

Category : **Polytrauma**

A27 - Risk factors associated with augmented renal clearance in a mixed icu population: a retrospective study

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Introduction:

Augmented renal clearance (ARC) is increasingly recognized in critically ill patients. This condition may lead to underdosing of renally excreted medications with negative clinical outcomes. The goal of this study was to identify demographic and clinical factors associated with ARC in a mixed ICU population.

Methods:

This retrospective single center observational cohort study collected data of patients admitted in a mixed (medical, surgical and trauma) adult ICU. ARC, defined as a creatinine clearance of ≥ 130 ml/min/1.73 m², was assessed through weekly 24-hour urine collection. Univariate analysis was used to identify variables associated with ARC which were then entered as covariates in a logistic regression using a backward stepwise selection. Goodness-of-fit of the model was assessed and a receiver operator characteristic curve was generated.

Results:

ARC was observed in 25.3 % (n = 82) of the study cohort (n = 324). Age < 50 years old (AOR 7.32; 95% CI 4.03-13.29, p < 0.001), lower serum creatinine at ICU admission (AOR 0.97; 95% CI 0.96-0.99, p < 0.001) and admission for trauma (AOR 2.26; 95% CI 1.12-4.54, p = 0.022) were identified as independent risk factors. Our model showed acceptable discrimination in predicting ARC (Area under the Receiver Operator Curve (0.810; 95% CI 0.756-0.864, p < 0.001)).

Conclusion:

Age < 50 years old, lower serum creatinine upon ICU admission and trauma were identified as independent risk factors for ARC. Our findings are consistent with the literature and suggest that patients with a low serum creatinine upon ICU admission could have a higher risk of developing ARC.