

CONTENT PAGE OF THE ISSUE NOV OF 2008

EQUINE

B. Tóth, P. S. Marsh, P. Tóth, N. Nógrádi: Equine pleuropneumonia. Literature review and own experiences. Part 2. Treatment, complications, discussion / 643

B. Zurovacová, J. Candrák, R. Židek, I. Jiskrová, J. Buleca Jr., L. Zöldág: BLUP-animal model for the estimation of the breeding value of show jumping horses / 651

RUMINANTS

L. Szeredi, T. Csabai, L. Makrai, Sz. Jánosi: Immunohistochemical detection of *Bibersteinia* (*Pasteurella*) *trehalosi* in a lamb died of acute systemic infection / 658

POULTRY

R. Glávits, É. Ivanics, Cs. Nemes, Á. Dán, É. Kaszanyitzky, Pné Samu, Á. Thuma, A. Beregszászi, A. Simon, S. Aladics, P. Berta, M. Dobos-Kovács: Examinations and observations about intestinal spirochaetosis (brachyspirosis) in geese, ducks and domestic fowls, compared to swine dysentery / 663

SMALL ANIMALS

Cs. Jakab, A. Arany-Tóth, P. Csébi, A. M. Szász, M. Rusvai, P. Gálfi, J. Kulka:

Malignant peripheral nerve sheath tumour derived from nervus hypoglossus in a dog. Case report / 671

M. Kornberg: Disorders of hearing and balancing / 680

G. Viefhues: Osteoarthritis in cats – an underestimated problem / 683

PET ANIMALS

J. Mátyus, M. Mándoki, J. Gál: Investigations of the causes of death in African grey parrots (*Psittacus erithacus*) between 1 January 1999 and 1 June 2008 / 688

LABORATORY DIAGNOSTICS

G. Szita, B. Gyetvai, J. Szita, M. Gyenes, N. Solymosi, L. Soós, A. Hajós, P. Tóth, S. Bernáth: Synthetic culture media evaluated for the detection of coliform bacteria in milk cheese and egg melange. Secondary communication / 694

INSTRUMENTAL DIAGNOSTICS

A. Arany-Tóth, P. Csébi, H. S. Jensen, T. Németh: Cisternal pressure measurement in dogs during myelography. Preliminary study / 698

B. Tóth – P. S. Marsh – P. Tóth – N. Nógrádi:

EQUINE PLEUROPNEUMONIA. LITERATURE REVIEW AND OWN EXPERIENCIES. PART 2. TREATMENT, COMPLICATIONS, DISCUSSION

In the second part of article the authors summarize the treatment, prognosis, and complications of equine pleuropneumonia. The most important part of the treatment is the aggressive antibiotic therapy, removal of necrotic tissue, bacteria and toxins via an indwelling thoracic drain, reducing pain and inflammation, and correction of dehydration and electrolyte abnormalities. Alleviation of the respiratory distress, prevention and treatment of the complications are essential, too. The most common complications are pneumothorax, pulmonary and extrapulmonary abscessations, bronchopleural fistula, and systemic complications. The prognosis for survival is usually good or uncertain, and future athletic career is uncertain.

B. Zurovacová – J. Candrák – R. Židek – I. Jiskrová – J. Buleca Jr. – L. Zöldág:

THE BLUP–ANIMAL MODEL FOR THE ESTIMATION OF THE BREEDING VALUE OF SHOW JUMPING HORSES

The aim of the authors' work was to estimate the performance and genetic parameters of show jumping horses, when breeding values were estimated by BLUP–animal model. These values were estimated on the base of sport results of show jumping during the seasons 2002–2006. Genetic parameters and breeding values were estimated for 1.389 horses and their ancestors (total 7.618 horses). Genetic evaluation was fixed and random effects. In the genetic model the competition, the year of competition, the rider, the sex and age of horses were used as fixed effects. The effect of animal and effect of the horse

environment were considered as random effects. Breeding values were estimated from –1,676 to 3,087 for average rate of convert points.

BLUP–animal model is used in all advanced horse breeding countries for breeding value estimation and it can complete an important but missing part of horse breeding in Slovak Republic if a required data base of information will be established (like in Hungary).

L. Szeredi – T. Csabai – L. Makrai – Sz. Jánosi:

IMMUNOHISTOCHEMICAL DETECTION OF *BIBERSTEINIA (PASTEURELLA) TREHALOSI* IN A LAMB DIED DUE TO ACUTE SYSTEMIC INFECTION

Systemic *Bibersteinia (Pasteurella) trehalosi* infection was diagnosed in a weaned lamb suddenly died in the late spring. The diagnosis was based on the isolation of the bacterium from the affected organs, and the evidence of gross pathological and histological lesions. The bacterium was detected in the lamb first with immunohistochemical method by using rabbit hyperimmune serum raised against *B. trehalosi* serotype 3. Bacteria were observed extracellularly in large number in the necrotic foci of liver, and in necrotic areas of tonsil and nasal mucosa. The bacteria were demonstrated in large number in the cytoplasm of inflammatory cells situated in the alveoli and bronchioli in the lung. The bacteria were present in low amount in the spleen, mediastinal lymph node, kidney and ileum, while they were absent in the heart muscle and brain.

