University of Agronomic Sciences
and Veterinary Medicine of Bucharest

Faculty of Veterinary Medicine

International Conference

"Agriculture for Life, Life for Agriculture"

BOOK OF ABSTRACTS

Section 4

VETERINARY MEDICINE

2024
Bucharest

University of Agronomic Sciences
and Veterinary Medicine of Bucharest

Faculty of Veterinary Medicine

International Conference
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Book of Abstracts

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2024
Bucharest

PUBLISHERS:

University of Agronomic Sciences and Veterinary Medicine of Bucharest, Romania - Faculty of Veterinary Medicine
Address: 105 Splaiul Independentei, District 5, Zip code 050097, Bucharest, Romania
Phone: + 40 21 318 04 69, E-mail: veterinarymedicinejournal@usamv.ro,
Webpage: www.fmvb.ro

CERES Publishing House
Address: 29 Oastei Street, District l, Bucharest, Romania
Phone: + 40 21 317 90 23, E-mail: edituraceres@yahoo.com,
Webpage: www.editura-ceres.ro

To be cited: BOOK OF ABSTRACTS - Section 4: VETERINARY MEDICINE, 2024

ISSN 2457-323X
ISSN-L 2457-323X

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SUMMARY

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CLINICAL SCIENCES

ANIMAL PRODUCTION, PUBLIC HEALTH AND FOOD QUALITY CONTROL

VETERINARY EDUCATION

EXPERIMENTAL MEDICINE

MISCELLANEOUS

FUNDAMENTAL SCIENCES

STUDY ON THE MORPHO-TOPOGRAPHY AND VASCULARIZATION OF THE PAROTID GLAND IN SMALL RUMINANTS

Sorina-Andreea MIHAI, Adela Ioana MUSTĂȚEA, Ioan CIOAREC-LUPAN, Gabriel PREDOI

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Abstract

The parotid gland is one of the major salivary glands present in domestic mammals, mainly developed in herbivores. In the specialized literature, there are studies related to the size and development of the gland in ruminants, analyzing correlations between diet and parotid gland morphometry. The parotid region is an area of interest for clinicians, given the traumatic lesions or tumor formations that can occur in this region and which also lead to pathologies of the large salivary glands. Despite the low incidence of salivary gland diseases in most domestic animal species, inflammatory processes may occur, and medicamentous treatment may be associated with surgical treatment. The study focused on aspects of the morpho-topography and vascularization of the parotid gland in small ruminants, also describing its rapport with vascular-nervous and lymphatic structures. Among the most important differences and individual variations observed are differences in gland morphometry and variations in the topography of the parotid duct.

Key words*: parotid duct, parotid gland, small ruminants.*

MORPHOLOGICAL PARTICULARITIES OF THE JACKAL SKULL (*CANIS AUREUS*) - CASE STUDY

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Abstract

This study aims to describe the morphological characteristics of the jackal skull. The jackal (Canis aureus) belongs to the Order Carnivora, Family Canidae, and is widespread in northern Africa and southern Europe. In Romania, the number of specimens of this species has dramatically increased in recent years because the jackal has no natural predators, and wolf specimens are rare. The skull features are valuable elements of species identification. Data on skull morphology in jackals in the specialized literature are few and lacking in detail. A skull from an adult specimen from the Anatomy discipline collection was used for the study. The following conclusions emerged: the external sagittal crest is very high; the paracondylar processes are attached to the tympanic bulla; the foramen lacerum is absent; the presence of 2-3 lesser palatine foramina, placed aboral to the greater palatine foramen; the supraorbital foramen is absent; on the medial face of the angular process there is a reduced fossa.

Key words*: jackal, lesser palatine foramina, skull.*

DOGS` HAIR AND TISSUES AS BIOINDICATORS FOR THE ASSESSMENT OF HEAVY METALS POLLUTION

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Abstract

The study aimed to examine the accumulation pattern and concentrations of heavy metals and minerals in different tissues of dogs (hair, kidney, brain, liver). Additionally, it explored the feasibility of utilizing these samples for identifying potential environmental impacts associated with these pollutants. ICP-MS was used to analyse the samples for concentrations of heavy metals. The obtained values were assessed considering various factors that could impact the levels of minerals and metals in the organisms of animals, including age, gender, and habitat. Generally, heavy metals recorded higher levels in the hair, liver and kidneys of dogs living outdoors compared to the ones living indoors. Of all types of samples lead had the highest levels in female dogs, in dogs younger than 5 years and in those living outdoors. The results also show that hair, among all samples, plays a significant role for the evaluation of heavy metals pollution.

Key words*: heavy metals, hair, liver, kidney, brain, dogs, ICP-MS.*

ETHOLOGICAL STUDY REGARDING THE DIPSIC BEHAVIOUR CHANGES DURING THE GESTATION PERIOD IN DOMESTIC CATS

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Abstract

The body`s water requirement, under basal conditions, is directly proportional to the metabolic processes' intensity, therefore, we can correlate gestation, as a metabolically demanding period, with the physiological variations of the water requirement, which will translate into changes of the dipsic behaviour in domestic cats. For this ethological study, we analysed a group of 8 clinically healthy females, monitoring their dipsic behaviour in the second part of the gestation period (after day 35), for 5 consecutive days. Based on the individual values obtained, the average group values of the studied parameters were calculated and statistically compared with the mean results of a group of 10 clinically healthy adults. Thus, in the case of the pregnant felines, there was observed a statistically significant increase ($p<0.05$) of the average number of waterings/24 hours and average duration/watering session, compared with the values of the control group. Also, a distinctly significant increase ($p<0.01$) of the dipsic behaviour manifestation duration/24 hours was observed, as a result of the simultaneous increase of the other two previously mentioned parameters.

