CEFTAZIDIME

<table>
<tr><td>Trade Name</td><td>Ceftazidime AFT® (AFT Pharmaceuticals)</td></tr>
<tr><td>Class</td><td>Third generation cephalosporin
Good beta-lactamase resistance</td></tr>
<tr><td>Mechanism of Action</td><td>Inhibits bacterial cell wall synthesis and thereby causing bacterial lysis.</td></tr>
<tr><td>Indications</td><td>Treatment of Pseudomonas aeruginosa infection and other susceptible gram negative organisms (e.g. E Coli, H Influenza, Neisseria, Klebsiella, Proteus species) and has some gram positive cover.</td></tr>
<tr><td>Contraindications</td><td>Known sensitivity to cephalosporins.
Caution in patients with Type 1 hypersensitivity to penicillin
Caution in patients with renal impairment, consider lengthening the dosing interval.</td></tr>
<tr><td>Supplied As</td><td>500mg vial as powder for injection</td></tr>
<tr><td>Dilution
This data is directly from the data sheet</td><td>IV:
<table><tr><th>Vial</th><th>Water Added</th><th>Final Volume</th><th>Concentration</th></tr><tr><td>1 g</td><td>8.9 mL</td><td>10 mL</td><td>100 mg/mL</td></tr></table>When reconstituted carbon dioxide bubbles will form.
*Displacement value for this dilution is 1.1mL

IM:
<table><tr><th>Vial</th><th>1%Lignocaine</th><th>Final Volume</th><th>Concentration</th></tr><tr><td>1 g</td><td>3 mL</td><td>3.84 mL</td><td>260 mg/mL</td></tr></table>When reconstituted carbon dioxide bubbles will form.
*Displacement value for this dilution is 0.84 mL</td></tr>
<tr><td>Dosage</td><td>30mg/kg/dose
50mg/kg/dose in proven meningitis
Max dose = 150mg/kg/day</td></tr>
<tr><td>Administration</td><td>IV: Slow push over 3-5 minutes
IM: Inject dose into a large muscle (buttock, thigh)
IM dose volume should be kept between 0.5-1mL if possible to decrease the pain for the baby
See IM drug guideline in Drugs folder and Handbook</td></tr>
</table>

<table>
<tr><td>Interval</td><td>
<table>
<tr><th>GA Birth (wks)</th><th>Postnatal Age (Days)</th><th>Interval (hrs)</th></tr>
<tr><td><29</td><td>0-28
>28</td><td>12
8</td></tr>
<tr><td>30-36</td><td>0-14
>14</td><td>12
8</td></tr>
<tr><td>37-44</td><td>0-7
>7</td><td>12
8</td></tr>
<tr><td>>44</td><td>Any</td><td>8</td></tr>
</table>
</td></tr>
<tr><td>Compatible With</td><td>Solution:
5% dextrose, 10% dextrose, 0.9% sodium chloride
May be given with 0.5% or 1 % lignocaine for IM administration.
Y-site:
Acyclovir, adrenaline, amikacin, aminophylline, atropine, aztreonam, benzylpenicillin, calcium gluconate, cimetidine, ciprofloxacin, clindamycin, dexamethasone, dexmedetomidine, dobutamine, dopamine, doxapram, enalaprilat, ephedrine, epoetin alpha, esmolol, famotidine, fentanyl, folic acid, furosemide, gentamicin, heparin, hydrocortisone, ibuprofen, imipenem/cilastatin, indomethacin, insulin, lidocaine, lipid, lysine, linezolid, magnesium sulphate, meropenem, methylprednisolone, metronidazole, milrinone, morphine, octreotide, paracetamol, pancuronium, phenobarbital, phenylephrine, piperacillin, potassium chloride, propofol, propranolol, pyridoxine, ranitidine, remifentanil, sodium bicarbonate, TPN, tobramycin, vasopressin, and zidovudine.</td></tr>
<tr><td>Incompatible With</td><td>Amiodarone, azithromycin, calcium chloride, diazoxide, erythromycin lactobionate*, fluconazole*, ganciclovir, hydralazine, midazolam, nicardipine, phenytoin, and vancomycin*.
*2023 Micromedex now cautions variable compatibility of erythromycin and fluconazole and vancomycin with ceftazidime use separate lines if at all possible</td></tr>
<tr><td>Monitoring</td><td>Closer monitoring of electrolytes may be indicated due to the sodium content (see comments box below)</td></tr>
<tr><td>Stability</td><td>Discard remaining solution in vial after reconstitution
Use a new vial for each dose
Vials are not designed for multidosing
Protect vial from light</td></tr>
<tr><td>Storage</td><td>Unopened vials should be stored at room temperature < 25^{o}C</td></tr>
<tr><td>Adverse Reactions</td><td>Uncommon.
Reported: diarrhoea, pain at injection site, infusion related phlebitis, elevated hepatic transaminases, rashes, eosinophilia and positive Coomb’s test.</td></tr>
</table>

Metabolism	Widely distributed throughout body. CSF concentration increased when meninges inflamed. Low protein binding (17%). Majority of drug is excreted unchanged in the urine. Serum half life in neonates is 3-12hrs. Ceftazidime is synergistic with aminoglycosides.
Comments	Sodium content of ceftazidime is 52mg (2.3 mmol) per gram
References	1. Neofax, 1999 2. Medicines for Children, RCHP, 1999 3. Trissell Handbook on Injectable Drugs 10th Edition 4. NZHPA Notes on Injectable Drugs 5th Edition 5. www.medsafe.govt.nz for displacement values and concentrations 6. seslhd.health.nsw.gov.au = www.anmfopnline.org 7. www.micromedexsolutions.com 8. www.noids.org 9. www.medsafe.govt.nz
Updated By	Dr Di Gray May 2000 P Schmidt, B Robertshawe November 2004 A Lynn, B Robertshawe, F Robertson May 2009 (new pumps) A Lynn, B Robertshawe June 2012 (re-order profile) Nov 2012 (discard vial) A Lynn, M Wallenstein, B Robertshawe Dec 2020