

ABSTRAK

HUBUNGAN ANTARA MIKROALBUMINURIA DAN SKOR SOFA PADA PASIEN SEPSIS YANG DIRAWAT DI ICU RSUP DR SARDJITO Antonius Catur S¹, Akhmad Yun Jufan², Untung Widodo³

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Latar belakang : Sepsis menyebabkan keluarnya mediator inflamasi ke dalam sirkulasi. Akibat adanya mediator inflamasi dan stres oksidatif terjadi peningkatan permeabilitas kapiler termasuk glomerulus renalis. Manifestasi pada glomerulus akibat disfungsi endotelium adalah meningkatnya ekskresi albumin dalam urin. Mikroalbuminuria menggambarkan peningkatan permeabilitas mikrosirkulasi. Mikroalbuminuria didefinisikan ekskresi albumin pada urin 30-300 mg/24 jam, terjadi secara cepat setelah inflamasi dan berhubungan dengan tingkat keparahan pada sepsis. Skor SOFA merupakan salah satu parameter untuk menilai tingkat keparahan disfungsi organ.

Tujuan : Tujuan penelitian ini adalah untuk mengetahui apakah terdapat hubungan antara mikroalbuminuria dan skor SOFA sepsis yang dirawat di ICU RSUP dr. Sardjito.

Metode : Penelitian ini merupakan studi korelasi observasional. Penelitian akan dilakukan di ICU RSUP dr. Sardjito Yogyakarta. Kriteria inklusi pada penelitian ini adalah pasien dengan diagnosis sepsis yang dirawat di ICU RSUP dr. Sardjito yang berumur lebih dari 18 tahun, kriteria eksklusi : pasien diabetes mellitus, anuria, gagal ginjal kronis (CKD), hamil, trauma urologi, sindrom nefrotik, infeksi saluran kencing, kriteria *drop out* : subyek ingin berhenti dari penelitian ketika penelitian berlangsung, subyek meninggal kurang dari 48 jam sehingga data tidak lengkap. Urin dikumpulkan pada 24 jam pertama (H-0), 48 jam pertama (H-1) dan 72 jam pertama (H-3), Mikroalbuminuria diperiksa di laboratorium. Skor SOFA diperiksa dan dilakukan studi korelasi untuk mengetahui hubungan dengan mikroalbuminuria.

Hasil : Jumlah subyek yang memenuhi kriteria inklusi 35 sampel, 20 subyek dieksklusi, 1 sampel *drop out*. Pada penelitian ini didapatkan subyek 57,1% laki laki dan 42,9% perempuan, rata-rata skor SOFA $9,4 \pm 3,4$, rata-rata mikroalbuminuria $132 \pm 75,2$ mg/l. Subyek dengan syok sepsis 42,9% dan semua subyek memerlukan ventilator. Mortalitas 50%, infeksi terutama dari sistem respirasi (42,9%), dan bakteri utama *Acinebacter baumannii*. Rata-rata skor SOFA subyek yang hidup $6,43 \pm 2,80$ dan yang meninggal $10,34 \pm 3,00$, mikroalbuminuria subyek yang hidup rata-rata $82,10 \pm 70,73$ mg/l dan subyek meninggal $167,71 \pm 46,81$ mg/l. Terdapat korelasi antara mikroalbuminuria dan skor SOFA dengan kekuatan $r:0,627$ dan $p: 0,016$. Skor SOFA >7 memiliki risiko kematian 16 kali dan mikroalbuminuria $> 156,35$ memiliki risiko kematian 36 kali.

Kesimpulan : Terdapat hubungan antara mikroalbuminuria dan skor SOFA pada pasien sepsis yang dirawat di ICU RSUP Dr Sardjito Yogyakarta.

Kata kunci : mikroalbuminuria, skor SOFA, sepsis

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ABSTRACT

CORRELATION BETWEEN MICROALBUMINURIA AND SOFA SCORE IN PATIENT WITH SEPSIS IN ICU Dr. SARDJITO GOVERNMENT GENERAL HOSPITAL

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Background: Sepsis causes release of inflammatory mediator to circulation. The inflammatory molecules and oxidative stress increase the capilar permeability include the glomerular renalis. An early event is the loss of barrier integrity leading to systemic capillary leakage. The glomerular manifestation of this increased permeability is increased excretion of albumin in the urine. Microalbuminuria, defined as 30–300 mg/day of albumin excretion in the urine, occurs rapidly after an acute inflammatory insult such as sepsis. SOFA score is one of parameter to asses the degree of organ dysfunction severity.

Purpose : The purpose of this study was to determine the correlation between microalbuminuria and SOFA score in patient with sepsis in ICU Dr. Sardjito Government General Hospital.

Methods: This observational study was conducted in ICU Dr. Sardjito Government General Hospital between January-July 2019. Inclusion criteria were all patients with sepsis admited to ICU (≥ 18 years old), exclusion criteria were patient with diabetic mellitus, anuria, chronic kidney disease, pregnant, urological trauma, nephrotic syndrome, urinary tract infection. urine samples were collected per 24 hour (Day-1st), 48 hour (Day-2nd) and 72 hour (Day-3st). The microalbuminuria was measured in hospital laboratory. The SOFA score evaluated every day. The correlation between SOFA score with microalbuminuria was analyzed with SPSS.

Result: Total 35 subject included, 20 subject excluded, 1 subject dropout. The study included 57,1% male and 42,9% female, mean of SOFA score were $9,4 \pm 3,4$, mean of microalbuminuria were $132 \pm 75,2$ mg/l. Subject with septic shock were 42,9% and all of subject required mechanical ventilation. Mortality rate were 50%, the major infection sourced was respiratory tract (42,9%), and the major bacteria was *Acinebacter baumanii*. The mean of SOFA score in survivor subject were $6,43 \pm 2,80$ and not survivor were $10,34 \pm 3,00$, the microalbuminuria in survivor subject were $82,10 \pm 70,73$ mg/l and not survivor were $167,71 \pm 46,81$ mg/l. There was positive correlation between microalbuminuria and SOFA score with strength correlation $r: 0,627$, $p: 0,016$. SOFA score > 7 had risk 16 times to die, and microalbuminuria $> 156,35$ had prognostic risk 36 times to die.

Conclusion: There was positive correlation between microalbuminuria level and SOFA score in septic patients in ICU Dr. Sardjito Government General Hospital.

Key word : SOFA score, microalbuminuria, sepsis

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