## **MONOGRAPH**

# **Clindamycin Monograph - Paediatric**

Scope (Staff):	Medical, Pharmacy, Nursing
Scope (Area):	All Clinical Areas

## **Child Safe Organisation Statement of Commitment**

CAHS commits to being a child safe organisation by applying the National Principles for Child Safe Organisations. This is a commitment to a strong culture supported by robust policies and procedures to reduce the likelihood of harm to children and young people.

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

QUICKLINKS					
<u>Dosage/Dosage</u> <u>Adjustments</u>	<u>Administration</u>	Compatibility	Monitoring		

#### DRUG CLASS

Lincosamide antibiotic<sup>(1)</sup>

## INDICATIONS AND RESTRICTIONS

Clindamycin is indicated in the treatment of serious infections caused by Gram positive bacteria resistant to other agents (e.g. Methicillin resistant *Staphylococcus aureus* [MRSA]) or in patients allergic to other agents (e.g. penicillin and/or cephalosporin allergy) and as an adjunct to standard beta-lactam antibiotics in specific clinical situations (e.g. invasive Group A Streptococcal infections).<sup>(1, 2)</sup>

## Oral and topical: Unrestricted (green) antibiotic

This is not a restricted agent. Follow standard ChAMP guidelines where appropriate.

## IV: Monitored (orange) antibiotic

- If the use is consistent with a standard approved indication, this must be communicated to ChAMP by documenting that indication on all prescriptions (inpatient and outpatient).
- The ChAMP team will review if ongoing therapy is required and/or if the order does not meet ChAMP Standard Indications
- If use is not for a standard approved indication, phone approval must be obtained from ChAMP before prescribing.

#### **CONTRAINDICATIONS**

Hypersensitivity to clindamycin, lincomycin or any component of the formulation. (1, 3-5)

## **PRECAUTIONS**

- Hypotension and cardiac arrest have been reported with rapid intravenous administration.
   Clindamycin should be diluted to a final concentration of 18mg/mL or less and the rate of administration should NOT exceed 30mg/minute.<sup>(6)</sup>
- The IV preparation contains benzyl alcohol which has been associated with gasping syndrome in neonates, it should be used with caution. (3-5, 7)
- Clindamycin should be used with caution in patients with a history of pseudomembranous colitis associated with clindamycin or other lincosamide antibiotics (administered orally, intravenously or topically), and in patients with ulcerative colitis or enteritis. (4, 7)
- Patients, parents and carers should be instructed to cease therapy and contact the prescriber
  if any diarrhoea develops whilst on clindamycin and up to 2 months after ceasing therapy. (1, 5, 7)

#### **FORMULATIONS**

Listed below are products available at PCH, other formulations may be available, check with pharmacy if required:

- 150mg Capsules
- 600mg/4mL Solution for Injection
- 1% topical solution
- clindamycin 1% with benzoyl peroxide 5% gel (Duac<sup>®</sup> Once Daily Gel)

Imprest location: Formulary One

## **DOSAGE & DOSAGE ADJUSTMENTS**

**Neonates: Refer to Neonatal Medication Protocols** 

Dosing in Overweight and Obese Children: Dose based on measured body weight. (8)

## IV: ≥4 weeks to 18 years

- **Note:** Clindamycin has excellent oral bioavailability (90%). Consider step down to oral antibiotic therapy when clinically appropriate. (6)
- Usual dose: 10mg/kg/dose (to a maximum of 450mg) given 8 hourly. (1, 5, 9)
- Severe infections: 15mg/kg/dose (to a maximum of 600mg) given 8 hourly. (1, 9)
- **HiTH patients:** 30-40mg/kg/DAY via continuous infusion (maximum total daily dose of 2.4grams) via a Baxter<sup>®</sup> infusor.
- **Surgical prophylaxis:** 15mg/kg (to a maximum of 600mg) as a single dose within 120 minutes before surgical incision. A repeat dose is required if the operation is > 6 hours. If further post-surgical doses are required, standard IV dosing (above) should be used.

