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| Alert | The Antimicrobial Stewardship team recommends this drug be listed as restricted. Aminoglycosides may be inactivated by some penicillin and cephalosporin antibiotics. Where feasible, give at separate sites or separate the administration time of the antibiotics. If this is not possible, flush the line well before and after giving each antibiotic. |
| Indication | Treatment of infections with serious gram-negative organisms including extended spectrum beta-lactamase (ESBL) producing E. coli and Klebsiella species and Enterobacteriaceae, Pseudomonas species, Citrobacter species and Serratia species. |
| Action | Fourth-generation cephalosporin with broad-spectrum activity against gram-negative and gram-positive bacteria. Also active against methicillin sensitive staphylococcus aureus and streptococcus pneumoniae. Inhibits bacterial cell wall synthesis by binding to penicillin-binding proteins. |
| Drug type | Cephalosporin antibiotic. |
| Trade name | Cefepime Alphapharm, Cefepime Kabi, Cefepime-AFT, Omegapharm Cefepime |
| Presentation | 1g and 2g vial powder for injection |
| Dose | 40 mg/kg/dose 8 hourly (1) (refer to practice points section) |
| Dose adjustment | Therapeutic hypothermia: No specific information. ECMO: Therapeutic drug monitoring may be beneficial. (2) Renal impairment: Consider adjusting the dosage or interval. (3) Hepatic impairment: No information. |
| Maximum dose | |
| Total cumulative dose | No information. |
| Route | IV |
| Preparation | Add 8.7 mL of sodium chloride 0.9% or glucose 5% to 1g vial to make a 100mg/mL solution OR Add 17.4 mL of sodium chloride 0.9% or glucose 5% to 2g vial to make a 100mg/mL solution Further dilute Draw up 3 mL (300 mg of cefepime) and add 12 mL of sodium chloride 0.9% or glucose 5% to make a final volume of 15 mL with a final concentration of 20 mg/mL. (Note approximate powder displacement volumes 1g = 1.3mL and 2g = 2.6mL) |
| Administration | Infuse over 30 minutes (4, 5) |
| Monitoring | Hypersensitivity reactions, renal function. |
| Contraindications | Hypersensitivity to cephalosporins or components of the formulation. Contraindicated in patients with severe immediate (IgE mediated) or severe delayed (T-cell mediated) hypersensitivity to penicillins. Seek specialist advice for patients with non-severe immediate hypersensitivity to penicillins. |
| Precautions | Renal impairment: Mainly excreted renally. Clearance is reduced. (6) |
| Drug interactions | Other nephrotoxic drugs such as aminoglycosides and potent diuretics such as furosemide. Aminoglycosides may be inactivated by some penicillin and cephalosporin antibiotics. Where feasible, give at separate sites or separate the administration time of the antibiotics. If this is not possible, flush the line well before and after giving each antibiotic. In renal impairment separate the administration of the antibiotics for the longest duration that is practical. |
| Adverse reactions | Hypersensitivity reactions including anaphylaxis, bronchospasm, urticaria (6) Nephrotoxicity Seizures and encephalopathy |
| Compatibility | Compatible fluids: Glucose 5%, sodium chloride 0.9%, glucose in sodium chloride solutions, glucose 5% in Hartmann's. (7, 8) Y-site: amikacin, amiodarone, amphotericin B lipid complex, ampicillin, azithromycin, calcium gluconate, dexamethasone sodium phosphate, dexmedetomidine hydrochloride, esmolol hydrochloride, fluconazole, furosemide, gentamicin, hydrocortisone sodium phosphate, hydrocortisone sodium succinate, insulin, leucovorin, linezolid, methylprednisolone sodium succinate, metoprolol tartrate, metronidazole, pamidronate disodium, pancuronium bromide, |

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| | piperacillin sodium/tazobactam sodium, potassium acetate, ranitidine, remifentanyl, rocuronium bromide, sodium bicarbonate, sulfamethoxazole/trimethoprim, tobramycin sulfate, valproate sodium, vasopressin, zidovudine. Variable compatibility (consult product information, local resources or pharmacist) for: dobutamine hydrochloride, morphine sulfate, vancomycin hydrochloride |
| Incompatibility | Y-site: acetylcysteine, aciclovir, amphotericin B liposome, ciprofloxacin, ganciclovir, labetalol hydrochloride, magnesium sulfate, mannitol, midazolam hydrochloride, pantoprazole sodium, phenytoin sodium, vecuronium. |
| Stability | Reconstituted solutions should be used immediately. If necessary, reconstituted solutions are stable for 24 hours at 2 to 8 °C. The solution is clear and colourless to pale yellow or amber. May darken when stored but can still be used |
| Storage | Cefepime vials should be stored in original cartons below 25°C. Protect from light. Reconstituted solutions are stable for 24 hours at 2 to 8 °C. Protect from light. |
| Excipients | Arginine. |
| Special comments | |
| Evidence | Refer to full version. |
| Practice points | Refer to full version. |
| References | Refer to full version. |

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