R. Glávits – I. Ivanics – Cs. Nemes – Á. Dán – É. Kaszanyitzky – Pné Samu –
Á. Thuma – A. Beregszászi – A. Simon – S. Aladics – P. Berta – M. Dobos-
Kovács:

**EXAMINATIONS AND OBSERVATIONS ABOUT INTESTINAL SPIROCHAETOSIS
(BRACHYSPIROSIS) IN GEESE, DUCKS AND DOMESTIC FOWLS, COMPARED
TO SWINE DYSENTERY**

The authors, on the basis of scientific literature and their own diagnostic results, summarise important knowledge about intestinal spirochaetosis in different poultry species (turkeys, geese, ducks, domestic fowls), compared to swine dysentery.

Causative role of spirochaetas in swine dysentery was confirmed in 1970s, and they were also detected in domestic fowl and turkey flocks from diseases with diarrhoea in countries of developed poultry farming (USA, Great Britain, Australia). In 1990s severe necrotic colitis with deaths in connection with spirochaetas was described in American ostrich (*Rhea americana*). From water fowl species, spirochaetas were detected from domestic duck flocks and wild ducks free of clinical signs, abroad, while later Hungarian authors reported first time, also internationally, spirochaetosis in geese with fibrinous-necrotic colitis and severe nephropathy. The authors carried out examinations in 28 Hungarian goose, 3 duck and 3 fowl flocks. Chronic diarrhoea with clinical signs occurred in broiler parent flocks at egg-laying period, with reoccurrence in spite of treatment. Mortality has not increased significantly, diarrhoea affecting 60% of flocks caused severe contamination of the litter, environment

and eggs, later weakening of the animals, decrease in egg production and hatchability and leg paresis and necrosis of the skin of sole.

In duck and goose flocks diseased in intestinal spirochaetosis – often at the end of egg-laying period – mortality gradually increased without visible signs of diarrhoea. Post mortem examination revealed fibrinous or necrotic inflammation of the caecum, colon and rectum, and chronic nephropathy often with fibrosis, and in the ducks arthritis of the tarsus and toes.

The diagnosis was based on epidemiological data, clinical signs and pathological and pathohistological changes, demonstration of brachyspiras in the changed intestinal mucosa by silver impregnation or immunohistochemical method, culture on selective medium, and identification by biochemical tests and sequence analysis. In goose flocks *Brachyspira alvinipulli* was the most frequently detected. From fowl flocks 8, and from duck flocks 21 *Brachyspira* strains were isolated, from which *Brachyspira hyodysenteriae* (and in duck flocks *B. pilosicoli*, too) was dominant.

Cs. Jakab – A. Arany-Tóth – P. Csébi – A. M. Szász – M. Rusvai – P. Gálfi – J. Kulka:

MALIGNANT PERIPHERAL NERVE SHEATH TUMOUR DERIVED FROM NERVUS HYPOGLOSSUS IN A DOG. CASE REPORT

The authors describe a case of malignant peripheral nerve sheath tumour (MPNST) which derived from a ride side n. hypoglossus in 5 year old Hungarian pointer male. The dog was anorectic in antecedent weeks, coughed

sometimes, often slavered and vomited many times. Upon physical examination medially from the right branch of the mandible a cigar-like brief bundle with a longitude of 6–7 cm was noted. In the course of operative exploration of the fabric progeny 2 cm thick, 5 cm of his long reel-like swelling on the right side of the n. hypoglossus was observed (*Figure 1*). The tumour sample was fixed in 8% neutral buffered (in PBS, pH 7.0) formalin solution for 24 hours at room temperature (*Figure 2*), dehydrated in a series of ethanol and xylene and embedded in paraffin. The 3–4 µm thick sections were routinely stained with hematoxylin and eosin. Fusiform or spindle cells arranged in densely or loosely sweeping fascicles, interlacing whorls, or storiform patterns were predominant. Some areas were composed of spindle or fusiform cells with high cellularity designated as Antoni A pattern, and the others comprised a hypocellular abundant mucinous or myxoid matrix with occasional round cells, termed Antoni B pattern. More than four mitotic figures per high-power field were found in the tumour (*Figures 3–6*). Tissue of MPNST was examined by immunohistochemically. For the primary antibodies, mouse monoclonal antibodies against neuron-specific enolase (NSE) (1:400; DAKO), S-100 protein (1:100; DAKO), glial fibrillary acidic protein (GFAP) (1:100; DAKO), vimentin (1:100; DAKO), cytokeratin (CK) (1:100; DAKO), desmin (1:50; DAKO), Melan-A (1:25; DAKO), claudin-5 (1:100; Zymed), Ki-67 (1:100; DAKO) and myoglobin polyclonal rabbit antibody (1:100; DAKO) were used. Immunohistochemical staining was performed using the streptavidin-peroxidase procedure: antigen-bound primary antibody was detected using