## Oral: ≥4 weeks to 18 years:

- Usual dose: 10mg/kg/dose (to a maximum of 450mg) given 8 hourly. (1, 9)
- Severe infections: 10mg/kg/dose (to a maximum of 450mg) given 6 hourly. (2)

## **Topical**

- Topical clindamycin preparations must be used in combination with other topical agents to limit the development of resistance.<sup>(1)</sup>
- Gel (only indicated for acne): apply once daily in the evening.<sup>(3)</sup>
- Topical solution (only indicated for acne): apply approximately 2mL twice daily for up to 12 weeks.<sup>(3)</sup>

## Renal impairment:

- eGFR calculator
- No dosage adjustments are recommended for patients with renal impairment. The half-life of clindamycin is slightly extended in severe renal impairment. (4, 5)

## **Hepatic impairment:**

 No dosage adjustments are recommended for patients with hepatic impairment. The half-life of clindamycin is extended in severe hepatic impairment, although no specific dosage adjustment is recommended. (4, 5)

## **ADMINISTRATION**

#### IV infusion:

 Dilute to a final concentration of 18mg/mL or weaker and infuse over 10 – 60 minutes at a rate no greater than 30mg/minute OR 20mg/kg/hour whichever is less. (4, 6, 7)

## **Continuous infusion:**

May be given over 24 hours by continuous infusion<sup>(6)</sup> via a Baxter<sup>®</sup> infusor.

#### Oral:

- Clindamycin may be taken without regard to food intake. Taking clindamycin with food may help reduce the incidence of gastrointestinal adverse effects. (4)
- If the patient is unable to swallow capsules and/or the dose is not a multiple of 150mg then the capsule(s) may be opened and the contents of the capsule(s) dissolved in water (for example, the contents of a 150mg capsule is dissolved in 3mL of water to give a 50mg/mL solution). (10)
- The contents of the capsule may be mixed in juice or soft food to disguise the taste. (Note: clindamycin solution is extremely unpalatable ensure a test dose is given to ensure tolerability).<sup>(1, 10)</sup>

## **COMPATIBILITY (LIST IS NOT EXHAUSTIVE)**

#### Compatible fluids:

- Glucose 5%
- Glucose/ sodium chloride solutions
- Sodium chloride 0.9%
- Hartmann's<sup>(6)</sup>

## Compatible at Y-site:

<u>Compatibilities of IV drugs</u> must be checked when two or more drugs are given concurrently.

## **MONITORING**

• Hepatic function, renal function and full blood picture should be monitored weekly with prolonged therapy (i.e. longer than 7 days). (1, 3-5, 7)

## **ADVERSE EFFECTS**

**Common:** contact dermatitis (with topical use), diarrhoea (mild-to-severe), nausea, vomiting, abdominal pain or cramps, rash, itch.<sup>(1, 7)</sup>

**Infrequent:** Clostridioides difficile-associated disease (1)

**Rare:** pseudomembranous colitis, serious cutaneous adverse reactions (SCARs), taste disturbance, anaphylaxis, blood dyscrasias, polyarthritis, jaundice, hepatotoxicity (with high doses). (4, 5, 7)

With IV use: hypotension and cardiac arrest (with rapid injection), thrombophlebitis. (1)

#### **STORAGE**

#### IV solution:

- Store ampoules (Dalacin<sup>®</sup> C brand) and products prepared by Pharmacy Compounding Service (PCS) at 2-8°C.<sup>(3, 6)</sup>
- Alternative brands may be stored below 25°C (e.g. Mylan<sup>®</sup> brand), check packaging for storage requirements.<sup>(3, 6)</sup>

## Oral capsules:

Oral capsules should be stored below 25°C and protect from light.<sup>(3)</sup>

## **Topical preparations:**

- Clindamycin gel (Duac<sup>®</sup>) should be stored between 2°C and 8°C. The gel must be discarded two months after opening.<sup>(3)</sup>
- Clindamycin solution should be stored below 30°C and protected from light.

#### **INTERACTIONS**

This medication may interact with other medications; consult PCH approved references (e.g. Clinical Pharmacology), a clinical pharmacist or PCH Medicines Information Service on extension 63546 for more information.

<sup>\*\*</sup>Please note: The information contained in this guideline is to assist with the preparation and administration of **clindamycin**. Any variations to the doses recommended should be clarified with the prescriber prior to administration\*\*

## Related CAHS internal policies, procedures and guidelines

Antimicrobial Stewardship Policy

**ChAMP Empiric Guidelines and Monographs** 

**KEMH Neonatal Medication Protocols** 

#### References

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