NEONATAL Medication Monograph

FLUCYTOSINE

This document should be read in conjunction with this **DISCLAIMER**

Highly Restricted: Requires Microbiologist approval before commencing

⚠ **HIGH RISK Medication**

Risk of neutropenia and thrombocytopenia. Appropriate monitoring is required

SAS Category A (item requires approval by TGA)

Presentation	**Infusion:** 2.5g/250mL = 100mg/mL **Oral Solution:** Prepared in Pharmacy (KEMH/PCH)
Description	Flucytosine (also known as 5-FC or 5-fluorocytosine) is an antifungal agent used in combination with another antifungal agent
Indications	Serious infections caused by susceptible strains of Candida, Cryptococcus, and other sensitive fungi Flucytosine is recommended for use in combination with liposomal amphotericin B
Contraindications	Hypersensitivity to flucytosine
Precautions	Use with extreme caution in renal impairment Concurrent treatment with nephrotoxic agents can reduce the excretion of flucytosine and increase the risk of toxicity Closely monitor haematologic, renal and hepatic status
Dosage	*Consult Microbiologist prior to prescribing as dose may vary according to clinical situation* **Systemic Infections** **IV/Oral:** 25-37.5mg/ kg/ dose every 6 hours
Dosage Adjustment	Increase dose interval in renal impairment and according to flucytosine levels

Adverse Reactions	**Common:** nausea, vomiting, diarrhoea, rash, anaemia, leucopenia, elevated liver enzymes
	Serious: bone marrow toxicity, hepatotoxicity, renal failure, GI haemorrhage, seizures
Interactions	Amphotericin may reduce the renal clearance of flucytosine, resulting in toxicity, However this combination is frequently used and is currently recommended for cryptococcal disease. Monitoring is required.
Compatible Fluids	Glucose 5%, Sodium Chloride 0.9%
Preparation	**Unit dose syringes:** 10 mg/mL (Prepared in Pharmacy) **Oral Solution:** 10mg/mL (Prepared in Pharmacy)
Administration	**IV infusion :** Infuse undiluted over 20 to 40 minutes
Monitoring	Monitoring of flucytosine levels is essential in all patients, especially in patients with renal impairment due to the increased risk of bone marrow suppression **Sampling time:** Pre and post levels to be taken at the **THIRD** dose (so as to ensure therapeutic levels) after initiating and change of dose and weekly thereafter. **Trough level:** Immediately prior to dose. **Trough:** 25 – 50microg/L **Peak level:** **IV:** 30 minutes after completion of infusion. **Oral**: 2 hours post dose **Peak:** 50-80microg/L **Additional Monitoring** Monitor blood count, and hepatic and renal function at baseline, then each day initially, and then twice each week
Storage	**Infusion:** Keep flucytosine at 15–25°C Precipitation occurs at prolonged storage below 15^{o}C Storage above 25^{o}C may result in the formation of fluorouracil (cytotoxic)
Notes	Flucytosine has a narrow spectrum of activity and resistance may develop rapidly; it must be used with another antifungal Each 250mL of flucytosine infusion contains 34.5mmol of sodium = 0.138mmol/mL

References	Taketomo CK, Hodding JH, Kraus DM, Hodding JH. Pediatric and Neonatal dosage handbook with international trade names index. 24th ed. Ohio: Lexi-comp; 2017-2018 p. 855-857 Ainsworth SB. Neonatal formulary 7 : drug use in pregnancy and the first year of life. Seventh ed. Chichester (West Sussex): John Wiley & Sons Inc.; 2015. 631 p. 221 Truven Health Analytics. Flucytosine. In: NeoFax [Internet]. Greenwood Village (CO): Truven Health Analytics; 2019 [cited 2019 Nov 5]. Available from: https://neofax.micromedexsolutions.com/ Society of Hospital Pharmacists of Australia. Flucytosine. In: Australian Injectable Drugs Handbook [Internet]. [St Leonards, New South Wales]: Health Communication Network; 2019 [cited 2019 Nov 5]. Available from: http://aidh.hcn.com.au Plover C, Porrello E. Paediatric injectable guidelines 2019 ed. Flemington (Victoria): The Royal Children's Hospital Melbourne; 2019
Related clinical guidelines	PCH ChAMP Flucytosine
Related policies	WNHS Policy: Antimicrobial Stewardship

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