Key words*: dipsic behaviour, gestation, domestic cats.*

CHARACTERIZATION OF THE METABOLIC RESPONSE OF LOHMANN BROWN LAYERS TO FEEDING DIETS WITH DIFFERENT PROTEIN LEVELS

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Abstract

40-wk-old Lohman Brown layers were used in this study. Three diets with different levels of crude protein allowed the consumption of 15.38, 13.58 and 11.78 g/d/capita, respectively. The experimental feeding lasted four weeks. Laboratory determinations were performed at the end of the experimental period. Triglycerides, total cholesterol, GOT, GPT and g-GGT transaminases, HDL-cholesterol, protein, albumin, g-globulins and uric acid were determined in the blood serum. Nitrogen intake, nitrogen excretion in manure, nitrogen retention in the body and in the egg were also determined. Thus, following four weeks of experimental feeding, serum transaminases and HDL-cholesterol remained within normal limits. An increase of serum values presented the triglycerides and the uric acid. As a consequence of the decrease in daily nitrogen intake, nitrogen excretion and nitrogen retention as total in the body decreased while nitrogen excretion as total in the egg remained unmodified.

***Key words**: Lohmann Brown layers, diet protein level, metabolic response.*

RESEARCH ON THE VALUES OF SOME ELECTROCARDIOGRAPHIC PARAMETERS IN DOGS, ACCORDING TO BREED

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Abstract

In this study we recorded electrocardiograms in dogs of different breeds, all the studied patients were clinically healthy, without cardiac pathology. After analyzing the ECGs, we found that the large breed patients presented the highest amplitude of the P wave. As concerning the R wave amplitude, higher values were observed both in small (Bishon) and large (German Shepherd) breed dogs. Regarding the T wave amplitude, we observed higher values in small (Yorkshire terrier) and medium (Dachshund) breeds, while large breed (German Shepherd and Golden retriever) patients presented the lowest values. Analyzing the duration of the main ECG components, we found that the P wave had the shortest duration (0.02 ± 0.01s) in Beagles, and the longest (0.08 ± 0.04s) in Golden Retrievers. The PR interval had the shortest duration (0.04 ± 0.01s) in Beagles, and the longest (0.10 ± 0.02s) in mixed breed patients. The QRS complex also had the shortest duration (0.02 ± 0.01s) in Beagles. The QT interval had the shortest duration (0.16 ± 0.01s) in Yorkshire Terriers, while the T wave had the same duration (0.04 ± 0.01s) in all patients, regardlees of the breed.

Key words*: electrocardiogram, amplitude, duration, dogs, breed.*

EFFECTS OF PRE-LAY DIETARY PROTEIN LEVELS AND ENERGY ON SUBSEQUENT PERFORMANCES IN LOHMANN BROWN LAYERS

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Abstract

The aim of this work was to find out the effects of diets with different levels of metabolizable energy (ME) and protein administered during the pre-lay period on the subsequent productive performances of the Lohmann brown hybrid. A low energy diet (2,690 kcal/kg) and a high energy diet (2,820 kcal/kg were formulated, each one with two variants of protein levels: low (15%) and high (17%). These diets were applied from 18 to 23 weeks of age. From 23 weeks of age, all birds were fed a diet containing 2,700 kcal/kg and 15.6% protein. The administration of the four diets allowed the identification of a higher protein content of the egg albumen from hens fed with high protein diet and high EM diet, and a higher weight of eggs in hens fed on high EM diets. Also, the hens fed high energy diet started the egg-laying cycle earlier and performed higher egg-laying levels than the other experimental groups. The obtained results allow the optimization of protein and EM levels in the diet according to the requirement of this Lohmann hybrid.

Key words*: Lohmann hybrid, metabolic energy, production performance, egg features.*

CLINICAL SCIENCES

ACUTE CONGESTIVE HEART FAILURE SECONDARY TO TRANSIENT MYOCARDIAL THICKENING IN A CAT: CASE REPORT

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Abstract

A one-year-old Scottish fold male cat was referred to the Cardiology department, presenting signs of congestive heart failure one week after anaesthesia. Echocardiography revealed an enlarged left atrium with the left ventricular wall thickening and confluent "B lines". Cardiac biomarker troponin I was markedly elevated. The cat was discharged home after an intensive hospitalization treatment that led to progressive clinical improvement. It was reevaluated after two months, and a physical examination, echocardiographic measurements, and cardiac troponin were normalized. The diagnosis of transient myocardial thickening was considered based on the presence of a trigger possibly related to myocardial injury and the patient's history, cardiological, and laboratory data. Transient myocardial thickening is a relatively uncommon condition that mimics hypertrophic cardiomyopathy and describes a reversible left ventricular wall thickening. It usually appears in young cats with previous events. Transient myocardial thickening has a better prognosis in cats with congestive heart failure associated with it compared with hypertrophic cardiomyopathy. This case report describes a case of transient myocardial thickness with congestive heart failure, which returns to a case of normal cardiac features.

Key words*: feline, myocardial thickening, troponin I, echocardiography.*

CLINICAL, NEUROLOGICAL AND MAGNETIC RESONANCE ASPECTS IN MYELOMALACIA IN DOGS - 10 CASES

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Abstract

Clinical, neurological and magnetic resonance imaging (MRI) aspects are crucial for diagnosing and understanding myelomalacia in dogs. The medical records of a series of 10 cases form the Faculty of Veterinary Medicine from Bucharest were included in the study base on the history, clinical, neurological evaluation and magnetic resonance aspects. The clinical and neurological examination presentation of the cases vary depending on the location and severity of spinal cord damage. Common symptoms include weakness or paralysis in one or more limbs, loss of coordination, difficulty walking, pain, changes in posture. Magnetic resonance imaging (MRI) is a key diagnostic tool for assessing myelomalacia in dogs and provides detailed images of the spinal cord offering valuable insights into the condition. Base on the history, clinical, neurological and magnetic resonance aspects the casese of myelomalacia are divided into: traumatic (6), degenerative (3) and vascular (1) myelomalacia with location at the thoracolumbar spinal cord. In conclusion, the combination of clinical, neurological evaluation and magnetic resonance imaging is critical for diagnosing myelomalacia in dogs and guiding appropriate treatment.

