CLINDAMYCIN

Drug Class: Lincosamide

Spectrum: Clindamycin has broad activity against anaerobic bacteria. It is also effective against Gram positive aerobes, including staphylococci and streptococci. It is ineffective against enterococci. It is also effective against *Toxoplasma*.

Resistance: Resistance can be acquired, particularly in staphylococci. In staphylococci (particularly *S. aureus*) inductively clindamycin resistance is a concern, as isolates may be erroneously reported as susceptible. Testing for inducible resistance is commonly performed but clinicians should be aware of whether this has been tested before when considering clindamycin, particularly for severe infections.

Mechanism of Action: Clindamycin action is thought to be via binding to the 50S bacterial ribosomal subunit. There is good distribution to most tissues, with therapeutic levels achieved in some difficult to reach sites such as bone and synovial fluid. CNS levels are low if meninges are not inflamed.

Route of Elimination: Clindamycin undergoes hepatic metabolism and both active and inactive metabolites are excited into the gastrointestinal tract. Some drug is excreted unchanged in urine, but levels are not generally high and clindamycin is not recommended for treatment of cystitis. Elimination can be delayed in patients with severe hepatic or renal compromise.

Adverse Effects: Gastrointestinal upset is the most common adverse effect. While less commonly reported than with doxycycline, oral administration of clindamycin pills has been associated with esophageal stricture in a small number of cases. Therefore, measures to reduce this risk, such as following pills with water and/or lubricating pills, should be considered.

Contraindications: Clindamycin should be used with caution in patients with hepatic or renal failure. Fatal gastrointestinal disease is likely in hindgut fermenters (e.g. rabbits, horses).

Common uses: Clindamycin is most often used for its anaerobic spectrum. It is also a useful drug for staphylococcal and streptococcal infections. It can be used for broad spectrum coverage in serious infections, when combined with an antimicrobial with activity against Gram negatives (e.g. fluoroquinolone, aminoglycoside).

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Dosing:

- *The canine label recommendations are 5.5-11 mg/kg POq12h, with feline dosing at 11-22 mg/kg PO q24h.*
- *Doses up to 33 mg/kg PO q12h in both dogs and cats have been recommended.*
- *The 5.5-11 mg/kg PO q12h dosing range is most commonly used, with the upper end probably being most useful given the concentration-dependent nature of the drug.*
- *High doses should be considered when treating osteomyelitis.*
- *10-15 mg/kg is often used parenterally (IV/IM) (extra-label).*

Veterinary Drug Director Category: II (High importance)

Approved veterinary products in Canada: Yes. Oral.