Aciclovir Intravenous Infusion for Adults

Who can administer

May be administered by registered competent doctor or nurse/midwife

Important information

- Must ensure **adequate hydration** and give over **recommended time** (to avoid potential renal tubular damage)
- See under 'Dose' for adjustments required in **renal** impairment
- See under 'Dose' for considerations in **obesity**

Available preparations

Aciclovir 250mg POWDER for solution for injection (Bowmed Ibisqis Ltd)

Zovirax 250mg vialÂ

Reconstitution

Aciclovir (Bowmed. Ibisqis, Hikma)	**Water for injection or Sodium chloride 0.9%** 10ml per 250mg vial **Dilute further prior to administration**
Aciclovir	Already in solution **Dilute further prior to administration**
Zovirax brand	**Water for injection or Sodium chloride 0.9%** 10ml per 250mg vial **Dilute further prior to administration**

Infusion fluids

Sodium Chloride 0.9% preferred

Glucose 5% (unlicensed) [(ref 1)]

Methods of intravenous administration

Intermittent intravenous infusion (administer using an electronically controlled infusion device)

Dilute with infusion fluid to a concentrationÂ not greater than 5mg/ml (0.5%w/v)		
Doses of 250 to 500mg	100ml infusion fluid	Administer required dose over 60 minutes Sixty minute infusion time reduces the risk of renal tubular damage
Doses between 501mg and 1000mg	250ml infusion fluid	
Fluid restricted patient (central line) (ref 3)	May be infused at a concentration of 25mg/ml - ie 250mg per 10ml	

Dose in adults

Herpes simplex infections (other than encephalitis) (treatment)

- Give 5mg per kg every eight hours
- Higher dose may be required in severe infection/immunocompromised. Discuss with Microbiology or Infectious Diseases [ref 2]

Herpes simplex encephalitis

- Give 10mg per kg every eight hours (for 14 to 21 days)

Herpes simplex infections (prophylaxis in immunocompromised) [ref 3]

- Give 5mg per kg every eight hours

Varicella zoster (chickenpox)or Herpes zoster(shingles)infections

- **NOT immunocompromised:** give 5mg per kg every eight hours
- **Immunocompromised, or severe /complicated infections:** give 10mg per kg every eight hours

Obesity

- **Limited data** available on aciclovir intravenous **dosing in obesity** (BMI greater than or equal to 30 kg/m2)
- **Ideal Body Weight (IBW)** has been used, as dosing based on **Total Body Weight** can result in **overdosing and subsequent toxicity**
- However, use of IBW in morbidly obese patients (BMI greater than or equal to 40 kg/m2) can result in **underdosing. Use of Adjusted body weight (Adj BW) in these patients may be considered** - see calculations below[ref 4]
- Take **type and severity of infection and patients renal function into** account when choosing dose in obese patients
- **Monitor patient for nephrotoxicity or neurotoxicity when using large doses**
- Contact Microbiology or antimicrobial pharmacist for advice if necessary
- The GAPP gentamicin calculator can be used to calculate ideal and **adjusted body weight (=Dosing weight)** for your patient. Alternatively, the calculations may be done manually using the following formulas
  - **Ideal body weight (IBW) calculations** [ref 2]
  - **Male** 50kg + (2.3 x inches over 5 feet) **or** 50kg + (0.9 x cm over 152 cm)
  - **Female** 45.5kg + (2.3 x inches over 5 feet) **or** 45.5kg + (0.9 x cm over 152 cm)
  - **Adjusted body weight** (Adj BW) = (IBW + 0.4 x [TBW-IBW])
  - (where TBW = total body weight or actual weight)

Renal impairment	
eGFR	**Dose**
25 to 50ml/minute/1.73m^2	give recommended dose every 12 hours
10 to 25ml/minute/1.73m^2	give recommended dose once every 24 hours
less than 10ml/minute/1.73m^2	give 50% of recommended dose every 24 hours
Dialysis	consult specialist literature or pharmacy

Monitoring

- Monitor renal function regularly
- Ensure adequate hydration
- Monitor for neurological side-effects

Storage

- Store below 25^{0}C
- Do not refrigerate as precipitation may occur

References

Zovirax SPC Sept 2021

1. Injectable medicines administration guide accessed online via Medusa 14/03/2022

2: Gapp app

3. BNF accessed online via Medicinescomplete 24/03/2022

4. Sanford Guide to antimicrobial therapy accessed online 24/03/2022

Therapeutic classification

Antiviral agent

BNF
Viral infection