Alert | The Antimicrobial Stewardship Team recommends this drug is listed under the following category: Restricted.

Indication | Treatment of meningitis and sepsis caused by susceptible gram-negative organisms (especially *Pseudomonas aeruginosa*) and susceptible gram-positive organisms.

Action | Bactericidal agent which inhibits cell wall synthesis in susceptible bacteria.

Drug Type | Cephalosporin antibiotic.

Trade Name | Ceftazidime Alphapharm, Ceftazidime Aspen, Ceftazidime Sandoz, Fortum, Hospira Ceftazidime.

Presentation | Ceftazidime 1 g vial
Ceftazidime 2 g vial

Dosage / Interval | 50 mg/kg/dose. Dosing interval as per table below

<table>
<thead>
<tr>
<th>Corrected Gestational Age/Postmenstrual Age</th>
<th>Postnatal Age</th>
<th>Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 30th weeks</td>
<td>0–28 days</td>
<td>12 hourly</td>
</tr>
<tr>
<td>&lt; 30th weeks</td>
<td>29+ days</td>
<td>8 hourly</td>
</tr>
<tr>
<td>30th–36th weeks</td>
<td>0–14 days</td>
<td>12 hourly</td>
</tr>
<tr>
<td>30th–36th weeks</td>
<td>15+ days</td>
<td>8 hourly</td>
</tr>
<tr>
<td>37th–44th weeks</td>
<td>0–7 days</td>
<td>12 hourly</td>
</tr>
<tr>
<td>37th–44th weeks</td>
<td>8+ days</td>
<td>8 hourly</td>
</tr>
<tr>
<td>≥ 45 weeks</td>
<td>0+</td>
<td>8 hourly</td>
</tr>
</tbody>
</table>

Route | IV
| IM

Maximum Daily Dose | 150mg/kg/day

Preparation/Dilution | IV injection
Add 8.9 mL of water for injection to the 1 g powder for reconstitution to make a 100 mg/mL solution.

IM injection
Add 3 mL water for injection to the 1 g powder for reconstitution to make a 260 mg/mL solution.

Administration | IV injection: Give over at least 3 to 5 minutes.
IV infusion: Over 15–30 minutes via syringe driver.

IM injection: Not recommended. If IM administration is necessary, ceftazidime may be reconstituted with lignocaine 1%.

NOTE: Vials are carbonated, shake well after reconstitution and wait 1–2 minutes for the solution to clear before withdrawing the appropriate dose. Use a vented needle to reduce spraying and leaking.

Monitoring | Not required.

Contraindications | Hypersensitivity to penicillins or cephalosporins.

Precautions | Sodium restriction (each gram contains 52 mg [2.3 mmol] of sodium).
Renal impairment: Consider increasing dosage interval in those with significant renal impairment.
Hepatic impairment.

Drug Interactions | Concurrent use of high doses with nephrotoxic drugs may adversely affect renal function.

Adverse Reactions | Rash
Diarrhoea
Elevated hepatic transaminases
Eosinophilia, thrombocytopenia, haemolytic anaemia
Positive Coombs test
Superinfection following prolonged use (esp. *Candida*)
Compatibility
Fluids: Sodium chloride 0.9%, glucose 5%, glucose 10%, Hartmann’s.

Y-site: Amino acid solutions, aciclovir, amifostine, anidulafungin, aztreonam, bivalirudin, cimetidine ciprofloxacin, dexmedetomidine, esmolol, filgrastim, foscarnet, granisetron, hydromorphone, ibuprofen lysozyme, ketamine, labetalol, linezolid, morphine sulfate, pethidine, sodium valproate, tacrolimus, tigecycline, tobramycin, zidovudine.

Incompatibility
Fluids: Sodium bicarbonate.

Y-site: Acetylcysteine, aminoglycosides – amikacin, gentamicin, tobramycin; amiodarone, atracurium, azathioprine, azithromycin, calcium chloride, caspofungin, chloramphenicol, chlorpromazine, dobutamine, erythromycin, fluconazole, ganciclovir, haloperidol lactate, hydralazine, midazolam, mycophenolate mofetil, pentamidine, phenytoin, promethazine, protamine, sodium ascorbate, sodium nitroprusside, vancomycin, verapamil.

Stability
Reconstitution with water for injection: Solution stable for 12 hours below 25°C and 24 hours at 2 to 8°C.

Reconstitution with lignocaine: Stable for 6 hours below 25°C and 24 hours at 2 to 8°C.

Storage
Store below 25°C. Protect from light.

Special Comments

Evidence summary
To be updated.

References