

## Who can administer

May be administered by registered competent doctor or nurse/midwife

## Important information

- This drug will ONLY be supplied on the direct recommendation of Microbiology/Infectious Diseases/Haematology team
- **Important:** The infusion bottle **contains an excess of drug** - eg patient 50kg, for 60mg/kg dose = 3,000mg. The infusion bottle contains 6,000mg so excess 3,000mg must be removed
- **Hydration is very important for this drug - see under dose for details**
- For **fluid restricted** patients, see SPC
- See under 'Dose' for adjustments required in **renal impairment**

## Available preparations

Foscavir 6,000mg in 250ml bottle (24mg/ml)

## Reconstitution

Already in solution

**Dilute further prior to administration (peripheral use)**

## Infusion fluids

Sodium chloride 0.9% or Glucose 5%

## Methods of intravenous administration

**Intermittent Intravenous Infusion (administer using an electronically controlled infusion device)**

**Peripheral line** <sup>(ref 1)</sup>

- **Gloves, protective eyewear and a mask** should be worn by those handling this drug
- **The drug solution needs to be diluted with an equal volume of infusion fluid to give a 12mg per ml solution**
- **Hydration required:** see under 'Dose' below for details
- **Doses of 6,000mg or less**
  - Dilute required dose with an equal volume of infusion fluid
  - Calculate the volume of drug solution required for the dose
  - Remove a volume of infusion fluid from a 500ml bag **to leave** an equal volume to the drug solution in the bag (because this method means that the drug will be diluted 50:50 (i.e. to produce 12mg/mL))
  - Add in the foscarnet solution
  - **Example for 70kg patient**

- Drug solution = 6,000mg in 250mL
- patient dose is 4,200mg = 175ml drug solution
- remove 325ml infusion fluid from a 500ml bag (to leave 175ml in bag)
- add the 175ml drug solution
- Administer the required dose over at least 60 minutes (**120 minutes for doses greater than 60mg/kg**)

- **Doses of greater than 6,000 up to 12,000mg**

- Dilute required dose with an equal volume of infusion fluid
- Calculate the volume of drug solution required for the dose
- Remove a volume of infusion fluid from a 1000ml bag **to leave** an equal volume to the drug solution in the bag (because this method means that the drug will be diluted 50:50 (i.e. to produce 12mg/mL))
- Add in the foscarnet solution
- **Example**
  - Drug solution = 6,000mg in 250mL
  - patient dose is 8,400mg = 350ml drug solution
  - remove 650ml infusion fluid from a 1000ml bag (to leave 350ml in bag)
  - add the 350ml drug solution
- Administer the required dose over 120 minutes (60 minutes if dose is 60mg/kg or less)

- **Doses of greater 12,000mg- see Further information**

### Central line

- **Calculate required dose, and withdraw excess drug from infusion bottle**
- Administer undiluted over at least 60 minutes (120 minutes for doses greater than 60mg/kg)
- Hydration also required: 500 to 1000ml

## Dose in adults

### Hydration

- **Renal toxicity** can be reduced by adequate hydration of the patient
- **Hydration is recommended with each infusion to reduce renal toxicity - this is in addition to the dilution of the drug as outlined above**
- Hydrate with 500 to 1000ml of Sodium chloride 0.9% at each infusion. In compliant patients, oral hydration with similar hydration regimens has been used. Clinically dehydrated patients should have their condition corrected before initiating foscarnet therapy

### CMV disease induction

- Give 60mg/kg every eight hours **or** 90mg/kg every twelve hours for two to three weeks <sup>(ref BNF)</sup>

### CMV disease maintenance

- Give 90mg/kg once daily
- Increase to 120mg/kg daily if tolerated and/or progressive retinitis
- If disease progression on maintenance dose, repeat induction dose
- Note: the BNF suggests that maintenance doses start at 60mg/kg, increased as tolerated. Specialist input should be sought re doses for maintenance treatment

