

CONTENT PAGE OF THE ISSUE FEBRUARY OF 2009

ALMA MATER

P. Laczay: Food hygiene, food-chain safety: tasks and challenges for the veterinary education / 67

EQUINE

A. Haubold, H. Gehlen: Thrombophlebitis and thrombosis in horses / 73

BOVINE

L. Szeredi, T. Labossa, M. Tenk, V. Pálfi, D. Rigó, T. Molnár: Pneumonia caused by *Mycoplasma bovis*, *Pasteurella multocida*, and *Mannheimia haemolytica* in fattening bulls / 78

SMALL ANIMALS

Zs. Lipka, Á. Máthé: Frequent clinical signs, rare diagnosis: Addison's disease in dogs. Case report / 86

Cs. Heteyi, Cs. Jakab, M. Mándoki, T. Németh: Chronic scirrhous eosinophilic gastritis in a seven-years old male mixed bred dog. Clinico-pathological case report / 91

W. Osthold, R. Wagner: Treatment strategy of otitis externa in dogs and cats: diagnosis and medical treatment / 100

TOXICOLOGY

I. Szatmári, P. Laczay: Occurrence and fate of veterinary medicines in the environment. Review article / 106

J. Lehel, J. Déri, P. Laczay: Carbofuran poisoning in birds 1. Literature review / 115

PET ANIMALS

A. Bölcskey Molnár, J. Gál, O. Jacsó, K. Jánosi, E. Adrián: *Foleyella furcata* (Linstow, 1889) infection and chronic inflammation in the ovaries caused by *Salmonella* Uzaramo in imported Senegal chameleon (*Chamaeleo senegalensis*). Case report / 125

LETTER TO THE EDITOR

Death of a Hungarian pointer caused by a molluscicide containing metaldehyde as active ingredient (*B. Egrí*) / 72

Cardial rhabdomyosarcoma in a golden retriever (*Cs. Jakab*) / 125

„Prometheus livers” (*I. Csapó*) / 126

P. Laczay:

FOOD HYGIENE, FOOD-CHAIN SAFETY: TASKS AND CHALLENGES FOR THE VETERINARY EDUCATION

Based on his lecture at the conference of the Hungarian Society on Zoonoses in 2008, the author gives a brief summary of the main changes in food hygiene

during the past few years that resulted in a significant increase in its tasks and material of knowledge, providing also a big challenge for the veterinary education. The author also presents the main characteristics of food hygiene education at the Faculty of Veterinary Science of the Szent István University, outlining the changes made or planned in the educational program, including its content, methodology and share in the veterinary curriculum, in order to meet the new challenges.

L. Szeredi – T. Labossa – M. Tenk – V. Pálfi – D. Rigó – T. Molnár:

PNEUMONIA CAUSED BY MYCOPLASMA BOVIS, PASTEURELLA MULTOCIDA, AND MANNHEIMIA HAEMOLYTICA IN FATTENING BULLS

On a feedlot cattle farm, five bulls died between the 14th and 30th days following their arrival after a long-lasting transport. Two animals died showing respiratory clinical symptoms, whereas the other three died suddenly, without any clinical symptom. *Mycoplasma (M.) bovis* induced pneumonia complicated with Pasteurellaceae infection was diagnosed in all cases. Using immunohistochemistry assay (IHC), Pasteurellaceae were detected only in the areas with fibrinosuppurative or purulent bronchopneumonia, while *M. bovis* was observed in areas with fibrinosuppurative pneumonia or purulent bronchopneumonia and also in areas of caseous necrosis. Bovine respiratory syncytial virus was detected with IHC in one case, while parainfluenza 3 virus was isolated from the lung in another case. In two cases *Pasteurella multocida*, in one case *Mannheimia haemolytica* and in another case *M. bovis*

was isolated from the lungs. Other pathogens (bovine herpesvirus type 1, bovine virus diarrhoea virus, respiratory coronavirus, type A influenza virus or chlamydiales) were not detected with IHC. According to the authors' experience, IHC is a good alternative for detecting *M. bovis* compared to the bacteriological culture. IHC is also useful for the detection of Pasteurellaceae infection in those cases where fibrinosuppurative or purulent pneumonia characteristic for the infection is present but the bacterium cannot be cultured.

Zs. Lipka – Á. Máthé:

FREQUENT CLINICAL SIGNS, RARE DIAGNOSIS: ADDISON'S DISEASE IN DOGS. CASE REPORT

The authors present a rare endocrine condition, in the dog Addison's disease. A clinical case is discussed, detailing the etiology, diagnosis and treatment of the disorder. Addison's disease (hypoadrenocorticism) develops if more than 90% of the adrenal cortex is damaged. The symptoms are varying, and usually not specific for the disease: the patient may be examined in acute hypovolaemic shock (Addisonian crisis), or in other cases the condition is more chronic with vomiting and diarrhoea, sometimes polyuria, polydipsia. The most important supplementary examinations are to measure the sodium/potassium ratio and the ACTH stimulation test. The key points of therapy are replacement of missing adrenocortical hormones, and in Addisonian crisis intensive fluid therapy with physiologic saline infusion.

