Physical compatibility of intravenous isavuconazonium sulfate during Y-site administration | 1

The physical compatibility of isavuconazonium sulfate with 95 i.v. drugs during simulated Y-site administration was studied” So et al (2017).

Abstract:

Purpose: The physical compatibility of isavuconazonium sulfate with 95 i.v. drugs during simulated Y-site administration was studied.

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Methods: Isavuconazonium sulfate for injection and all other drugs were reconstituted according to the manufacturer’s recommendation and further diluted with 0.9% sodium chloride injection or 5% dextrose injection to a final concentration (1.5 mg/mL for isavuconazonium sulfate and standard concentrations used clinically for other drugs). A Y site was simulated in glass culture tubes by mixing 5 mL of the tested drug and isavuconazonium sulfate solutions in each diluent. Incompatibility was defined as changes in visual characteristics or increases in turbidity by greater than 0.5 nephelometric turbidity units over the 120-minute experiment.

Results: Of the 95 drugs tested, isavuconazonium sulfate was physically compatible with 66
drugs in 0.9% sodium chloride injection and 60 drugs in 5% dextrose injection. Incompatibility was observed with albumin, amphotericin B deoxycholate, amphotericin B lipid complex, amphotericin B liposome, ampicillin–sulbactam, cefazolin, cefepime, ceftaroline fosamil, ceftazidime, ceftriaxone, cefuroxime, colistimethate sodium, cyclosporine, ertapenem, esomeprazole, filgrastim, fosphenytoin, furosemide, heparin, meropenem, methylprednisolone, micafungin, phenytoin, potassium phosphate, propofol, sodium bicarbonate, sodium phosphate, and tedizolid. Azithromycin, bumetanide, penicillin G potassium, and piperacillin–tazobactam were incompatible with isavuconazonium sulfate in 5% dextrose injection only.

Conclusion: Of the 95 drugs tested, isavuconazonium sulfate 1.5 mg/mL was physically compatible with 66 drugs in 0.9% sodium chloride injection and 60 drugs in 5% dextrose injection. Incompatibility was observed with 18 antimicrobials, including most cephalosporins tested, and 14 other i.v. drugs in at least 1 of the 2 tested diluents.

Reference:


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