

Marbofloxacin*

Class: Fluoroquinolone

Overview

Marbofloxacin, a carboxylic acid derivative third generation fluoroquinolone, is a veterinary antimicrobial approved for use in cats, dogs and horses. This preparation is soluble in water and is less soluble under alkaline conditions. The drug is primarily metabolized in the kidneys; only 10 to 15% is metabolized in the liver. As with other fluoroquinolones, marbofloxacin has been observed to be associated with lameness and lesions of the articular cartilage in large breed dogs. In horses, the oral bioavailability of marbofloxacin is similar to that of enrofloxacin.

Resistance

Please see the discussion of resistance in the ciprofloxacin section.

Although cross resistance among the different fluoroquinolones does occur, a study conducted on bacterial isolates collected from pets in six European nations from 1994 to 2001 indicated no significant change in minimum inhibitory concentration (MIC) of marbofloxacin in the bacterial species studied. Similar results have been observed in other studies. Therefore marbofloxacin use in pets does not appear to have induced a significant increase or spread of resistance.

Effectiveness

Like enrofloxacin, marbofloxacin is bactericidal and is usually effective against most Gram-negative bacteria and against some Gram-positive bacteria, such as are found in staphylococcal skin infections. Marbofloxacin appears to be quite effective in therapy for canine pyoderma. Marbofloxacin and ciprofloxacin are superior to the other fluoroquinolones in efficacy against *P. aeruginosa*, therefore marbofloxacin is frequently utilized in empiric treatment of suspected infections caused by this agent. This antimicrobial is used for treatment of susceptible skin, soft tissue and urinary infections. The high end of the dose range is usually recommended in therapy for *P. aeruginosa* and *Staphylococcus* infections.

***References available by request. Call the Infectious Disease Epidemiology Section, Office of Public Health, Louisiana Department of Health and Hospitals (504-219-4563)**