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

#### Neonatal - MetroNIDAZOLE IV

Antimicrobial with activity against anaerobic bacteria and protozoa [1].

## **MEDICATION SAFETY ISSUES**

- · Anaphylaxis has been reported rarely with metronidazole [2].
- Sound-alike/Look-alike issues: Metronidazole may be confused with metformin, meropenem [3,4].

#### **USES**

Infections for which anaerobic cover required, such as Necrotising Enterocolitis (NEC) [1].

## **PRESENTATION**

Metronidazole 5mg/ml Solution for Infusion [2]

## DOSAGE [1]

Age	Dose	Frequency
Neonate less than 26 weeks corrected gestational	Single loading dose 15mg/kg followed after 24	Every 24 hours
age	hours by 7.5mg/kg each dose	
Neonate 26 - 34 weeks corrected gestational age	Single loading dose 15mg/kg followed after 12	Every 12 hours
	hours by 7.5mg/kg each dose	
Neonate over 34 weeks corrected gestational age	Single loading dose 15mg/kg followed after 8 hours	Every 8 hours
	by 7.5mg/kg each dose	
Child 1 - 2 months	Single loading dose 15mg/kg followed after 8 hours	Every 8 hours
	by 7.5mg/kg each dose	
Child 2 – 3 months	7.5mg/kg (max 500mg)	Every 8 hours

## **Hepatic Impairment**

Dose reduction may be required in hepatic impairment [1]. Refer to BNFc and seek advice on assessment of liver function [1].

## RECONSTITUTION

Metronidazole 5mg/ml solution for infusion is already in liquid form. There is no need to further dilute the infusion solution [2,5,6].

# **ADMINISTRATION**

Give by IV infusion over one hour [1,2,5,7].

## SAMPLE CALCULATION

2.8kg neonate corrected gestational age 40 weeks with suspected NEC.

Dose 15mg/kg as a single loading dose followed after 8 hours by 7.5mg/kg every 8 hours.

- 15mg/kg = 42mg. Withdraw 8.4ml metronidazole from the bag and give over one hour.
- 7.5mg/kg = 21mg. Withdraw 4.2ml metronidazole from the bag and give over one hour.

## **STORAGE**

Store at room temperature below 25 ° C. Keep container in the outer carton to protect from light. Once infusion solution opened, it must be used immediately. Discard any unused portions. [2,5].

## MONITORING

• Monitor liver function tests as dose reduction may be required in hepatic impairment [1].

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 Appropriate clinical and laboratory monitoring (especially of full blood count) are advised if administration of metronidazole for more than 10 days is considered necessary [2,5].

## **ADVERSE EFFECTS**

Gastro-intestinal disturbances (including nausea and vomiting), taste disturbances, furred tongue, oral mucositis, anorexia; *very rarely* hepatitis, jaundice, pancreatitis, drowsiness, dizziness, headache, ataxia, psychotic disorders, darkening of urine, thrombocytopenia, pancytopenia, myalgia, arthralgia, visual disturbances, rash, pruritus, and erythema multiforme; on prolonged or intensive therapy peripheral neuropathy, transient epileptiform seizures, and leucopenia; also reported aseptic meningitis, optic neuropathy [1]. Anaphylaxis reported rarely [2].

#### REFERENCES

- British Medical Association, Royal Pharmaceutical Society of Great Britain, Royal College of Paediatrics and Child Health, et al. BNF for Children. London: BMJ Group, Pharmaceutical Press and RCPCH Publications Limited; 2020. Available from <a href="www.medicinescomplete.com">www.medicinescomplete.com</a>, accessed 24/11/2020.
- 2. B. Braun Melsungen AG. Summary of Product Characteristics for Metronidazole 5mg/ml Solution for Infusion. 2020. Available from www.hpra.ie, accessed 24/11/2020.
- 3. Institute for Safe Medication Practices. ISMP's List of Confused Drug Names, 2019. Available from <a href="www.ismp.org">www.ismp.org</a>, accessed 24/11/2020.
- 4. UpToDate. Metronidazole (systemic) Paediatric Drug Information: Lexicomp®. Available from www.uptodate.com, accessed 28/11/14.
- 5. Medusa Injectable Drugs Guide. Metronidazole Intravenous Paediatric Monograph, 2018. Available from <u>www.medusa.wales.nhs.uk</u>, accessed 24/11/2020.
- Department of Health and Government of South Australia. South Australia Neonatal Medication Guidelines Metronidazole, 2017. Available from <a href="http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/clinical+resources/clinical+topics/neonatal+medication+guidelines">http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/clinical+resources/clinical+topics/neonatal+medication+guidelines</a>, accessed 24/11/2020.
- 7. American Society of Health-System Pharmacists. Pediatric Injectable Drugs. Available from <a href="https://www.medicinescomplete.com">www.medicinescomplete.com</a>, accessed 9/2/15.
- Institute for Safe Medication Practices. FDA and ISMP Lists of Look-Alike Drug Names with Recommended Tall Man Letters, 2016. Available from www.ismp.org , accessed 24/11/2020.

# **Summary of Changes from Previous Versions**

Date	Change
Feb 2021: Rev. No. 1	Updated based on Rotunda MetroNIDAZOLE Monograph Jan 2019.
	Changes to OLOL monograph:
	References updated.
August 2015	This is the first version of this guideline.

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