

# HUBUNGAN KADAR UREUM DAN JUMLAH RETIKULOSIT PADA PASIEN PGTA

## Studi Observasi Analitik di Rumah Sakit Islam Sultan Agung Semarang

### *The relationship between urea levels and reticulocyte count in ESRD patients is still limited.*

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#### **ABSTRAK**

**Latar Belakang** : Penyakit Ginjal Tahap Akhir (PGTA) adalah penurunan fungsi nefron ginjal yang progresif diikuti dengan penurunan laju filtrasi glomerulus (LFG). Pasien PGTA mengalami penurunan fungsi ekskresi ginjal yang menyebabkan peningkatan kadar ureum. Peningkatan kadar ureum memperparah kerusakan tubulus ginjal dan menyebabkan penurunan produksi eritropoietin. Penurunan eritropoietin mengganggu proses eritropoiesis dan menyebabkan penurunan retikulosit. Penelitian terdahulu mengenai hubungan kadar ureum dan jumlah retikulosit pada pasien PGTA masih terbatas. Tujuan dilakukan penelitian ini untuk mengetahui hubungan antara kadar ureum dan jumlah retikulosit pada pasien PGTA di Rumah Sakit Islam Sultan Agung Semarang.

**Metode** : Desain penelitian analitik observasional dengan rancangan cross sectional melibatkan 35 pasien PGTA rawat jalan di Unit Hemodialisa Rumah Sakit Islam Sultan Agung Semarang. Data penelitian dianalisis secara deskriptif dan uji *pearson correlation*.

**Hasil**: Hasil penelitian didapatkan rerata kadar ureum adalah 146,31 mg/dL dan rerata jumlah retikulosit adalah 1,49%. Uji korelasi rerata kadar ureum dan jumlah retikulosit *pearson correlation* menunjukkan nilai  $p = 0,266$ .

**Kesimpulan** : Berdasarkan penelitian dapat disimpulkan tidak terdapat hubungan bermakna antara kadar ureum dan jumlah retikulosit pada pasien PGTA di Rumah Sakit Islam Sultan Agung Semarang.

**Kata kunci**: PGTA, Penyakit Ginjal Tahap Akhir, Kadar Ureum, Jumlah Retikulosit

## **ABSTRACT**

**Background:** *End Stage Renal Disease (ESRD) is a progressive decrease in renal nephron function followed by a decrease in glomerular filtration rate (GFR). ESRD patients experience decreased renal excretion function which causes an increase in urea levels. Increased urea levels exacerbate damage to the renal tubules and cause a decrease in erythropoietin production. Decreased erythropoietin interferes with the process of erythropoiesis and causes a decrease in reticulocytes. Previous studies on the relationship between urea levels and reticulocyte count in ESRD patients is still limited. The purpose of this study was to determine the relationship between urea levels and reticulocyte count in ESRD patients at Sultan Agung Islamic Hospital, Semarang.*

**Methods:** *This observational analytic study with cross sectional design included 35 ESRD outpatients at the Hemodialysis Unit of Sultan Agung Islamic Hospital, Semarang. The research data were analyzed descriptively, followed by Pearson correlation test.*

**Results:** *The results obtained show that the average urea level was 146.31 mg / dL and the mean reticulocyte count was 1.49%. The Pearson correlation test of mean urea levels and reticulocyte count showed p value = 0.266.*

**Conclusion:** *Based on the study, it can be concluded that there is no significant relationship between urea levels and reticulocyte count in ESRD patients at Sultan Agung Islamic Hospital, Semarang.*

**Keywords:** *ESRD, End Stage Renal Disease, Urea Level, Reticulocyte count*