"The physical and chemical compatibility of cefepime and vancomycin at concentrations typically used in prolonged-infusion cefepime infusions was assessed" Berti et al (2015).

Reference:

Berti, A.D., Hutson, P.R., Schulz, L.T., Webb, A.P. and Rose, W.E. (2015) Compatibility of cefepime and vancomycin during simulated Y-site administration of prolonged infusion. American Journal of Health-System Pharmacy. 72(5), p.390-395.

Compatibility of cefepime and vancomycin during simulated Y-site administration http://ctt.ec/Ncxb4+ @ivteam #ivteam

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Abstract:

Purpose: The physical and chemical compatibility of cefepime and vancomycin at concentrations typically used in prolonged-infusion cefepime infusions was assessed.

Methods: Samples from a typical Y-site configuration of standard-infusion vancomycin and prolonged-infusion cefepime were collected at various time points during the simulated 4-hour infusion. Samples were analyzed by visual inspection, spectrophotometry, and high-performance liquid chromatography (HPLC). Infusion antibiotics were reconstituted in pairwise combinations of 0.9% sodium chloride injection and 5% dextrose injection to determine the effects of solvent selection on stability. Infusion simulations were performed in triplicate without light protection under fluorescent lighting at room temperature (22.5 °C). Experimental replicates were not run simultaneously but on sequential days due to the considerable time (~12 hours) required to analyze samples obtained from a single infusion simulation and the known time-dependent instability of reconstituted cefepime beyond 24 hours. Physical stability was assessed visually for evidence of particulate formation, haze, precipitation, color change, and gas evolution. Samples were also assessed spectrophotometrically at 600 nm at the time of collection and 24 hours after collection.

Results: Cefepime was compatible with vancomycin at the concentrations tested. The solvent selected (0.9% sodium chloride or 5% dextrose) to reconstitute either antibiotic had no impact on compatibility. Solutions were indistinguishable from positive and negative controls (heat-degraded cefepime and freshly reconstituted cefepime, respectively) at all time points assessed in terms of visual clarity, spectrophotometric absorbance, and HPLC recovery.

Conclusion: Cefepime and vancomycin were physically and chemically compatible during simulated Y-site administration of prolonged-infusion cefepime.

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