EXPLORATION OF THE PHARMACOKINETICS OF PEFLOXACIN ON ORAL ADMINISTRATION IN BROILER CHICKENS

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Pefloxacin, a second generation quinolone compound has widespread use in poultry though little is known about its pharmacokinetic behavior in chickens.

The pharmacokinetics of pefloxacin was investigated in chicken after oral administration of pefloxacin at a dose of 10mg.kg\(^{-1}\). The drug concentrations were assayed using HPLC. The concentrations were detected up to 48 h. The pharmacokinetic parameters of pefloxacin were calculated using Pharmkit Software.

The pharmacokinetic parameter values were \(t_{1/2}\) 7.73h; AUC 31.79 \(\mu\)g.h.ml\(^{-1}\); MRT 14.48 h; F 80.2%; \(t_{\text{max}}\) 4.83 h and MR 29.3 %

Bioavailability of pefloxacin was 80.2% after oral administration. The concentration of pefloxacin lasted for 48 h after oral administration (10 mg.kg\(^{-1}\)).

A suitable dosage regimen of pefloxacin for poultry would be 10 mg.kg\(^{-1}\) orally at 24 h interval.