standard avidin-biotin immunoperoxidase complex (DAKO LSAB2 Kit), the chromogen substrate was 3,3 – diamino-benzidine tetrahydrochloride (DAB substrate-chromogen; DAKO, Denmark) in each case. Mayer's hemalaun was used for counter-staining. The number of positive cells was calculated as follows: 10 randomly selected areas per slide were analyzed using 200x magnification with 100 cells counted in each field. The scoring standardized for each group was as follows: + + + + = 50% <, + + + = 30 to 50%, + + = 10 to 30%, + = 0 to 10%, and – (negative) = 0% of the cells showing positive reactions. Immunohistochemically the neoplastic cells showed a cytoplasmic positivity for NSE (scoring: + + +; 30–50% tumour cell positivity) (*Figure 7*), cytoplasmic positivity for S-100 protein (scoring: + +; 10 – 30% tumour cell positivity) (*Figure 8*), and again cytoplasmic positivity for vimentin (scoring: + + + +; 50%< tumour cell positivity) (*Figure 9*). The tumour cells were negative for GFAP, cytokeratin, desmin, myoglobin, Melan-A and claudin-5. The proliferation index of MPNST, based on Ki-67 antigen was 34–37% (*Figure 10*). The neoangiogenesis was quantified by immunohistochemical evaluation of microvessel density (MVD) using claudin-5 as marker for vascular endothelium in MPNST (*Figure 11*). Computer image analysis was used to measure the intratumoural MVD. For claudin-5, mean MVD was 3,62 pixel % per x 200 fields (range 3,26–4,51).

Because of adverse procession, the dog was euthanized in accordance to the animal welfare legislation and recommendations. To the authors' knowledge, this is the first report of the canine malignant peripheral nerve sheath tumour

which derived from n. hypoglossi in canine.

J. Mátyus – M. Mándoki – J. Gál:

**INVESTIGATIONS OF THE CAUSES OF DEATH IN AFRICAN GREY PARROTS
(*PSITTACUS ERITHACUS*) BETWEEN 1 JANUARY 1999 AND 1 JUNE 2008**

The authors investigate the causes of death in African grey parrots presented for diagnostic dissection at the Department of Pathology and Forensic Veterinary Medicine of the Faculty of Veterinary Medicine, Szent István University in the past nine and a half years. In the given period 29 female and 28 male (all together 57) parrot carcasses were delivered at the Department. 35% of the birds were younger than one year of age. The most frequent causes of death were diseases of the proventriculum and the gizzards (23%), followed by liver (20%), lung (19%) and intestinal diseases (17%). Proventricular dilatation syndrome was frequently found in both sexes, either in young or very old specimens. From liver degenerations, dystrophy caused mostly by eating food contaminated with mycotoxins occurred frequently. From lung disorders, lung mycosis was frequent in the birds examined by the authors. From parasites, both tape- and roundworms were occasionally present.

A. Arany-Tóth – P. Csébi – H. S. Jensen – T. Németh:

**CISTERNAL PRESSURE MEASUREMENT IN DOGS DURING MYELOGRAPHY.
PRELIMINARY STUDY**

Neurological complications are quite common in dogs after myelography. In the present study the authors hypothesized, that beside the well know neurotoxic effect of contrast media the volume-loading effect of injected fluid can also contribute to side effects due to increased intracranial pressure. Since no relevant data was found in the literature, the authors aimed to perform a clinical trial of a noninvasive pressure monitoring method and to gather baseline information by recording cisternal pressure values in clinical myelography patients.

Ten dogs with clinical signs of spinal disease underwent routine myelography. In nine dogs, injection of contrast medium was performed with a syringe pump. The pressure in the connecting tube system was monitored by a digital pressure sensor. Pressure values 10 seconds after the injection were 90–65 mm Hg (mean \pm SD: 130 \pm 42 mm Hg), then decreased exponentially into a range of 30–45 mm Hg during the next 2–4 minutes. In one case the pressure was measured directly in the cisterna magna with a second needle/sensor. These values corresponded well with the ones measured indirectly.

The recorded pressure values markedly exceeded the normal subarachnoid pressure range, making the volume loading effect of contrast medium as an etiological factor very probable.

Clarification of the relationship between pressure values and various clinical data warrants further study. Another goal for the future is to investigate the possible ways of reducing pressure during injection. However, the applied

method proved feasible under clinical circumstances.