Consensus Guidance on the Prescribing of Intravenous Aciclovir in Adults ≥ 16 years

TARGET AUDIENCE	NHS Lanarkshire secondary care
PATIENT GROUP	Adult patients (≥ 16 years) prescribed intravenous aciclovir

Clinical Guidelines Summary

Key Points

- **Aciclovir dose is weight based and varies dependent on indication.**
- **Adjusted body weight should be used to calculate dose in obesity (BMI ≥30kg/m^2).**
- **Be alert to increased risk of adverse effects in elderly patients and those with renal impairment.**
- **Symptoms of toxicity include renal failure and neurological symptoms including confusion, hallucinations, agitation, seizures and coma.**

Contents

Consensus Guidance on the Prescribing of Intravenous Aciclovir in Adults ≥ 16 years

Introduction

This guidance has been created to support safe and effective prescribing of intravenous (IV) Aciclovir in adult patients (≥ 16 years) in NHS Scotland. This guidance is for use by healthcare professionals. The information contained within this guidance is not exhaustive and this resource should therefore not be used in isolation when prescribing this medication.

Key Points
• **Dose is weight based and varies dependent on indication.**
• **Adjusted body weight should be used to calculate dose in obesity (BMI ≥30kg/m^2).**
• **Be alert to increased risk of adverse effects in elderly patients and those with renal impairment.**
• **Symptoms of toxicity include renal failure and neurological symptoms including confusion, hallucinations, agitation, seizures and coma.**

Prescribing

Dosage varies per indication[7] and should be considered in line with the British National Formulary and manufacturer's information.

Licensed indications: herpes simplex treatment and prophylaxis in the immunocompromised, varicella zoster treatment, initial treatment of severe genital herpes simplex[7]

Off-label indications: herpes zoster treatment[7]

Obesity

Obesity is defined by the National Institute for Health and Care Excellence (NICE) as BMI ≥30kg/m^2.

Risk of toxicity is increased when IV Aciclovir is dosed as per actual body weight in obese patients[3,4]. One pharmacokinetic study has shown that dosing using ideal body weight may lead to subtherapeutic plasma concentrations[2,5].

It is recommended that adjusted body weight (AdjBW) should be used when calculating doses for obese patients[1,2,3,4,8].

AdjBW= IBW + 0.4 (actual body weight – IBW)

Renal impairment

The risk of neurological reactions is increased when administering to patients with renal impairment[7]. It is essential to maintain adequate hydration in this patient group.

Lead Author	Antimicrobial Management Team	Date approved	Antimicrobial Management Committee (Nov 2024); ADTC (Nov 2024)
Version	1	Review Date	Nov 2027

Consensus Guidance on the Prescribing of Intravenous Aciclovir in Adults ≥ 16 years

Dose reductions of intravenous Aciclovir are recommended in renal impairment.[1,7] Use Renal Drug Database for advice on dosing in patients undergoing renal replacement therapy.

Contraindications

Known hypersensitivity to Aciclovir or product excipients[4,7].

Cautions

- Adequate hydration is essential for patients treated with IV Aciclovir[4].
- Caution when prescribing for elderly patients as increased likelihood of renal impairment[4].
- Risk of renal impairment increased if used in combination with other nephrotoxic drugs[4].

Administration

Refer to Medusa Injectable Medicines Guide for information on intravenous administration.

Monitoring

All patients should be monitored for treatment efficacy. Refer to British National Formulary for known adverse effects with IV Aciclovir use.

Overdose

Overdose with intravenous Aciclovir can cause renal failure. Neurological effects such as confusion, agitation, hallucinations, seizures and coma can occur. Patients should be closely monitored for any signs and symptoms of toxicity[4].

Consensus Guidance on the Prescribing of Intravenous Aciclovir in Adults ≥ 16 years

References/Evidence

This guidance has been reviewed by the Association of Scottish Antimicrobial Pharmacists (ASAP) group and has been agreed to be adapted for use within NHS Lanarkshire.

1. ASHLEY, C. & DUNLEAVY, A., 2024. *Aciclovir IV.* [online]. Abingdon: Taylor & Francis Group. Available from: ACICLOVIR IV (renaldrugdatabase.com) [Accessed 9th September 2024].
2. BRIGG TURNER, R. et al., 2016. Prospective, Controlled Study of Acyclovir Pharmacokinetics in Obese Patients. *Antimicrobial Agents and Chemotherapy,* 60(3), pp. 1830-1833.
3. CASTRO-BALADO, A. et al., 2024. Updated Antimicrobial Dosing Recommendations for Obese Patients. *Antimicrobial Agents and Chemotherapy,* 68(5), pp. e01719-e01723.
4. GLAXOSMITHKLINE UK., 2024. *Zovirax IV 500mg – Summary of Product Characteristics.* [online]. Brentford: Datapharm. Available from: Zovirax IV 500mg - Summary of Product Characteristics (SmPC) - (emc) (medicines.org.uk) [Accessed 9th September 2024].
5. MENG, L., 2024. *Stanford Health Care Antimicrobial Dosing Guide for Obesity.* [online]. California: Stanford Antimicrobial Safety and Sustainability Program. Available from: SHC-ABX-Obesity-Dosing-Guide.pdf (stanford.edu) [Accessed 9th September 2024].
6. National Institute for Health and Care Excellence (NICE) (2024). *Clinical Knowledge Summary – Obesity – Definition.* Available at: Definition | Background information | Obesity | CKS | NICE [Accessed 10th September 2024].
7. PHARMACEUTICAL PRESS., 2024. *Aciclovir.* [online]. London: BMJ Publishing Group Limited. Available from: MedicinesComplete — CONTENT > BNF > Drug: Aciclovir (oclc.org) [Accessed 9th September 2024].
8. University of Michigan (2021). *Weight-Based Dosing Recommendations for Intravenous Antimicrobial in Obese Adult Patients.* Available at: Antimicrobial Dosing in Obesity (umich.edu) [Accessed 9th September 2024].

This guidance was originally developed by: E Clark, Antimicrobial Pharmacist, NHS Ayrshire & Arran.

Reviewed by: Association of Scottish Antimicrobial Pharmacists members, September 2024.

Adapted for use in NHS Lanarkshire with thanks.