Zidovudine Intravenous for Adults

Who can administer

May be administered by registered competent doctor or nurse/midwife

Important information

- The information below is for general **guidance only: peri-natal care should always be under the care of Infectious Diseases** specialists
- See Q-pulse document: WAC group guidelines on preventing perinatal transmission 2015 - here CLN-OGCP-159
- See under 'Dose' for adjustments required in **renal** and hepatic impairment

Available preparations

Retrovir 200mg per 20mL vial

Reconstitution

Already in solution

Dilute further prior to administration

Infusion fluids

Glucose 5% (see under Further information re other infusion fluids)

Methods of intravenous administration

To prepare a 2mg per mL solution		To prepare a 4mg per mL solution - (this concentration used where fluid restriction is required)	
1000mg in 500mL (maintenance dose)	Remove 100mL from a 500mL infusion bag Replace with 1000mg (5x20mL) zidovudine injection	**2000mg in 500mL (maintenance dose)**	Remove 200mL from a 500mL infusion bag Replace with 2000mg (10 x 20mL) zidovudine injection
200mg in 100mL (loading dose)	Remove 20mL from a 100mL infusion bag Replace with 200mg (1 x 20mL) zidovudine injection	**400mg in 100mL (loading dose)**	Remove 40mL from a 100mL infusion bag Replace with 400mg (2 x 20mL) zidovudine injection)

Continuous intravenous infusion - during labour and delivery (administer using an electronically controlled infusion device) - see WAC group guidelines on preventing perinatal transmission 2015 CLN-OGCP-159

Intermittent intravenous infusion (short term management of HIV infection in patients unable to take oral formulations - doses below)

- Administer required dose over one hour

Dose in adults

DURING LABOUR AND DELIVERY (prevention of vertical transmission) - see also WAC group guidelines on preventing perinatal transmission 2015 CLN-OGCP-159

Loading dose

- Give 2mg/kg over one hour

Maintenance infusion

- Give 1mg/kg/hour until delivery is complete
- In the event of a false labour, the infusion should be stopped and oral dose restarted

In a **Planned Caesarean Section** the infusion is **started 3 hours before the operation** (see Further information)

SHORT TERM MANAGEMENT OF HIV INFECTION IN PATIENTS UNABLE TO TAKE ORAL FORMULATIONS

- Give 1 or 2 mg/kg every four hours, **only until** oral therapy can be administered
- This dose differs from that specified in the BNF. Consult expert opinion (Infectious Diseases)
- Note: 1mg by the intravenous route is approximately equivalent to 1.5mg orally. So doses of 1-2mg/kg every four hours is equivalent to approximately 600 to 1200mg daily **orally** for a 70kg patient

Renal impairment

- **Severe renal impairment** (Creatinine clearance less than 10ml/min)**:** 1mg/kg three to four times daily
- This dosage reduction does **not apply to the regimen for prevention of vertical transmission in labour.** In this case, if the consultant wishes to consider a dosage reduction, consider a 50% reduction in the maintenance dose only (noting that in the short-term accumulation is less likely to be a problem) (ref 1)
- For patients on renal dialysis, consult pharmacy or specialist literature

Liver impairment

- Patients with liver **cirrhosis may require dosage adjustments** due to decreased glucuronidation but only limited data is available and precise recommendations cannot be made
- If monitoring of plasma zidovudine levels is not feasible, patient will need to be monitored for signs of intolerance, such as development of haematological adverse reactions (anaemia, leucopenia and neutropenia) and the dose should be reduced and/or the interval increased

between doses as appropriate

Monitoring

- Monitor haematological parameters closely

Further information

- While the license refers to starting zidovudine 4 hours before a planned caesarean Section, the National guideline (see Q pulse document 2015 CLN-OGCP-159) suggests 3 hours. This was confirmed with the ID consultants in GUH - they prefer to go with the national document
- Glucose 5% is the only infusion fluid recommended by the manufacturer. However, the drug is compatible with Sodium chloride 0.9% if an alternative fluid is required [ref 2]

Storage

- Store below 25^{0}C

References

SPC August 2024

1: Kidd, P. "Dosing of zidovudine in severe renal failure".4th March 2025 [personal opinion based on the pharmacokinetic behaviour of zidovudine as expressed by the manufacturers]

2: Injectable drugs guide downloaded from Medicines complete

Therapeutic classification

Antiviral