

## Louth: Antimicrobial Guidelines - Louth Hospitals: Antimicrobial Guidelines: Neonatal - Aciclovir IV

### Neonatal - ■Aciclovir IV

Antiviral [1].

#### MEDICATION SAFETY ISSUES

- Aciclovir may be confused with other antivirals [2]
- Zovirax® may be confused with Zyvox® [2,3]
- Anaphylaxis has been reported very rarely with aciclovir [4].
- Zovirax® may be confused with Zithromax® [2].

#### USES

- Treatment of herpes simplex and varicella zoster infections [1].
- Under consultant neonatologist and virologist direction, prophylactic IV aciclovir should be considered for neonates whose mothers develop chickenpox 7 days before to 7 days after delivery due to the risk of severe complicated infection despite varicella-zoster immunoglobulin prophylaxis [5].

#### PRESENTATION

Concentrate for solution for infusion: Aciclovir 250mg/10ml [4].

#### DOSAGE [1]

| Age                                  | Infection                                | Dose          | Frequency     | Duration                                                                                                  |
|--------------------------------------|------------------------------------------|---------------|---------------|-----------------------------------------------------------------------------------------------------------|
| Neonate                              | Prophylaxis of chickenpox after delivery | 10mg/kg       | Every 8 hours | Until blood test confirms absence of virus                                                                |
| Neonate<br>and<br>Child 1 – 3 months | Herpes simplex                           | 20mg/kg       | Every 8 hours | 14 days (for at least 21 days if CNS involvement, confirm CSF negative for HSV before stopping treatment) |
|                                      | Herpes zoster                            | 10 – 20 mg/kg | Every 8 hours | At least 7 days (for 10 – 14 days in encephalitis, possibly longer if also immunocompromised)             |

**Renal Impairment** : Dose reduction may be required – refer to BNFC and seek advice [1]. Nephrotoxic drugs (e.g. gentamicin, vancomycin) may worsen renal function if used concurrently.

#### RECONSTITUTION [1,4,6].

In OLOL, aciclovir is available as 250mg/10ml concentrated solution. The vial **must be further diluted** before use. **Dilute** 4ml of the 25mg/ml solution with 16 ml Sodium Chloride 0.9% to a final volume of 20ml.

The resulting solution contains aciclovir 5mg/ml.

#### ADMINISTRATION

Administer by IV infusion over 1 hour [1,4].

#### SAMPLE CALCULATION

3.2kg neonate 7 days old with herpes simplex infection. Dose 20mg/kg = 64mg every 8 hours.

Reconstitute aciclovir as above to a solution containing 5mg/ml.

Administer 12.8ml (64mg) by IV infusion over 1 hour.

#### STORAGE

Store unopened vials at room temperature below 25 °C. Once diluted, use immediately. Discard any remaining solution [4].

## MONITORING

- Maintain adequate hydration, especially with infusion of high doses, or during renal impairment [1,4]
- Monitor for changes in renal function [7], especially when administered concomitantly with nephrotoxic drugs (eg. gentamicin, vancomycin)
- Patients with renal impairment are at increased risk of developing neurological side effects and should be closely monitored for evidence of these effects. Dose reduction is required in patients with renal impairment [1,4].
- Monitor liver function [2].
- Monitor infusion site for phlebitis if administered peripherally [6]
- Monitor neutrophil count at least twice weekly in neonates receiving aciclovir 60 mg/kg/day IV for more than 48 hours [2].

## ADVERSE EFFECTS

Nausea, vomiting, abdominal pain, diarrhoea, headache, fatigue, rash, urticaria, pruritus, photosensitivity; *very rarely* hepatitis, jaundice, dyspnoea, neurological reactions (including dizziness, confusion, hallucinations, convulsions, ataxia, dysarthria, and drowsiness), acute renal failure, anaemia, thrombocytopenia, and leucopenia; on *intravenous infusion*, severe local inflammation (sometimes leading to ulceration), and *very rarely* agitation, tremors, psychosis and fever [1].

## REFERENCES

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## Summary of Changes from Previous Versions

| Date                 | Change                                                                                                                                                                                                                                                                                                                                        |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Feb 2021: Rev. No. 2 | Updated based on Rotunda Aciclovir Monograph Jan 2019. OLOL changes: <ul style="list-style-type: none"><li>• Aciclovir 250mg/10ml vials – current brands stocked in OLOL include Baxter and Pfizer. Both are in concentrated solution form and contain 250mg/10ml. Brand name removed from monograph.</li><li>• References updated.</li></ul> |
| Aug 2017: Rev. No. 1 | Aciclovir Claris® solution for infusion now stocked in OLOL, therefore no need to reconstitute powder for solution for infusion.                                                                                                                                                                                                              |
| May 2015             | This is the first version of this guideline.                                                                                                                                                                                                                                                                                                  |