Key words*: imaging diagnosis, MRI, myelomalacia, dog.*

DIFFERENTIATION OF FELINE INTESTINAL T-CELL LYMPHOMA FROM INFLAMMATORY BOWEL DISEASE BY POLYMERASE CHAIN REACTION FOR ANTIGEN RECEPTOR REARRANGEMENT (PARR)

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Abstract

Lymphoma is a very common malignancy in cats, classified in low-grade intestinal T-cell lymphoma and high grade intestinal T-cell lymphoma. The differentiation between inflammation and low-grade lymphoma is always a challenge. The study included 22 cats with digestive syndrome featured by recurrent vomiting and diarrhea which are also unresponsive to treatment. Full thickness intestinal biopsies from living animals and tissue samples from dead animals have been considered for routine cytopathological and histopathological diagnosis. Polymerase chain reaction for antigen receptor rearrangement (PARR) for T-cell CD3 region of the TCRγ chain was used to differentiate lymphoma from non-lymphoma lesions. Cytological and histological findings have been represented by a residual heterogeneous population consisting of neutrophils, eosinophils and small mature lymphocytes, to which is added a dominant contingent of small- to medium-sized or large lymphocytes and the mesenteric lymph nodes contain characteristic cells of incipient malignant lymphoid proliferation. PARR test discriminated 11 cases of T-cell lymphoma showing strong performance for discrimination of lymphoma from IBD.

Key words*: intestinal bowel disease, lymphoma, PARR.*

ASSESSMENT OF HEAVY METALS AND TRACE ELEMENTS IN HAIR SAMPLES FROM CATS WITH GASTROINTESTINAL LYMPHOMA

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Abstract

The link between heavy metals and gastrointestinal lymphoma in cats is an area of growing concern among researchers and veterinarians. The present study assessed the concentrations of some heavy metals and trace elements in cats with gastrointestinal lymphoma, by hair sample analysis, and to compared them with the elements' concentrations in clinically healthy cats. Hair samples were collected from clinically healthy cats (n = 10) and cats suffering from gastrointestinal lymphoma (n = 10). The samples underwent wet mineralization (with HNO_3 and HCl), with heavy metals and trace elements being evaluated by ICP-MS analysis. Statistical analysis was done using SPSS software. Heavy metals and trace elements were generally higher in cats with GI lymphoma. The median concentrations of Cr, As, and Se in cats with GI lymphoma were significantly higher ($p < 0.05$) compared to clinically healthy cats. Although this research found significantly higher concentrations of Cr in cats with gastrointestinal lymphoma, available studies present either no or weak evidence indicating that Cr can lead to GI lymphoma. Further research is needed to better understand the causes of this type of neoplasm in cats.

Key words*: cats, hair, heavy metals, trace elements, ICP-MS.*

COMPARATIVE DESCRIPTION OF HUMAN AND CANINE EXTRASKELETAL OSTEOSARCOMA (EOS): A PRELIMINARY IMMUNOHISTOCHEMICAL INVESTIGATION

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Abstract

Extraskeletal osteosarcoma is a rare malignant neoplasm affecting both humans and dogs, which arises primarily in the soft tissues with histological characteristics like primary skeletal osteosarcomas. There are various etiopathogenetic hypotheses, and especially in the human species, this form of tumor often arises within soft tissue subjected to injuries or radiation therapies treating other forms of primary neoplasms. The study's aim is to explore the expression of selected proteins in human and canine EOS. Several canine and human EOS slides were submitted to immunohistochemical analysis to study their expression of different markers such as: DDR1, RUNX2, and KPNA2. The described results of investigations performed using novel diagnostic and predictive markers such as collagen1, collagen3, collagen4, RUNX2, KPNA2, and DDR1 are presented in these papers. The preliminary experimental conclusions suggest an exciting new role of these markers in the biology of canine and human EOS. Further studies for a profound understanding of both canine and human EOS are recommended. More detailed knowledge of this infrequent type of tumor may provide additional prognostic parameters and reports for targeted therapeutic approaches.

Key words*: canine, extraskeletal osteosarcoma, expression, human, immunohistochemical markers.*

HEPATIC AND RENAL IMPAIRMENT IN ANTICOAGULANT RODENTICIDE POISONING

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Abstract

This paper aims to highlight the impairment of the renal and hepatic function in anticoagulant rodenticide poisonings. The study involves 40 cases taken from the archive of the Veterinary Emergency Hospital within the Faculty of Veterinary Medicine in Cluj-Napoca between 2017 - 2022, 7 cats and 33 dogs. This article collects important laboratory values, we elaborated a database to be able to diagnose, treat and evaluate the renal and hepatic status of these animals. For the hematology part a VetScan HM5 device was used, thrombocytopenia was found, the erythrocytes, haemoglobin and haematocrit had lower values. For the biochemistry part we used a PrimeVet device, we detected important changes in the level of glucose, lactate, total bilirubin, smaller changes in creatinine and urea. For the coagulation tests a Quickvet specialty analyser was used, the prothrombin time in 50% of the cases presented low values, 14% presented normal values, and in 36% had high values. In each case the partial thromboplastin activation time presented high values. We detected kidney insufficiency in 2 cats and 3 dogs, and liver problems in 2 cats and 8 dogs.

Key words*: rodenticide, intoxication, renal, hepatic.*

HEMATOLOGICAL AND BIOCHEMICAL INVESTIGATIONS IN CASE OF ACETAMINOPHEN ADMINISTRATION IN HORSES

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Abstract

Acetaminophen is one of the most commonly used analgesic agent for the relief of acute and chronic pain in humans. Equine analgesia poses a common challenge to clinicians, so acetaminophen can be considered as an alternative to common non-steroidal anti-inflammatory drugs used in horses. The purpose of this research was to observe the safety of treatment with acetaminophen, and it was carried out at the USAMV Cluj-Napoca. In order to initiate treatment with acetaminophen, a dose of 20 mg/kg was administered orally, once every 12 hours, for a period of 14 days, in two horses of approximately 500 kg, aged 16 and 17 years, from lipizzan breed. We adminitered the commercial product Paracetamol Terapia was used, a 500 mg acetaminophen tablets, for human use. The horses in this study were monitored throughout the treatment, from a clinical point of view, and as complementary examinations the gastric mucosa was monitored with gastroscopy. The haematological analyses were performed with the Abacus Junior Vet5, and for the biochemical analyses a Skyla vb1+ analyzer was used.

