Food and Chemical Toxicology

Volume 50, Issue 10, October 2012, Pages 3819–3825

# A high oxfendazole dose to control porcine cysticercosis: Pharmacokinetics and tissue residue profiles

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Oxfendazole (OFZ) is efficacious for porcine cysticercosis at 30 mg/kg. OFZ is not registered to be used at this dose. The assessment of the OFZ and metabolites [(fenbendazole sulphone (FBZSO2), fenbendazole (FBZ)] plasma pharmacokinetic and tissue residue profiles after its oral administration to pigs and the withdrawal period for human consumption were reported. Forty-eight pigs allocated into two groups received OFZ (30 mg/kg) orally as a commercial (CF) or as experimental formulation (SMF). Samples (blood, muscle, liver, kidney and fat) were collected over 30 days post-treatment and analyzed by HPLC. OFZ was the main compound recovered in plasma, followed by FBZSO2 and low FBZ concentrations. OFZ AUC0-LOQ (209.9±33.9 μg·h/ml) and Cmax (5.40±0.65 μg/ml) parameters for the CF tended to be higher than those for the SMF (AUC0-LOQ: 159.4±18.3 μg h/ml, Cmax: 3.80±0.35 μg/ml). The highest total residue (OFZ+FBZSO2+FBZ) concentrations were quantified in liver, followed by kidney, muscle and fat tissue. FBZSO2 residue levels were the highest found in muscle (0.68±0.39 μg/g) and fat (0.69±0.39 μg/g). In liver and kidney the highest residues corresponded to FBZ (5.29±4.36 μg/g) and OFZ (2.86±0.75 μg/g), respectively. A withdrawal time of 17 days post-treatment was established before tissues are delivered for human consumption.



Full text: http://www.sciencedirect.com/science/article/pii/S0278691512005017