PRADOFLOXACIN

Drug Class: Fluoroquinolone

Spectrum: Like other fluoroquinolones, pradofloxacin has a broad spectrum, including various Gram positive and Gram negative bacteria. Unlike other veterinary fluoroquinolones, pradofloxacin has broad-spectrum anti-anaerobic activity. It is particularly useful as a drug targeting Gram negative bacteria of the Enterobacteriaceae family (e.g. *E. coli, Enterobacter*). It has good activity against staphylococci, with less predictable activity against streptococci and enterococcus.

Resistance: Resistance is a potential concern in both Gram positive and Gram negative bacteria. This can occur both through mutations and acquisition of transferable resistance genes.

Mechanism of Action: Pradofloxacin exhibits bactericide last activity in a concentration dependent manner, through effects on DNA gyrase. As a concentration dependent drug, high peak drug levels are important, so once daily dosing is used.

Route of Elimination: Elimination is primarily through the kidneys, and high levels of active drug are present in urine.

Adverse Effects: There are concerns about articulate cartilage damage when enrofloxacin is used in growing dogs, but the risks associated with pradofloxacin are unknown. No impact was noted in puppies at 3 mg/kg q24h dosing. Use of enrofloxacin in dogs with *Streptococcus canis* infection has been associated with induction of necrotizing fasciitis; however, there is no evidence that the risk also applies to pradofloxacin. Similarly, there is no evidence that retinopathy associated with enrofloxacin use also occurs with pradofloxacin.

Contraindications: Pradofloxacin use should be avoided in growing animals.

Common uses: As a critically important antimicrobial, pradofloxacin is typically recommended for treatment of infections resistant to common first line options. It is a useful second tier option for infections such as cystitis and pyoderma. This drug is well distributed throughout the body and is a first line treatment for bacterial prostatitis and pyelonephritis. It is also often used, in combination with a drug with greater Gram positive activity (e.g. ampicillin or clindamycin) for broad spectrum empirical therapy in cases of suspected sepsis.

Dosing:

- ***Dogs: 3-4.5 mg/kg PO q24h***
- ***Cats: 7.5 mg/kg PO q24g***

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Veterinary Drug Director Category: I (Very High Importance).

Approved veterinary products in Canada: Yes, for both dogs and cats. Oral.