### Herpes infections unresponsive to aciclovir

- Give 40mg/kg every eight hours for two to three weeks or until lesions heal (ref BNF)

### Renal dose adjustments

- Creatinine clearance is calculated using the following formula (**this gives the answer in ml/kg/min-** as per table below)
- $N * (140 - \text{Age in yrs}) / \text{Serum creatinine (micromol/l)}$  (Where N is 1.23 for male patients, 1.04 for female patients)
- This formula may not be accurate for patients at extremes of body weight- ie **obese or very underweight**

CMV INDUCTION therapy					
Creatinine clearance (ml/kg/min)	For 60mg/kg dose	Interval	Â	For 90mg/kg dose	Interval
Greater than 1.4	60 mg/kg	8 hours	Â	90 mg/kg	12 hours
1.4 to 1.1	45 mg/kg	8 hours	Â	70 mg/kg	12 hours
1 to 0.81	35 mg/kg	8 hours	Â	50 mg/kg	12 hours
0.8 to 0.61	40 mg/kg	12 hours	Â	80 mg/kg	24 hours
0.6 to 0.51	30 mg/kg	12 hours	Â	60 mg/kg	24 hours
0.5 to 0.41	25 mg/kg	12 hours	Â	50 mg/kg	24 hours
less than 0.4	No therapy recommendation				

CMV MAINTENANCE therapy					
Creatinine clearance (ml/kg/min)	For 90mg/kg dose	Interval	Â	For 120mg/kg dose	Interval
Greater than 1.4	90 mg/kg	24 hours	Â	120 mg/kg	24 hours
1.4 to 1.1	70 mg/kg	24 hours	Â	90 mg/kg	24 hours
1 to 0.81	50 mg/kg	24 hours	Â	65 mg/kg	24 hours
0.8 to 0.61	80 mg/kg	48 hours	Â	105 mg/kg	48 hours
0.6 to 0.51	60 mg/kg	48 hours	Â	80 mg/kg	48 hours
0.5 to 0.41	50 mg/kg	48 hours	Â	65 mg/kg	48 hours
less than 0.4	No therapy recommendation				

Herpes infection		
Creatinine clearance (ml/kg/min)	For 40mg/kg dose	Interval
Greater than 1.4	40 mg/kg	8 hours
1.4 to 1.1	30 mg/kg	8 hours
1 to 0.81	20 mg/kg	8 hours
0.8 to 0.61	25 mg/kg	12 hours
0.6 to 0.51	20 mg/kg	12 hours
0.5 to 0.41	15 mg/kg	12 hours
less than 0.4	Treatment not recommended	

## Monitoring

- Monitor serum creatinine every second day during induction therapy, and once weekly during maintenance therapy
- Adequate hydration must be maintained in all patients
- Monitor serum calcium and magnesium levels
- Monitor/consider QT prolongation risk

## Further information

- Each 250mg bottle contains 1.38g (60mmol) sodium (equivalent to 69% of the WHO's recommended maximum daily intake of 2g)
- **Doses of greater than 12,000mg**
  - Because the drug solution must be diluted with equal quantities of fluid, a 1000ml infusion bag is not large enough to allow this to be prepared (as 12,000mg = 500mL), an alternative method must be used - as follows
  - **Calculate required dose, and withdraw excess drug from infusion bottle and discard it**
  - Administer the volume left in the infusion bottle (the required dose) over 120 minutes (60 minutes for doses of 60mg/kg or less) while at the same time **piggybacking** 1000ml sodium chloride 0.9% through the same catheter/cannula as the foscarnet infusion (at the same rate as foscarnet)
  - This dilutes the injection solution to the required concentration as it is being administered
  - As the drug is supplied in glass bottles, precautions need to be taken during administration to **prevent possible air embolism** - particularly in central line administration. **Glass bottle precautions** <sup>(ref 2)</sup>

## References

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1: Injectable medicines guide, downloaded from Medusa 21/11/2024

2: Glass bottle reference - see below