Vancomycin and piperacillin-tazobactam is associated with a higher risk of AKI than both vancomycin and cefepime and vancomycin and meropenem in ICU patients, especially for patients with normal initial kidney function requiring longer durations of therapy.

CRITICAL CARE

Is There a Difference Between Using Vancomycin and Piperacillin-Tazobactam, Vancomycin and Cefepime, or Vancomycin and Meropenem and Incidence of Acute Kidney Injury in ICU Patients?

STUDY DESIGN

• Retrospective cohort study of data from eICU Research Institute of 35,654 patients between 2010 and 2015
  - Vancomycin and piperacillin-tazobactam (VPT) N = 27,459
  - Vancomycin and cefepime (VC) N = 6,371
  - Vancomycin and meropenem (VM) N = 1,824
• Primary outcome = development of acute kidney injury (AKI) after antibiotic exposure

RESULTS

Cumulative Hazard Plot for Stage 1, 2, and 3 AKI

Received on ICU admit

Received for >48 hours