**MONOGRAPH**

**Clindamycin Monograph - Paediatric**

<table>
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<tr>
<th>Scope (Staff):</th>
<th>Medical, Nursing, Pharmacy</th>
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<td>Scope (Area):</td>
<td>PCH</td>
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This document should be read in conjunction with this DISCLAIMER

**DESCRIPTION**

- Clindamycin is a semi-synthetic antibiotic effective against aerobic Gram positive and anaerobic Gram positive and negative bacteria.
- It inhibits protein synthesis by binding to the 50S ribosomal subunit.\(^{(1-3)}\)
- 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. severe Group A Streptococcal infections).

**INDICATIONS AND RESTRICTIONS**

**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.

**Oral and topical:** Unrestricted (green) antibiotic

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

**CONTRAINDICATIONS**

- Clindamycin is contraindicated in patients with a previous hypersensitivity reaction to clindamycin, lincomycin or any of the ingredients contained in the product.\(^{(3, 5-7)}\)

**PRECAUTIONS**

- Hypotension and cardiac arrest have been reported with rapid intravenous administration. Clindamycin should be diluted to a strength of 18mg/mL or less and the rate of administration should NOT exceed 30mg/minute.\(^{(7, 9)}\)
- The IV preparation contains benzyl alcohol which has been associated with gasping syndrome in neonates, it should be used with caution.\(^{(3, 5, 8, 9)}\)
- 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.
- 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.\(^{(3, 5, 8, 10)}\)

**FORMULATIONS**

<table>
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<th>Available at PCH:</th>
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<tr>
<td>150mg Capsules (Dalacin C)</td>
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<tr>
<td>600mg/4mL Solution for Injection</td>
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<tr>
<td>1% topical solution</td>
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<tr>
<td>1% clindamycin with 5% benzoyl peroxide gel (Duac Once Daily Gel)</td>
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**Other formulations available:**

- 150mg capsules (multiple generic brands)
- 300mg/2mL Solution for injection
- 1% topical lotion
- 1% topical gel
- 2% vaginal cream

**DOSAGE**

- The doses listed below fall within the standard range. Higher doses may be prescribed for certain situations in consultation with an infectious diseases or clinical microbiology consultant.

**Neonates:**
- Please refer to neonatal clinical care drug protocols

**IV:**
- **Usual dose:** 10mg/kg/dose (to a maximum of 450mg) given 8 hourly.\(^{(1, 2, 4)}\)
- **Severe infections:** 10mg/kg/dose (to a maximum of 600mg) given 6 hourly.\(^{(1, 2, 4)}\)
- **Note:** Clindamycin has excellent oral bioavailability. Consider step down to orals when clinically relevant.\(^{(1, 5)}\)
- **HiTH patients:** 30-40mg/kg/DAY (maximum total daily dose of 2.4grams) in 3 to 4 divided doses OR via continuous infusion.
- Higher doses may be used in some circumstances in consultation with infectious diseases or clinical microbiology.
- **Surgical prophylaxis:** 15mg/kg (to a maximum of 600mg) as a single dose with the infusion completed 15 to 30 minutes prior to knife to skin.\(^{(2)}\)
### Oral:
- Usual dose: 10mg/kg/dose (to a maximum of 450mg) given 8 hourly.\(^{(4)}\)

### Topical
- Gel (only indicated for acne): apply once daily.
- **Topical solution or lotion** (only indicated for acne): apply approximately 2mL twice daily.\(^{(1, 4)}\)
- **Vaginal cream**: Apply ONE applicator full (5g) of cream intravaginally at bedtime for 7 days.\(^{(6)}\)

### DOSAGE ADJUSTMENT

#### Dosage adjustment required in renal impairment:
- No dosage adjustments are recommended for patients with renal impairment. The half-life of clindamycin is slightly extended in severe renal impairment.\(^{(5, 7)}\)

#### Dosage adjustment required in hepatic impairment:
- No dosage adjustments are recommended for patients with hepatic impairment. The half-life of clindamycin is slightly extended in severe hepatic impairment.\(^{(5, 7)}\)

### RECONSTITUTION

#### Solution for infusion:
- Further dilution is required (see administration section below), use the solution prepared in CIVAS where possible.

### ADMINISTRATION

#### IV infusion:
- Dilute to 18mg/mL or weaker and infuse over 10 – 60 minutes and at a rate no greater than 30mg/minute.\(^{(7-10)}\)

#### Continuous infusion:
- May be given over 24 hours by continuous infusion.
- Contact Pharmacy for advice.\(^{(7)}\)

#### Oral:
- Swallow capsules whole with a glass of water without regard to food intake.
- If the patient is unable to swallow capsules 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).
- If only a portion of the mixture is required, draw up the required volume and discard the remaining solution.
- 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)\(^{(1)}\)
**MONITORING**
- Hepatic function, renal function and full blood picture should be monitored weekly with prolonged therapy (i.e. longer than 7 days). \(^{8, 10}\)

**ADVERSE EFFECTS**
- **Common:** diarrhoea (mild-to-severe), nausea, vomiting, abdominal cramps, rash, itch. \(^{1, 3, 8}\)
- **Rare:** *Clostridium difficile*-associated diarrhoea, pseudomembranous colitis, toxic epidermal necrolysis, Steven’s Johnson syndrome, taste disturbance, anaphylaxis, blood dyscrasias, polyarthritis, jaundice, raised liver enzymes (with high doses); IV: hypotension, cardiac arrest (with rapid injection), thrombophlebitis; IM: pain, induration, sterile abscess. \(^{1, 3, 8}\)

**COMPATIBLE FLUIDS**
- Glucose 5%
- Glucose/sodium chloride solutions
- Sodium chloride 0.9%
- Hartmann’s \(^{7, 9}\)

**STORAGE**
**IV solution:**
- Store ampoules and products prepared by CIVAS at 2-8°C

**Oral capsules:**
- Oral capsules should be stored below 25°C

**Topical preparations:**
- Clindamycin lotion, cream and gel should be stored below 25°C
- Clindamycin solution should be stored below 30°C and protected from light. \(^{8}\)

**INTERACTIONS**
Clindamycin has few drug interactions; please consult PCH approved references, your ward pharmacist or Pharmacy on 6456 0190 (option 1) for more information.
- Clindamycin enhances the effect of non-depolarising muscle relaxants. \(^{8}\)
- Clindamycin antagonises the effects of neostigmine and pyridostigmine. \(^{8}\)

**COMMENTS**
- Injection ampoule contains benzyl alcohol which may cause allergic reactions in some people and/or gasping syndrome in neonates. \(^{1, 3, 9}\)
- Clindamycin has good oral bioavailability – consider switching to oral dosing as soon as clinically appropriate. \(^{3}\)
- Clindamycin obtains good concentration in the bone and is excreted in the urine and bile. It has poor CNS penetration. \(^{5, 7, 8}\)
MANUFACTURER SAFETY DATA SHEET (SDS)

To access the Manufacturer SDS for this product, use the following link to ChemAlert.

**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 internal policies, procedures and guidelines

- Antimicrobial Stewardship Policy
- ChAMP Empiric Guidelines

References


10. Micromedex 2.0 [Internet]. Truven Health Analytics. 2016 [cited 10/05/2016].
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<td>Children’s Antimicrobial Management Program Pharmacist</td>
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