Key words*: acetaminophen, pain, anti-inflammatory drug, exams.*

MESH-ENHANCED SUTURES: A NOVEL APPROACH FOR TREATING COMPLETE ACHILLES TENDON RUPTURE IN DOGS

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Abstract

The Achilles tendon is the strongest and largest tendon and is commonly affected by traumatic rupture in dogs. This case report describes an original suture, utilizing a polypropylene mesh augmentation combined with a double 3-loop pulley pattern, to manage a complete and chronic rupture of the right Achilles tendon in a 6-year-old, male, mixed-breed dog. The initial assessment included a comprehensive orthopedic, radiographic and ultrasound examinations. Following an extensive debridement involving about ¼ of the length of the tendon, the structure was reconstructed using a combined technique with a double 3-loop pulley pattern and a polypropylene mesh. An external fixator was applied to support the tibiotarsal joint for 16 weeks, with biweekly adjustments to gradually reduce extension and enhance tendon strength. Appropriate anti-inflammatory and antibiotic treatments were prescribed for one month postoperatively. Biweekly ultrasonographic follow-ups up to eight months postoperative confirmed complete recovery, with the patient demonstrating weight-bearing and no signs of lameness or swelling. This case highlights a novel and effective mesh-enhanced suture in successfully treating a dog with traumatic, chronic, and complete tendon damage.

Key words*: common calcaneal tendon, Achilles tendon, polypropylene mesh, tendon repair, 3-Loop pulley suture.*

PERITONEOPERICARDIAL DIAPHRAGMATIC HERNIA IN A MINIATURE SCHNAUZER: CASE REPORT

Alina ȘTEFĂNESCU, Cristian Ionuț FLOREA, Crina Alexandra BOANCA, Andrei RĂDULESCU, Alexandru Bogdan VIȚĂLARU

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Abstract

A five-months-old female Miniature Schnauzer dog was referred with persistent vomiting and history of inappetence, lack of appetite, abdominal distention, tachypnea, and progressive weight loss. During clinical examination, the patient presented a defence reaction in the epigastric region upon deep palpation and auscultation of left side of the lungs found enhanced respiratory noises. Cardiac auscultation, revealed diminished heart sounds and intermittent borborygmi on the right hemithorax. At abdominal focused assessment with sonography in trauma, intestines were slightly distended by gas and liquid content and motility was reduced. The X-rays showed enlarged cardiac silhouette and abnormal topography of the intestinal mass, with the cranial displacement especially on the projection area of the right heart. The radiological aspect suggests a peritoneopericardial hernia with small intestine involvement. Peritoneopericardial hernia is a malformation which allows the protrusion of abdominal organs into the pericardial sac. Surgical repair was done by herniorrhaphy with a polypropylene suture material. The only treatment for peritoneopericardial hernias is surgical and the main tool for diagnosis is radiography. If found at an early age, peritoneopericardial hernias have a favourable prognosis.

Key words*: peritoneopericardial, hernia, dog, surgery.*

ALFAXALONE SEDATION FOR CENTRAL VENOUS CATHETERIZATION IN A DOG UNDERGOING HEMODIALYSIS: CASE REPORT

Cristian Ionuț FLOREA, Crina Alexandra BOANCA, Andrei RĂDULESCU, Alina ȘTEFĂNESCU, Alexandru Bogdan VIȚĂLARU

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Abstract

A 5 years old Shar Pei female, diagnosed with acute kidney injury was referred for hemodialysis therapy. The dog was admitted with lethargy, lack of appetite, severely weight loss, dehydration (7-10%) and pale mucous membranes. To prevent exacerbation of preexisting comorbidities, in order to sedate a renal patient, a safe anesthesia protocol requires understanding the kidney disease pathology and hemodialysis therapy implications. A central venous catheter (CVC) was placed under a light sedation with additional oxygen therapy. Sedation was induced intravenously with alfaxalone (Alfaxan® multidose), on a peripheral catheter. The dose was titrated until full relaxation of the patient was observed. During the procedure, there were no major hemodynamics changes in the patient. Alfaxalone is a short-acting and rapid duration anesthetic with minimal or no cardiovascular consequences. When given titrated to effect, it represents the best choice for short sedation in central venous catheterization for acute renal patients undergoing hemodialysis.

Key words*: alfaxalone, sedation, CVC, hemodialysis, kidney.*

HYDRONEPHROSIS, DIABETES AND FELINE UROLOGIC SYNDROME IN A MIXED BREED TOMCAT: CASE REPORT

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Abstract

An 8 years old intact tomcat, was referred with urinary incontinence and polydipsia. After ultrasound examination, the patient was diagnosed with feline urologic syndrome and hydronephrosis. Acute urethral obstruction is the result of a physical or functional obstruction and can be life-threatening due to azotemia, hyperphosphatemia and hyperkalemia. Following the onset of obstruction, regardless of its nature, bilateral hydronephrosis can occur. Biochemistry revealed low serum sodium, serum albumin (ALB), alanine aminotransferase (ALT), blood urea nitrogen (BUN), total proteins (TP) and glucose (GLU) were elevated. On further examination, by determining serum fructosamine concentration, stress hyperglycemia was excluded, and diabetes mellitus was diagnosed. This article brings valuable insights into the complex pathology of feline urologic syndrome, paving the way for enhanced clinical strategies and potential preventive measures.

Key words*: hydronephrosis, diabetes mellitus, feline urologic syndrome, serum fructosamine, hyperglycemia.*

P-WAVE VARIATIONS IN CENTRAL VENOUS CATHETERIZATION IN A CANINE PATIENT UNDERGOING HEMODIALYSIS: CASE REPORT

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Abstract

A 5 years old, Shar Pei intact female, presented with lethargy, progressive weight loss, pale mucous membrane and severe dehydration (7-10%). The patient was diagnosed with acute on chronic renal disease (ACKD), polycystic kidney disease (PKD) and non-regenerative anemia and was referred for hemodialysis. A central venous catheter was placed under light sedation. During central venous catheterization, the cardiac rhythm was monitored by ECG. A key factor for a favorable outcome of the procedure is to understand the correlation between central venous catheterization and cardiac electrical activity. ECG monitoring goal was to observe alterations in P-wave morphology, which reflects atrial depolarization, during central venous catheterization. By monitoring the P-wave variations with extensive care is possible to observe the valuable cardiovascular dynamics in the context of central venous catheterization, aiding clinicians in optimizing patient care and safety of the procedure.

