Aciclovir
Newborn use only

2020

Alert	High risk medicine. Increased risk of renal impairment if there is concomitant use of other nephrotoxic drugs, pre-existing renal disease or dehydration. Turbidity or crystallisation may occur even when mixed with compatible fluids,. Discard preparation if this occurs before or during the infusion. Highly alkaline and IV extravasation can cause severe tissue damage.
Indication	Treatment of neonatal herpes simplex virus (HSV) infection. Treatment of varicella zoster virus (VZV) infection HSV suppression following treatment to prevent CNS sequelae.
Action	Inhibits viral DNA synthesis when activated in infected cells.
Drug type	Antiviral
Trade name	IV: Aciclovir Sandoz, DBL, Pfizer, Oral: Aciclovir GH, Aciclovir Sandoz, Acihexal, Acyclo-V, Chemmart Aciclovir, GenRx Aciclovir, Lovir, Ozvir, Pharmacor Aciclovir, Terry White Chemists Aciclovir, Zovirax
Presentation	IV: Aciclovir DBL, Pfizer : 250 mg/10 mL ampoule, 500 mg/20 mL ampoule Aciclovir Sandoz: 250 mg, 500 mg vial (powder for reconstitution) Oral: 200mg, 400mg, 800mg tablets (Acyclo-V, Lovir, Ozvir, Zovirax brands are dispersible)
Dose	**Treatment of HSV and VZV** **IV** 20 mg/kg/dose 8 hourly Consider 12 hourly dosing in infants <30 weeks corrected age where HSV or VSV is not confirmed. **Suppression of HSV following treatment[5]** **Oral** 300 mg/m^2/dose three times per day for 6 months. **Body Surface Area (BSA) calculation:** $$BSA\ (m^2) = \sqrt{\frac{height\ (cm) \times weight\ (kg)}{3600}}$$ **Duration of therapy (expert recommendation)** Laboratory or clinically confirmed HSV confined to skin, eye, and mouth: 10–14 days HSV encephalitis or disseminated disease: 21 days Pre-emptive therapy (high-risk asymptomatic infant without laboratory confirmed infection): 10 days (expert recommendation)
Dose adjustment	**Renal impairment** **Creatinine concentration** / **Dosage and Interval adjustment** 70–100 micromol/L: 20 mg/kg 12 hourly 101–130micromol/L: 20 mg/kg 24 hourly > 130 micromol/L and/or urine output < 1 mL/kg/hour: 10 mg/kg 24 hourly
Maximum dose	
Total cumulative dose	
Route	IV or Oral
Preparation	IV: If using Sandoz brand, reconstitute 250 mg vial with 10 mL or 500 mg with 20 mL of water for injection to obtain 25 mg/mL solution. If using DBL or Pfizer brand, vials contain 25 mg/mL solution. Draw up 4 mL (100 mg)of aciclovir and add 6 mL sodium chloride 0.9% to make final volume 10 mL with a final concentration of 10 mg/mL. Oral: Acyclo-V, Lovir, Ozvir and Zovirax brands come as dispersible tablets. Consider rounding if dose is close to half or quarter of a tablet. Disperse fraction of tablet in small quantity of water (e.g. 2 mL) and give dose immediately. If this is not possible, disperse an entire tablet in a set quantity of water, ensure mixture is a uniform suspension, and draw up a fraction of this mixture and give immediately. If uniform suspension

	cannot be produced, contact pharmacy. Example: If dose is 30 mg, disperse 200 mg tablet in 10 mL of water to obtain 20 mg/mL mixture, and then give 1.5 mL.
Administration	IV Infusion: Infuse via syringe driver over 60 minutes. Oral: Dose can be given with feed.
Monitoring	Periodic full blood count, renal function, bilirubin, and hepatic transaminases. IV site for phlebitis — prepare a more dilute infusion solution if phlebitis occurs.
Contraindications	Known hypersensitivity to aciclovir, valganciclovir or any component of the product.
Precautions	Increased risk of renal impairment if there is concomitant use of other nephrotoxic drugs, pre-existing renal disease or dehydration. Administration interval may be lengthened to minimise renal effects. Refer to the renal adjustment dose in the dose adjustment section.
Drug interactions	Concurrent use with other nephrotoxic drugs may cause renal impairment (gentamicin, furosemide). Concurrent use with ceftriaxone may cause renal impairment.
Adverse reactions	Neutropenia, thrombocytopenia may occur. May cause • neurotoxicity with lethargy, tremor, and agitation. • transient renal impairment which is minimised by a slow administration rate. • transient rise in AST and total bilirubin. • phlebitis at IV injection site (highly alkaline solution). The solution can be made more dilute.
Compatibility	Fluids: sodium chloride 0.45%, sodium chloride 0.9% Compatible via Y-site : Amikacin, ampicillin, anidulafungin, cefotaxime, ceftazidime, ceftriaxone, cefazolin, chloramphenicol, clindamycin, dexamethasone, doripenem, erythromycin, fluconazole, heparin sodium, hydrocortisone sodium succinate, imipenem–cilastatin, linezolid, lorazepam, magnesium sulfate, methylprednisolone sodium succinate, metronidazole, potassium chloride, ranitidine, remifentanil, sodium bicarbonate, tobramycin, trimethoprim-sulfamethoxazole, vancomycin, zidovudine
Incompatibility	Amino acid/glucose solution, glucose-containing solutions, adrenaline (epinephrine) hydrochloride, aztreonam, caffeine citrate, cefepime, ciprofloxacin, dobutamine, dopamine, esmolol, gentamicin, hydralazine, ketamine, labetalol, lidocaine (lignocaine), midazolam, pentamidine, phenylephrine, piperacillin–tazobactam (EDTA-free), potassium phosphate, sodium nitroprusside, sodium phosphate, ticarcillin–clavulanate, vecuronium, verapamil.
Stability	Diluted solutions should be used as soon as practicable, discard unused portion.
Storage	Store below 25°C. Do NOT refrigerate (may result in precipitation).
Excipients	Sodium hydroxide
Special comments	The infusion solution may be filtered. Discard the solution if visible turbidity or crystallisation appears.
Evidence	Refer to full version.
Practice points	Refer to full version.
References	Refer to full version.

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