

# Factors associated with mortality of intensive care unit patients with acute kidney injury at cipto mangunkusumo national central general hospital

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## Abstrak

Background: the incidence of acute kidney injury (AKI) in intensive care units is associated with increased mortality, post AKI morbidity and high treatment costs. Research on factors related to mortality of AKI patients in intensive care units in Indonesia, especially Cipto Mangunkusumo General Hospital has never been done. This study aims to determine the prevalence of AKI, mortality rate of AKI patients, and the factors associated with increased mortality of AKI patients in intensive care units in ICU Cipto Mangunkusumo General Hospital.

Methods: this is a retrospective cohort study of all patients diagnosed with AKI in the intensive care unit at Cipto Mangunkusumo General Hospital, January 2015 - December 2016. An analysis of bivariate relationships with multivariate with STATA Statistics 15.0 between age > 60 years, sepsis, use of ventilator, ventilator duration, dialysis, oligoanuria, and APACHE II scores at admission with mortality.

Results: the prevalence of AKI patients in the intensive care unit was 12.25% (675 of 5511 subjects) and 220 subjects (32.59%) of the 675 analyzed subjects died in the intensive care unit. Factors related to increased mortality in multivariate analysis were sepsis (OR 6,174; IK95% 3,116-12,233), oligoanuria (OR 4,173; IK95% 2,104-8,274), use of ventilator (OR 3,085; IK95% 1,348-7,057),(scores APACHE II at admission) 1/2 [OR 1,597; IK95% 1.154-2.209], and the duration of the ventilator (OR 1.062; IK95% 1.012-1.114).

Conclusion: the prevalence of AKI patients and their mortality rate in the intensive care unit of Cipto Mangunkusumo General Hospital obtained 12.25% and 32.59%. Sepsis, oligoanuria, ventilators (APACHE II score at admission) 1/2, and ventilator duration are factors that are significantly associated with increased mortality of AKI patients in intensive care units.

.....Latar belakang: kejadian acute kidney injury (AKI) di unit perawatan intensif berhubungan dengan peningkatan mortalitas, morbiditas pasca AKI dan biaya perawatan tinggi. Penelitian mengenai faktor-faktor yang berhubungan dengan mortalitas pasien AKI di unit perawatan intensif di Indonesia khususnya RSUPN dr. Cipto Mangunkusumo belum pernah dilakukan. Penelitian ini bertujuan untuk mengetahui prevalensi AKI, angka mortalitas pasien AKI, dan faktor-faktor yang berhubungan dengan peningkatan mortalitas pasien AKI di unit perawatan intensif di ICU RSUPN dr. Cipto Mangunkusumo.

Metode: penelitian kohort retrospektif terhadap seluruh pasien AKI di unit perawatan intensif di RSUPN Cipto Mangunkusumo periode Januari 2015 – Desember 2016. Dilakukan analisis hubungan bivariat sampai dengan multivariat dengan STATA Statistics 15.0 antara faktor usia >60 tahun, sepsis, ventilator, durasi ventilator, dialisis, oligoanuria, dan skor APACHE II saat admisi dengan mortalitas.

Hasil: prevalensi pasien AKI di unit perawatan intensif didapatkan 12,25% (675 dari 5511 subjek) dan sebanyak 220 subjek (32,59%) dari 675 subjek yang dianalisis meninggal di unit perawatan intensif. Faktor-faktor yang berhubungan dengan peningkatan mortalitas pada analisis multivariat adalah sepsis (OR 6,174; IK95% 3,116-12,233), oligoanuria (OR 4,173; IK95% 2,104-8,274), ventilator (OR 3,085; IK95%

1,348-7,057), (skor APACHE II saat admisi)1/2 [OR 1,597; IK95% 1,154-2,209], dan durasi ventilator (OR 1,062; IK95% 1,012-1,114).

Kesimpulan: prevalensi pasien AKI dan angka mortalitasnya di unit perawatan intensif RSUPN dr. Cipto Mangunkusumo didapatkan sebesar 12,25% dan 32,59%. Sepsis, oligoanuria, ventilator, (skor APACHE II saat admisi)1/2, dan durasi ventilator merupakan faktor-faktor yang berhubungan bermakna dengan peningkatan mortalitas pasien AKI di unit perawatan intensif.