JOURNAL OF AVIAN MEDICINE AND SURGERY

Pharmacokinetics and Egg Residues of Oral Meloxicam in Bantam Cochin Chickens (*Gallus gallus domesticus*)

C. Robert Stilz, BS, Sherry Cox, MS, PhD, Joan Bergman, BS, Lillian Gerhardt, LVMT, Sarah Singleton, Lainey Harvill, and Marcy J Souza, DVM, MPH, MPPA

Abstract: Backyard poultry are commonly treated in veterinary hospitals; however, there is limited information regarding appropriate dosing of medications and withdrawal times for eggs. Six healthy adult bantam Cochin hens (*Gallus gallus domesticus*) were given a single oral dose of meloxicam (1 mg/kg). Meloxicam plasma concentrations and egg residues were analyzed via high performance liquid chromatography. Non-compartmental analysis was used to calculate pharmacokinetic parameters. The apparent terminal half-life, maximum concentration, and time to maximum concentration were 5.94 ± 0.917 hours, 7.03 ± 2.68 µg/mL, and 2.83 ± 1.33 hours, respectively. Meloxicam was detected in egg whites for 4.8 ± 1.5 days and egg yolks for 9.8 ± 2.4 days. Results were compared to previous studies in white leghorn (*G g domesticus*) and Columbian Wyandotte (*G g domesticus*) hens. Bantam Cochin hens demonstrated a significantly longer mean apparent terminal half-life, greater area under the curve, smaller elimination rate constant, and longer egg residue times compared to white leghorn hens. However, the pharmacokinetic results from the bantam Cochin hens did not significantly differ from those reported for the Columbian Wyandotte hens. Until pharmacodynamic studies can be performed, dosing of oral meloxicam in bantam Cochins should follow recommendations for Columbian Wyandotte hens to reduce the likelihood of adverse effects. These results better inform appropriate dosing of meloxicam in domestic hens, as well as recommended withdrawal times for egg consumption.