TRIMETHOPRIM-SULFONAMIDE

Drug Class: Potentiated sulfonamide

Spectrum: Trimethoprim-sulfonamide (TMS) combinations provide broad spectrum activity against Gram positive and Gram negative bacteria (including anaerobic Gram positive bacteria). They also have activity against some Protozoa.

Resistance: Acquired resistance can be present in various bacteria. The degree of resistance that is present typically precludes the use of TMS as an empirical antimicrobial for potentially life-threatening infections.

Mechanism of Action: This is a bactericidal combination that blocks two enzymes in the bacterial folic acid pathway.

Distribution/Route of Elimination: It is well distributed after oral administration. Active drug is excreted at high concentrations in urine, making TMS an excellent option for bacterial cystitis.

Adverse Effects: Keratoconjunctivitis sicca (KCS) is an important adverse effect that can develop in any dog, but which is likely more common in breeds with elevated underlying risk of KCS. Arthropathy and hepatopathy may also occur, and hepatopathy can be very serious. The risk of these is likely greatest with prolonged treatment but complications can occur with any duration of treatment. Blood dyscrasias (leukopenia, anemia) can develop with prolonged use.

Contraindications: TMS should be used with caution in individuals with a history of KCS or those that are at high risk for KCS, particularly if prolonged treatment duration is required. While it is often stated that the risk of arthropathy is higher in 'black and tan' breeds, there are no data to substantiate this.

Common uses: In dogs and cats, TMS is uncommon used, largely because of concerns about adverse effects. It has been recommended as a potential first line option for treatment of bacterial cystitis and superficial folliculitis. While resistance may be present, some multi drug resistant pathogens can be susceptible to TMS so it might be an option for infections such as those by some MRSA isolates.

Dosing:

- ***15-30 mg/kg PO q12h***

Veterinary Drug Director Category: II (High Importance).

Approved veterinary products in Canada: Not for dogs or cats.