Key words*: electrocardiogram, P-wave, hemodialysis, central venous catheter, kidney.*

DYNAMICS OF POST-VACCINATION ANTIBODIES AGAINST CANINE PARVOVIRUS IN DOGS

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Abstract

Canine parvovirus or viral hemorrhagic gastroenteritis is a contagious infectious disease of canids that is characterized by gastrointestinal syndrome and mortality, especially in young puppies. Canine Parvovirus type 2 (CPV2 or CPV) is the pathogen agent of disease, and it is considered antigenically distinct from CPV1, the etiological agent of a disease that causes neonatal mortality in puppies. The high rate of morbidity and mortality in young animals requires the use of specific prophylactic measures. Vaccination against canine parvovirosis is part of the common vaccination scheme, a live attenuated vaccine being used. The purpose of our study is to evaluate the dynamics of antibodies against CPV, as result of vaccination, considering that CPV is extremely important in sanitary management of dogs.

Key words*: postvaccination antibodies, CPV, dogs.*

THE USE OF EXTERNAL FIXATORS FOR THE REPAIR OF SEVERELY COMMINUTED BILATERAL FEMORAL FRACTURES IN A FELINE PATIENT - SINGLE CASE STUDY

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Abstract

Purpose: This article reports the outcome result of a single case study following the use of external fixators to stabilize bilateral comminuted femoral fractures in a cat. Methods: The full history regarding signalment, radiographic evaluation and postoperative care were included in this article. The patient was regularly monitored with regards to time till onset of weight-bearing, callus formation, joint range of motion, pin site infection and implant reaction, implant stability and loosening-up. The patient obtained good functional recovery with full range of motion. Conclusions: External skeletal fixators, offer an efficient repair method for severely comminuted femoral fractures in feline patients, obtaining early weight bearing and callus formation, with unimpeded mobility and range of motion.

Key words*: biological fixation, callus, comminuted fracture, diaphyseal femoral fracture, feline external skeletal fixator.*

MAGNETIC RESONANCE IMAGING OF INTERVERTEBRAL DISC DISEASE ON CERVICAL SPINE IN DOGS - 12 CASES

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Abstract

Intervertebral degenerative disc disease is a condition of the spine caused by dehydration and degeneration of intervertebral discs being an inevitable process that appear when animals get older. These changes can lead to clinical and pathological diseases characterized differently, such disc extrusions and protrusions. Medical records of 12 dogs, who were presented in the clinic of the Faculty of Veterinary Medicine of Bucharest with neurological deficiencies, were reviewed. Animals were evaluated by MRI imaging. MRI examination revealed intervertebral disc disease divided in: Hansen type I (extrusion) regitered in 5 cases and Hansen type II (protrusion) in 7 cases of spinal cord compresions. Magnetic resonance imaging has provided a useful, safe, non-invasive evaluation of the cervical spinal cord.

Key words*: imaging diagnosis, IVDD, MRI, dog.*

CLINICAL AND ULTRASONOGRAPHIC FINDINGS IN GALLBLADDER MUCOCELE IN DOGS

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Abstract

The aim of this retrospective study was to describe the results of ultrasound examination in a series of cases with mucocele of the gallbladder in dogs. Eighteen dogs, represented by 7 males and 11 females, aged between 7 and 18 years (mean age = 11.67 years) were included in the study. The breeds represented were: 12 mixbreeds, 2 Beagles, 2 Yorkshires, 1 Miniature Schnauzer and 1 Pekingese. Eleven of the 18 dogs (61.11%) were symptomatic and 7 dogs were asymptomatic. The ultrasonographic examination revealed oversizing of the gallbladder, presenting an immobile content with a different appearance, based on which, each case was classified into one of the VI known types. Based on the ultrasonographic images, the following prevalence was found: type I = 2 cases, type II = 4 cases, type II = 3 cases, type IV = 5 cases, type V = 4 cases. No type VI has been identified. Gallbladder wall rupture was also not observed in any of the examined cases. In conclusion, ultrasonography is the standard imaging method for the diagnosis of gallbladder mucocele in dogs, highlighting the presence of an enlarged gallbladder with an immobile biliary pattern and a variable appearance.

Key words*: dogs, gallbladder, mucocel, ultrasonography.*

ENDOSCOPIC TRANSCERVICAL INSEMINATION: A METHOD FOR SUCCESSFUL CANINE ARTIFICIAL INSEMINATION

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Abstract

Artificial insemination (AI) is one of the most frequently implemented assisted reproductive technologies for animals. The dog-breeding industry is extremely dependent on artificial insemination (AI), which enables the successful transfer of genetic material over large distances and its indefinite storage for future use in breeding programs. When natural reproduction is not possible due to male incapacity, receptivity, or physical impairment, AI may also be utilised. The manner in which AI is put into practice in canines differs and is dependent on the variety of sperm utilised. In particular, with preserved or fresh sperm, intrauterine insemination is performed through transcervical catheterization using an endoscope. Endoscopic TCI for frozen sperm offers the advantage of obtaining comparable or superior results while avoiding the requirements and potential risks associated with general anaesthesia and surgery. Undoubtedly, the capacity to perform all inseminations with fresh or refrigerated semen increases the conception rates. This article will centre on the endoscopic transcervical insemination (TCI) method of canine artificial insemination (AI).

Key words*: artificial insemination, endoscopy, reproduction, TCI.*

CLINICAL APPROACH AND EFFECTIVENESS OF THERAPY WITH SOME ANTIULCER DRUGS IN DIGESTIVE DISEASES IN DOGS

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Abstract

An important share in canine digestive pathology is represented by gastrointestinal ulcers of various causes. Between them, gastritis, ulcers, hypergastrinemic syndromes and last but not least the prevention and combating of the unwanted effects of non-steroidal anti-inflammatory therapy, can occur in carnivores when the protective factors are disturbed or compromised. In such situations, administration of proton pump inhibitors, H2 receptor antagonists or local antacids is routine and of undeniable utility. Our study was carried out on 12 clinical cases that presented to the veterinary clinic, dogs of different breeds and ages, both female and male, in which the therapeutic efficiency was monitored after the administration of drugs to combat acidity. After performing the treatment, healing occurred in 91.66% of cases, failure registering 8.33% of the total. A correct and complete clinical approach, with carefully chosen and regularly administered drugs, increases therapeutic efficacy in multicausal canine ulcer pathology.

