EFFECT OF ADMINISTRATION ROUTE AND DOSE ESCALATION ON INTESTINAL CONCENTRATIONS OF ENRO- AND CIPROFLOXACIN IN BROILER CHICKENS

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The posology of veterinary antimicrobial drugs is currently determined by dose titration and confirmation studies solely monitoring clinical efficacy. These studies generally do not take into account the objective of limiting the emergence and spread of resistance. Nevertheless, resistance to antimicrobial drugs is becoming one of the leading health concerns in human and veterinary medicine worldwide. As resistance development and selection depends on the extent of exposure to antimicrobials, it is of importance to know to which amount of drug the intestinal flora is exposed after treatment.

The goal of present study is to assess and compare the intestinal concentration of enro- and ciprofloxacin after treatment of broiler chickens with the conventional dosage regimen of enrofloxacin (oral as well as intramuscular) and after dose escalation.

Sixty-four 3-week-old broiler chickens were equally divided in four different treatment groups. The first group received the conventional oral therapy (10 mg enrofloxacin/kg BW, 5 days) whereas the second group received an escalated dose (50 mg enrofloxacin/kg BW, 5 days). The third and last group received the same dose as the first and second, respectively, but it was administered intramuscularly. At regular time points after administration, animals were euthanized and intestinal content from ileum, cecum, colon and cloaca was collected. Enro- and ciprofloxacin levels in the samples were determined by a validated LC-MS/MS method. Results will be presented at the conference.

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