Title: The effectiveness and safety of vancomycin dosing via pk monitoring in critically ill patients

In: on Monday, 3 September 2018, 12:00-14:30
Type: Poster
By: HE, Na (Peking University Third Hospital)
Co-author(s): Na He, ()

Abstract:
BackgroundPharmacokinetic parameters can be significantly altered for critically ill patients because of altered Vd and creatinine clearance. MethodsThis single-arm cohort study included patients receiving intravenous vancomycin and consult-to-pharmacy service. Consult-to-pharmacy service included designing initial vancomycin regimen based on population pharmacokinetic model and adjusting dosing with TDM and bayesian prediction. The primary endpoint was target trough concentration attainment rate defined as 10-20 mg/L. Secondary endpoints included clinical failure rate and nephrotoxicity (KDIGO criteria). ResultsEight-two consecutive critically ill patients were involved in this study from April, 2016 to January, 2018. Fifteen of them were collected retrospectively and 67 prospectively. The mean age of the patients was 58.7 +/- 20.8 years. Thirty-one (37.8%) of them had gram-positive proven infections. Loading dose was given to 14 (17.1%) patients. The mean initial dosage was 1614.8 +/- 629.8 mg/d. Thirty-eight (46.3%) initial concentrations attained goal range and 47 (57.3%) patients had repeat TDM. The overall target trough concentration attainment rate was 68.3%. Concerning the clinical endpoint, 11 (13.4%) patients experienced clinical failure and nephrotoxicity rate was 10.0%, which was slightly lower than the incidence rate published before.ConclusionPharmacists’ service with pharmacokinetic monitoring possibly increases the target trough concentration attainment rate and decreases the clinical failure and nephrotoxicity risk.