Key words*: antiulcer drugs, digestive diseases, dogs, therapy.*

REMOTE CHEMICAL IMMOBILIZATION AND ANESTHESIA FOR ORCHIDECTOMY IN A PLAINS ZEBRA (*EQUUS QUAGGA*)

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Abstract

This case study evaluates the remote chemical immobilization protocol for a short reproductive surgical procedure of a free-ranging male Plains Zebra (Equus Quagga), 11 years old, 400 kg body weight. The zebra was darted twice in the gluteal muscles (first from a distance of 30 meters, succeeded after 25 minutes by the second dart, from 15 meters), as the first dart was not fully discharged. Each syringe dart contained a 5 ml total volume of the combination: 1000 mg Ketamine, 50 mg Medetomidine, 10 mg Butorphanol, and 5 mg Midazolam. The induction time calculated from the last dart until the animal gained lateral recumbency was 8 minutes. A bilateral locoregional intratesticular block was performed using a total dose of 2 mg/kg Lidocaine. The maintenance phase lasted 54 minutes ensuring optimal anesthesia and analgesia, necessary for the procedure. Atipamezole 0.15 mg/kg was used for antagonization, intravenously, and was effective in 1 minute. The patient was classified with a final recovery score of 1 and assisted into a standing position, presenting stable coordination and reduced ataxia. During anesthesia clinical monitoring was continuous, without any complications recorded.

Key words*: zebra, chemical, immobilization, Ketamine, Medetomidine.*

THE CURATIVE EFFICIENCY OF THE COMPLEX BIOLOGICALLY ACTIVE MICROBIAL PREPARATION IN AVIAN CLOSTRIDIOSIS

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Abstract

The aim of the work was to study the curative-prophylactic efficiency of the complex biologically active microbial preparation and its effect on some growth and development indicators of chickens. The preparation was included in a proportion of 40 g/kg feed, in the composition of the daily ration of the chickens in the experimental group, starting from the first day of life. At the age of 17 days, an infection with Clostridium perfringens was registered in the chickens from both groups, which was treated with the Bromex preparation. As a result of the daily administration in the ration of the complex biologically active microbial preparation, the viability of 100% of the chickens in the experimental group was ensured compared to 72% in the control group; decreasing the titer of pathogenic bacteria E. coli, Enterococcus spp., Clostridium spp. by 6.5-10.6%, in the gastrointestinal tract; increasing the titer of beneficial microorganisms Bifidobacterium spp., Bacillus spp. and yeast fungi by 3.6-15.4%; the increase in the body weight of the chickens at the end of the experiment by 25.5% compared to the control.

Key words*: chicken, microbial preparation, avian clostridiosis.*

SURGICAL APPROACH OF RENAL CALCULI IN A MIXED BREED FEMALE DOG: CASE REPORT

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Abstract

A five-years-old mixed breed female dog was diagnosed with renal calculi and recurrent cystitis and referred for second opinion. The patient presented lack of appetite, abdominal distention, progressive weight loss, dysuria, hematuria. Body temperature, heart rate, blood pressure and respiratory rates were slightly elevated. Blood biochemistry revealed elevated creatinine and blood urea nitrogen. Using abdominal ultrasound examination, two ellipsoidal structures compatible with uroliths were visualized in the left kidney pelvis and proximal ureter. Abdominal radiography showed an irregular radiopaque calculi in the pelvis of the left kidney, confirming the ultrasound diagnosis, unilateral nephroureterolithiasis. Urinalysis showed struvite presence in urine. Urolithiasis is a general term referring to aggregates of crystalline that can lead to ureteral obstruction, deterioration of renal function, bacterial urinary tract infection, hematuria and pain. Ureteral obstruction is a common indication for surgery in small animals. Following abdominal radiography, nephrolithotomy and ureteral stenting were performed. Ureteral stenting is frequently performed following ureterotomy or ureteral anastomosis in order to reduce the risk of ureteral stricture. Ureteral stenting is the surgical treatment providing a direct communication between the bladder and kidney.

Key words*: calculi, dog, surgery, ureter, kidney.*

EPIDEMIOLOGY OF COMMON HELMINTH INFECTIONS IN DOMESTIC CARNIVORES: A SYSTEMATIC REVIEW ON THE ASSOCIATED RISK FACTORS

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Abstract

The helminth infections in carnivores have a high relevance for the animal health, but also for human health, due to their potential associated zoonotic risks. Therefore, the present paper aimed to review veterinary epidemiological studies and human cases reported over the last two decades to emphasize on the current understanding of epidemiology of helminth infections in domestic carnivores and the associated risks factors for the animal and public health. There is well known that humans can get infected through direct or indirect contact with infective stages of zoonotic parasites of pets' faeces in the environment. For this, eligible studies were searched in international Databases (PubMed, Google Scholar) following specified inclusion predefined eligibility criteria. The findings emphasize that helminth infections in domestic carnivores have large distribution and their prevalence is not significantly decreasing worldwide. These aspects suggest for a high need to increase awareness among the both veterinarians and animal owners about the importance of applying suitable methods to control parasite infections in animals, including of those with zoonotic risk.

Key words*: carnivores, epidemiology, intestinal helminths, parasitological control, zoonotic risk.*

CLINICAL AND BACTERIOLOGICAL STUDY REGARDING A DEEP CHRONIC GOAT'S DERMATITIS

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Abstract

Our study reveals the association between a chronic local-generalized clinical hard-skin infection in a 2-year-old Sannen goat and pathogens identified from lesions. The particular infection consists of a deep haemorrhagic-purulent, non-contagious, ineffectively treated dermatitis. The open skin lesions were infected with a mixed microbial flora. It was therefore difficult to identify the actual pathogenic microorganism necessary for effective and specific treatment. By conventional bacteriological examinations, we identified three bacterial pathogens: a haemolytic strain of Staphylococcus, a non-haemolytic strain of Corynebacterium and a haemolytic and highly proteolytic strain of Trueperella pyogenes. We also isolated many other germs, including Gram negatives that do not ferment lactose. For Staphylococcus and Corynebacterium, we assessed antibiotic susceptibility by the Kirby-Bauer diffusimetric method. Through local and general antibiotic treatment (beta-lactams, aminoglycosides), associated with a stimulation of the immune system and prevention of possible secondary liver disease, an improvement in housing conditions also improved clinical condition, appetite, livability and wound healing rate.

