/menit (PGK stadium 4), kadar BUN biasanya akan lebih besar dari 40 mg/dl. Penelitian ini bertujuan mengetahui hubungan kadar BUN yang meningkat terhadap meningkatnya kejadian gangguan gerak pada PGK. Penelitian *cross-sectional* dilakukan dengan mendapatkan populasi terjangkau pasien PGK, pemeriksaan fisik generalis dan neurologis untuk inklusi adanya gangguan gerak, dilakukan bersamaan dengan pengambilan data kuesioner mengenai data demografis dan klinis penyakit ginjal kronis. Pemeriksaan kadar BUN dilakukan di laboratorium RSUP Dr. Sardjito Yogyakarta dan sampel diambil pada saat pasien kontrol di instalasi hemodialisa (rawat jalan) dan instalasi rawat inap. Dari 73 subjek, hasil analisis bivariat terdapat korelasi yang bermakna kejadian gangguan gerak dengan durasi PGK ($p = 1,010$), tekanan darah sistolik ($p = 0,102$), tekanan darah diastolik ($p = 0,109$), kadar asam urat ($p = 0,086$), kadar natrium ($p = 0,060$), dan kadar BUN ($p = 0,002$). Pada analisis multivariat regresi logistik menunjukkan bahwa kadar BUN merupakan faktor independen kejadian gangguan gerak pada PGK ($p = 0,032$).

Kata kunci: *blood urea nitrogen* (BUN), gangguan gerak (*movement disorders*), penyakit ginjal kronis (PGK)

CORRELATION OF BLOOD UREA NITROGEN (BUN) LEVEL AND MOVEMENT DISORDERS INCIDENCE ON CHRONIC KIDNEY DISEASE PATIENTS AT DR. SARDJITO YOGYAKARTA HOSPITAL

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ABSTRACT

Chronic Kidney Disease (CKD) is a persistently and irreversible decrease of kidney function. High-risk neurologic complications that could happen on CKD patients in terminal stage and uremia is movement disorders, may include myoclonus, tremor, parkinsonism, and restless legs syndrome (RLS). Blood Urea Nitrogen (BUN) is the amount of urea nitrogen in the blood. In decreasing glomerular filtration rate (GFR) <20 ml/min (CKD stage 4), BUN levels will usually be greater than 40 mg/dl. This study aims to determine the relationship of increased BUN levels to increased incidence of movement disorders in CKD. A cross-sectional study was conducted by obtaining an affordable population of CKD patients, generalist and neurologic physical examinations for inclusion of movement disorders, performed simultaneously with questionnaire data collection of demographic and clinical data of CKD patients. BUN level examination was done in the laboratory of Dr. Sardjito Yogyakarta Hospital and samples were taken at the time of control patients in hemodialysis (outpatient) and inpatient installation. Of the 73 subjects, the results of bivariate analysis showed significant correlation with movement disorders are duration of CKD ($p = 1,010$), systolic blood pressure ($p = 0,102$), diastolic blood pressure ($p = 0,109$), uric acid level ($p = 0,086$), level of sodium ($p = 0,060$), and BUN level ($p = 0,002$). In multivariate analysis logistic regression showed that BUN level was an independent factor of incidence of movement disorders in CKD patients ($p = 0,032$).

Keywords: blood urea nitrogen (BUN), movement disorders, chronic kidney disease (CKD)