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Relationship between body dimension, body weight, age, gender, breed and echocardiographic dimensions in young endurance horses

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of IL-10 than mares. The stimulation to spontaneous release ratios of TNF α , IL-4 and IL-17 differed in warmblood- and thoroughbred-types. Sampling time influenced leukocyte composition and cell morphology.

In summary, many animal factors – with age being the dominant one – should be considered for studies involving the analysis of equine leukocytes. In addition, high inter-individual variances argue for individual baseline measurements.

0038

PHARMACOKINETICS OF FIVE COMMERCIALY AVAILABLE FORMULATIONS OF OMEPRAZOLE. B.W. Sykes¹, C. Underwood¹, C. McGowan², P.C. Mills¹. ¹School of Veterinary Science, The University of Queensland, Gatton, 4343, QLD, Australia, ²Institute of Ageing and Chronic Disease, Faculty of Health and Life Sciences, University of Liverpool, United Kingdom

Little is published on the pharmacokinetics of different formulations of omeprazole making comparison between products difficult. The objective of this study was to compare the pharmacokinetics of four commercially available formulations of omeprazole to an existing reference formulation. A single dose, cross-over study was performed using 12 adult Thoroughbred horses. Two generic buffered formulations (OG and AG), one commercial enteric coated formulation (GZ) and one compounded enteric coated formulation (BO) were compared to the reference buffered formulation (GG). Each formulation was administered at a total dose of 2 grams (equivalent to 4 mg/kg for a 500 kg horse). Blood samples were collected at 0, 15, 30, 45, 60, 75, 90, 105, 120, 150, 180, 210, 240, 300, 360 and 540 minutes. Plasma omeprazole concentrations were determined by UPLC-MS. Non-compartmental pharmacokinetic analyses were performed using PK Solver and presented as median (IQR). The results of this study, presented below, suggest that modest differences are present between commercially available formulations of omeprazole.

Formulation	Area-Under-the-Curve (AUC _{0-t/0-inf_obs}) (µg/mL*min)	Cmax (µg)	Tmax (min)
OG	45.8 (30.9:60.8)	0.30 (0.20:0.42)	75 (71:83)
AG	41.5 (14.3:59.5)	0.18 (0.10:0.20)	113 (56:180)
GZ	70.4 (43.6:98.1)	0.45 (0.35:0.71)	45 (45:68)
BO	63.7 (38.8:86.0)	0.36 (0.27:0.59)	45 (60:105)
GG	48.3 (45.5:58.0)	0.30 (0.27:0.50)	60 (45:64)

0039

RELATIONSHIP BETWEEN BODY DIMENSION, BODY WEIGHT, AGE, GENDER, BREED AND ECHOCARDIOGRAPHIC DIMENSIONS IN YOUNG ENDURANCE HORSES. D.S. Trachsel^{1,2}, A. Giraudet², G. Hervé², D. Maso², D.D. Hauri³, E. Barrey⁴, C. Robert^{2,4}. ¹CIRALE-Hippolia, Médecine Sportive, RD 674, 14430 Goustranville, France, ²Ecole Nationale Vétérinaire d'Alfort, 7 avenue du Général de Gaulle, 94704 Maisons-Alfort, France, ³Office Fédéral de la Statistique, Espace de l'Europe 10, 2010 Neuchâtel, Switzerland, ⁴INRA, GABI-UMR1313, Jouy-en-Josas, France

Heart dimensions are related to body weight (BWT), body size, and growth. Training, especially endurance training, also influences the ventricular size. Further, breed is relevant to deter-

mine normal heart dimensions in certain species. However, few data on the evolution of heart dimensions with growth and training in Arabian and Arabian related horses are available.

Therefore, the study aimed at describing the effect of body dimensions (body length, thoracic perimeter (TP), withers height (WH)), BWT, age, gender and breed (pure breed, Arabian cross, anglo-arabian, others) on echocardiographic measurements in competition fit endurance horses aged 4–6 years. Standardised echocardiographic images of 302 left ventricles (LV) and 256 left atria (LA) and great vessels were obtained at rest by two experimented examiners. The relationship between echocardiographic measurements and mentioned predictors was assessed by multiple linear regression models with selection of relevant predictors based on the adjusted R² and AKAIKEI's information criteria.

BWT and WH showed a positive influence on most LV 2D and area dimensions. Age influenced LV area, volumes and functional indices, gender influenced LV area, volumes and mass, whereas breed influenced LV internal diameter and mass. All LA and great vessels dimensions increased with increasing body dimensions, especially TP. Age had an influence on all 2D dimensions, whereas BWT, gender and breed affected only some of them.

In conclusion, BWT and body dimensions as well as age, gender and breed are important for assessing cardiac dimensions and should be considered when establishing normal values for Arabian type horses.

0040

SUCCESSFUL TREATMENT OF DERMATOGRAPHISM WITH CETIRIZINE IN A HORSE. A.J. Van den Brom-Spijrenburg¹, M.J.P. Theelen¹, M.M. Sloet van Oldruitenborgh-Oosterbaan¹. ¹Department of Equine Sciences, Faculty of Veterinary Medicine, Utrecht University, Yalelaan 112, 3584 CM Utrecht, the Netherlands

Dermatographism is a common condition in humans. Local pressure applied to the skin triggers mast cells to release histamine, causing pruritic urticaria on the pressure-spots. In horses only one case of dermatographism was reported in 1989 describing an 8-year-old Thoroughbred gelding.

This case report is about a 4-year-old Quarter horse gelding that was presented with the complaint of pressure induced urticaria. When pressure was applied to the skin non pruritic urticaria-like swelling was evident after approximately ten minutes and this lasted for approximately two to three hours. It was indeed possible to 'write' on the horse. On clipped skin the condition was less evident.

Based on extrapolation of human literature mast cell involvement was suspected, and the horse was treated with cyproheptadine (0.3 mg/kg q12 h). This showed to have some effect by reducing clinical signs. However, the horse developed side-effects consisting of ulceration of the gingiva and significant dullness. Therefore therapy was changed to cetirizine (0.2 mg/kg q12 h). With this treatment no side-effects were noticed and dermatographism was no longer present. After a few months the treatment was discontinued and clinical signs did not reoccur. Presently it is still too early to determine a possible seasonal influence.

This case report shows that dermatographism in horses occurs and can be treated successfully with cetirizine.

0041

ULTRASOUND-GUIDED PERCUTANEOUS TRANSCATHETER DELIVERY OF AN OCCLUSION DEVICE IN TWO HORSES. G.van Loon¹, D. De Clercq¹, A. Decloedt¹, S. Ven¹, N. Van Der Vekens², M. Jordana², Y. Taeymans³, D. De Wolf³. ¹Departments of Large Animal Internal Medicine, Ghent University, Belgium, ²Surgery and Anaesthesiology, Faculty of Veterinary Medicine, Ghent University, Belgium, ³Department of Pediatrics and medical genetics, Faculty of Medicine and Health Sciences, Ghent University, Belgium

In human and small animal medicine, intracardiac or vascular shunt closure is often performed with an occluder, delivered via a catheter. Fluoroscopy is mandatory to guide the procedure. In adult horses, fluoroscopy cannot be used for cardiac imaging due