Key words*: dermatitis, goat, Staphylococcus, Corynebacterium, Trueperella.*

CONSEQUENCES OF NEOSPOROSIS ON EMBRYO TRANSFER IN BUFFALOES: REVIEW

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Abstract

With a long history and a wide distribution across the globe, the population of buffaloes (Bubalus bubalis) increased by 1.3% annually between 2002 and 2017, suggesting rising interest in this species. The results of assisted reproduction technologies in buffaloes are not as fulfilling as in cows; for this purpose, any other possible inconvenience must be removed. Parasitic and infectious diseases represent the major cause that negatively impact biotechnologies, especially in embryo transfer, since, although the relocation of an embryo from a seropositive donor to a seronegative recipient seems to be disease-free, in 25% of cases abortion occurs. Neosporosis is a parasitosis with effects that interest mainly the female reproduction, being one of the most important abortigenic entities among buffaloes, with an average prevalence in Australia and America of approximately 88%, in Africa 68%, in Asia 54.7-66.7%, and in Europe varying from 9.1% (Czech Republic) to 68.5% (Romania). In order to monitor and control neosporosis, it is imperative that all three existing categories involved in the embryo transfer process (donors, recipients, embryos) should be tested and proved to be free.

Key words*: Neospora caninum, buffalo, embryo transfer, abortion.*

ANIMAL PRODUCTION, PUBLIC HEALTH AND FOOD QUALITY CONTROL

EFFECTIVE CONTROL AND PREVENTION OF DENGUE (*AEDES AEGYPTI*) VECTOR FROM *CITRULLUS COLOCYNTHIS*, *DATURA STRAMONIUM* AND *AZADIRACHTA INDICA* PLANT EXTRACTS THROUGH ETHER

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Abstract

Mosquitoes cause of life-threatening disease vectors. The excess use of synthetic insecticides causes development of resistance (in vector species), biological magnification (of toxic substances through the food chain) and adverse effects (on environmental quality and non-target organisms including human health). So, under the biological control of mosquito by the use of different plant extracts, such as Citrullus colocynthis, Datura stramonium and Azadirachta indica emphasis is given on the application of plant extracts through petroleum either. After identification, Aedes mosquitoes were reared and treated with Citrullus colocynthis, Datura stramonium and Azadirachta indica plant extracts. Different significant oil to test their efficacy against Aedes larvae. Again, mortality data was collected and subjected to probit analysis to calculate LC50. The least value of LC50 (1.5-40 ppm) and LT50 (0.4-0.8 hrs) was observed with solution of Citrullus colocynthis, Datura stramonium and Azadirachta indica extracts through ether, for Aedes larvae. By adopting these techniques, we should able to manage the populations of Aedes in the environment.

Key words*: plant extract, potent plants, Aedes.*

ARTIFICIAL INTELIGENCE APPROACHES TO EVALUATE INDIVIDUALITY IN CATTLE BASED ON VOCAL EMISSIONS

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Abstract

There is a critical need to develop and validate non-invasive animal-based indicators in order to integrate them into on-farm welfare assessment protocols. The aim of this study was to test two types of artificial intelligence (AI) models, deep-learning-based (DL) and explainable-machine-learning-based (EM), for individual cow identification based on vocal emissions. A number of 1144 vocalizations from 20 multiparous dairy cows were analysed using PraatDSP package v.6.0.3136, based on the extraction of the 23 acoustic features per vocalization, and then the AI models were tested with the aid of the TPOT automatic machine learning library. Individual identification classifier models' performances had accuracies of: 73.0 ± 3.3% for the EM training cohort and 68.9 ± 5.1% for the EM testing cohort; 76.3 ± 4.2% for the DL training cohort and 72.5 ± 4.7% for the DL testing cohort. Moreover, out of the 23 acoustic features, AMvar, AMrate, AMextent, Formant dispersal, and the Weiner-entropy were the most important individual vocal features, with a joint importance of 55.36%. Through our experiments using EM and DL approaches, we demonstrated the effectiveness of the AI models in identifying individual cows based on their vocalizations.

Key words*: behaviour, dairy cattle, vocal communication, welfare indicators.*

ASSESSMENT OF THE SPOILAGE MICROFLORA IN POULTRY AND CARCASSES CONDEMNATION

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Abstract

The microbial load plays an important role in hygiene abattoirs performance and risk categorisation, as an essential component of a risk-based meat safety assurance system. The aim of our study was to investigate the usefulness of testing for pathogens and indicator microorganisms for abattoir risk categorisation with the result condemnation for the final carcasses inspection. The research material was represented by poultry samples collected in compliance with the current legislation (Reg. CE 2073/2005) and (Reg. CE 627 /2019) it is used for poultry condemnation. The results showed that differences regarding Campylobacter and Salmonella may be consider as variation in risk abattoir categorisation. A lower risk may be considered regarding Campylobacter level lower than Salmonella. Microbial load from the surface of carcasses is significantly influencing the risk abattoir categorization and the final condemnation.

Key words*: microbial residues, consumer safety, sustainable environment.*

AN OVERVIEW OF THE FISH ISSUES FACING GWAGWALADA`S FISH FARMERS AND TRADERS NIGERIA`S ABUJA

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Abstract

Although the area council is not considering their various directions to help them, it is well said and done to empower fish farmers and traders. These individuals are essential to the economy and the generation of income for the people, even though they are enticing ways for the populace to obtain the necessary proteins and not only develop eating only cow and goat meats. We discovered that through visiting various farms in compensation layouts, Kuje roads and markets, speaking with some of the important populations-including thirty important extension workers from the Federal Capital Territory Agricultural Development Programmes, fifty farmers, twenty fish traders in Gwagawalada and some oral interviews with some of the fish buyers, we were able to gather information. Numerous fish farmers in Gwagawalada have a significant number of different disconnections between buyers, transporters, and sellers, which has decreased the average fish farmer`s income. It is obvious that further research is needed to determine the best methods for preparing fish for human consumption, as well as to lower fish spoilage.