Cs. Heteyi – Cs. Jakab – M. Mándoki – T. Németh:

CHRONIC SCIRRHOUS EOSINOPHILIC GASTRITIS IN A SEVEN-YEAR OLD MALE MIXED BRED DOG. CLINICO-PATHOLOGICAL CASE REPORT

The owner asked for the throughout checkup of a seven-year-old male mixed German shepherd breed dog. The anamnesis was long lasting periodic vomiting. Prior to the first examination at our clinic the dog lost his appetite, beside the vomiting also bloody diarrhea and weight loss occurred. Then ultrasound examination of the abdominal cavity was performed. The wall of the stomach was extremely thickened, six times of the normal measurements (*Figure 1*). After the consultation about the clinical findings, the owner decided to ask for laparotomy despite the possible malignant cause and the bad prognosis. Midline laparotomy was performed, which revealed remarkable thickening of the wall of the *antrum pylori*, as well as the narrowing of its lumen (*Figure 2* and *3*). The removed part of the stomach was submitted to histopathological examination (*Figure 4*). The gastric wall was 2–3 cm deep, composed of grayish white, significantly moist fibrous tissue (*Figure 5*). From the peritoneal surface mild vascular injection, edema and point-wise hemorrhages could be seen. The regional lymph node was enlarged. The cut surface was homogenous, grayish red, finely uneven and moist. The light microscopic examination revealed notably thickened mucosal membrane, significant intra- and extravascular infiltration eosinophil granulocyte (*Figure 6*), fibroblasts and low number of other inflammatory cell types in the propria. In all

sections collagen fiber proliferation, blood vessel dilatation accompanied with endothel cell swelling, and inflammatory edema was recognized. Besides these findings multiplex follicular hyperplasia, lymph vessel dilation, and destruction of the glands were visible in the lamina propria. In the thickened mucosal membrane notable fibroblast proliferation and collagen fiber accumulation (desmoplasia) was diagnosed (*Figure 7*). The well vascularized connective tissue was infiltrated focally, diffusely and also perivascularly with large number of eosinophil granulocytes. Inflammatory and multiplex pathological neo-angiogenesis was recognized. Fibrinoid necrosis (*Figure 8*), hyaline thrombus formation, eosinophilic vasculitis (*Figure 9*) and adventitial cell proliferation could be identified in the wall of certain small and medium arteries of the inter-muscular and sub-serosal area. Beside the active inflammatory sites, dens fibrous areas were also recognizable, which were poor in cells. The chronic inflammatory fibrous tissue infiltrated the myogastrium, resulting in the distorsion of the normal tissue structure, vacuolar degeneration and necrosis of some muscle fibers. The vegetative neurons of the inter-muscular connective tissue and the plexus myentericus were destructed by the eosinophil granulocytic infiltration. In the perigastric regional lymph node chronic eosinophil granulocytic inflammation was detected, and similar changes were seen as in the arteries of the different gastric regions. The slides for the immunohistochemical reaction were deparaffinized in xylene and graded ethanol. After antigen retrieval the deparaffinized sections were treated with primary antibodies including *claudin-5*; *lyzosome*; *serotonin*,

vimentin, *cytokeratin* and *Ki-67*. The endothelial cells of the inflammatory neovasculatura, and of the preexisting vessels in the propria-, submucosa layers, and of the dilated lymphatics of the stomach showed an intense membrane positivity for *claudin-5* tight junction protein (*Figure 10 and 11*). In these vessels the membran reactions were linear-continual. The intact superficial epithelial cells of the stomach and the intact epithelial cells of the glands showed intense lateral membrane positivity and the parietal cells of the fundic glands showed granular cytoplasmic immunoreactivity for *claudin-5* (*Figure 12*). The granules of the eosinophil granulocytes showed positivity for *lyzosome* and for serotonin. The mast cells showed a granular cytoplasmic positivity for *serotonin*, and negativity for *lyzosome*. The mesenchymal cells including fibroblasts of the intact propria, and of the chronic inflammation, leiomyocytes, endothelial cells of the physiological and pathological vessels, and the inflammatory cells showed strong cytoplasmic positivity for *vimentin*. The epithelial cells of the stomach and the eosinophil leukocytes showed strong *cytokeratin* positivity (*Figure 13*), but the other physiological and pathological mesenchymal cells were negative for this epithelial marker. After one month therapy after following the operation the animal did not show any clinical signs.

I. Szatmári – P. Laczay:

OCCURRENCE AND FATE OF VETERINARY MEDICINES IN THE ENVIRONMENT. REVIEW ARTICLE

The active substances of veterinary medicines excreted unchanged or as metabolite(s) can persist in the environment for shorter or longer time, potentially influencing its living flora and fauna. In the publication the authors review the relevant legislative rules for ecotoxicological impacts of veterinary medicines, the rate of their use and the factors that determine and influence their occurrence and fate in the environment, including the excretion characteristics and the potential pathways into the environment, their behaviour in the environment (e.g. kinetic and degradation properties), the effect of manure aging on their degradation and certain effects of these substances on the nature.

J. Lehel – J. Déri – P. Laczay:

CARBOFURAN POISONING IN BIRDS. 1. LITERATURE REVIEW

The authors write about the primary and secondary poisonings caused by carbofuran in birds, involving the possible poisonous sources, toxicity, disposition, mechanism of action, clinical signs, diagnosis and principles of treatment.

A. Molnár Bölcskey – J. Gál – O. Jacsó – K. Jánosi – E. Adrián:

FOLEYELLA FURCATA (LINSTOW, 1889) INFECTION AND CHRONIC INFLAMMATION IN THE OVARIES CAUSED BY SALMONELLA UZARAMO IN IMPORTED SENEGAL CHAMELEON (CHAMAELEO SENEGALENSIS). CASE REPORT

The authors in this article describe degeneration of the ovarian follicles and parasitic infection caused by a nematode, *Foleyella furcata* in senegal chameleon (*Chamaeleo senegalensis*). *Salmonella* Uzaramo bacteria were cultured from the degenerated ovaries of the animal.