

**P2455 Risk factors for acute kidney injury in critically ill patients with bacteraemia by carbapenem non-susceptible Gram-negative bacteria: is colistin safer than we thought?**

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**Background:** Utilization of colistin for treatment of carbapenem non-susceptible Gram-negative bacteria (CnS-GNB) infections is associated with high rates of acute kidney injury (AKI). The objectives of the present study were to identify risk factors for development of AKI during the treatment of bacteraemia with CnS-GNB and its role on mortality.

**Materials/methods:** Data of all patients with bacteraemia by CnS-GNB in the Intensive Care Unit of a tertiary hospital from 2012-16 were included. AKI was defined by AKIN criteria. Secondary outcomes were AKI development in patients treated by colistin and predictors of 14-day mortality.

**Results:** Among 285 episodes of bacteraemia due to CnS-GNB (144 *K. pneumoniae*, 83 *A. baumannii*, 43 *P. aeruginosa*, 15 polymicrobial infections) 84 (29.5%) developed AKI. Multivariate analysis revealed that BMI (P 0.003; OR 1.1), septic shock (P 0.002; OR 5.5), maximum noradrenaline dose (P<0.001; OR 1.1) and eGFR upon BSI onset <60 mL/min/1.73m<sup>2</sup> (P<0.001; OR 4.3) were independently associated with development of AKI. Among 228 patients receiving colistin, 64 (28.1%) developed AKI. BMI (P 0.003; OR 1.1), diabetes mellitus (P 0.021; OR 7.0), chronic kidney disease (P 0.045; OR 8.7), septic shock (P 0.008; OR 6.1), maximum noradrenaline dose (P<0.001; OR 1.1), eGFR upon BSI onset <60 mL/min/1.73m<sup>2</sup> (P 0.023; OR 4.0) and voriconazole administration (P 0.026; OR 13.3) were independently associated with AKI. Fourteen-day mortality was 34.2% and was independently associated with BSI by *P. aeruginosa* (P 0.001; OR 3.9), AKI after BSI (P 0.010; OR 2.9), maximum noradrenaline dose (P 0.010; OR 1.0), SOFA score upon BSI onset (P 0.002; OR 1.2), SAPS II upon BSI onset (P 0.002; OR 1.1), whereas appropriate combination therapy (P 0.012; OR 0.35) and catheter-related BSI (P 0.005; OR 0.34) were independently associated with better survival.

**Conclusions:** AKI was a frequent complication of bacteraemia by CnS-GNB and was associated with septic shock and baseline renal function impairment. Mortality was higher among patients that developed AKI due to bacteraemia. Colistin could be a safe option for treating these infections.