Key words*: Gwagwalada, Nigeria, fish farmers, marketers, and fish.*

EVALUATION OF CALCIUM, PHOSPHORUS AND CHOLECALCIFEROL INTAKE, PRODUCTIVE PERFORMANCE, EGG QUALITY AND KEEL BONE DAMAGE WITHIN LAYING HENS REARED IN FREE-RANGE AND BARN SYSTEMS

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Abstract

Egg deposition represents the main factor affecting Calcium (Ca) metabolism in laying hens. Excessive mobilization of Ca from the skeleton could lead to bone fragility, especially in high-production laying hens. Indeed, the Ca level in the diet along with phosphorus (P) ratio, synthesis of cholecalciferol, vitamin (VD3) and the Ca absorption in the gastrointestinal tract are crucial factors in preventing welfare issues in farmed animals. The aim of the present study is to evaluate the influence of the rearing system on the intake of Ca, P, and VD3, as well as egg and eggshell quality and the occurrence of keel bone damage within laying hens. These results suggested that the reduced consumption of Ca and VD3 by the FR (had access to an outdoor area with pasture) group could have been partially compensated by the endogenous synthesis of VD3 due to solar exposure. Additionally, the grazing activity and the relative intake of bioactive compounds (tocopherols, carotenoids, Vit E, etc.) in FR hens have positively influenced the egg's color profile.

Key words*: bone, calcium metabolism, cholecalciferol, egg, laying hens.*

OXIDATIVE STRESS IN ASSOCIATION WITH MANY PATHOPHYSIOLOGICAL CONDITIONS AND THE ROLE OF THE NATURAL ANTIOXIDANTS IN LIVESTOCK. A REVIEW

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Abstract

Oxidative stress is a current subject of research in veterinary medicine, it is the basis of many disease states. Understanding the pathophysiology of oxidative stress in ruminants will allow the design of specific antioxidant therapies. The aim of the present review is to examine the role of oxidative stress in pathophysiological conditions and ways to prevent and overcome it by using natural antioxidants. The properties of polyphenols encourage the research and use of various biologically active components as a natural tool to improve animal performance and the quality of animal production. The development and use of effective antioxidants of natural origin is a priority nowadays. They can protect animals from free radicals and prevent the subsequent oxidative damage that leads to degenerative and pathological processes.

Key words*: oxidative stress, antioxidants, polyphenols, livestock.*

VETERINARY EDUCATION

ASSESSING COMMUNICATION WITHIN COMPANION ANIMAL PRACTICES: VETERINARIAN VS. PET OWNER

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Abstract

Veterinarian-client communication has been the subject of many surveys, and guides were developed. This study assesses the communication patterns between veterinarians and pet owners in Romania. The study used an original questionnaire based on The Calgary-Cambridge Guide adapted for veterinary medicine. Following the analysis, it was concluded that, in most cases, the communication process was efficient. More than 90% of the owners felt encouraged to participate in the dialogue and appreciated that the veterinarian used an accessible language. The communication process included feedback, as 80.1% of the vets verified the owner`s understanding. As negative aspects that influence the therapeutic relationship, we mention the fact that 21.6% of owners were not asked if they accepted the final plan, 38.6% were not informed about the costs during the consultation, and 57.3% did not receive a copy of the medical file at the end of the consultation. Communication, in most of the consultations, follows a bio-lifestyle-social pattern. However, the existence of the negative aspects that fall within a biomedical, authoritarian pattern supports the continuous need for communication education.

Key words*: communication skills, communication patterns, veterinarian-client communication.*

EXPERIMENTAL MEDICINE

DEVELOPMENT OF A MURINE MODEL OF NEUROBORRELIOSIS INDUCED BY HUMAN *BORRELIA* STRAIN

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Abstract

Borrelia sp. is represented by spirochetes that can migrate to different organs, including the central nervous system. The aim of the study was to develop a murine neuroborreliosis model by inoculating a strain of Borrelia burgdorferi (Bb). Bb was isolated in a hospital from the cerebrospinal fluid of a human patient. The strain was engineered by introducing a luminescent plasmid (GFP) and a gentamicin resistance gene. Studies were performed on mouse. The selected animals were inoculated with Bb (106 spirochetes/mL), intradermally or intracerebral. To assess the neuroborreliosis, endpoints were established at 1,2,6,8, and 13 weeks post-infection, when samples were collected from brain and other different organs. The tissue samples were deposited in specific culture medium for Borrelia and were monitored by fluorescence microscope for the identification of spirochetes. The highest percentage of spirochetes in brain was revealed in the samples taken 7 days after infection, from animals inoculated both intradermally and intracerebrally. Through the experiments we have developed a model of neuroborreliosis in mice, a model that will be used for the study of the development of new therapeutic approaches.

Key words*: Borrelia burgdorferi, intracerebral, intradermal, neuroborreliosis, mouse.*

ANTIBACTERIAL EFFECT OF ESSENTIAL OILS AGAINST BACTERIAL STRAINS ISOLATED FROM COWS WITH MASTITIS

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Abstract

Antibiotic resistance has become a global concern, with major implications in both human and veterinary medicine. In recent years, new therapies are being sought as alternatives to antibiotics. In this regard, essential oils extracted from medicinal plants have been shown to be effective in many cases. The purpose of our study was to test the efficacy of essential oils of thyme, clove, peppermint and cinnamon against ten bacterial strains isolated from cows with clinical mastitis. From the bacterial strains included in the study, 60% were found to be resistant to 5 or more antibiotics. The effectiveness of essential oils was tested using the aromatogram method. This varied depending on the strain and concentration tested. Cinnamon, thyme and the mixture of the four oils were the most effective products. The highly resistent S. aureus isolate (7 from 12 antibiotic molecules), proved to be extremely sensitive to the essential oils of thyme and cinnamon and highly sensitive to the mixture of oils.

Key words*: cow, mastitis, essential oils, antibacterial.*

ADVANCEMENTS IN LAPAROSCOPIC SURGERY FOR VETERINARY MEDICINE: ESSENTIAL INSTRUMENTS AND PROCEDURES

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Abstract

In recent years, laparoscopic surgery has gained from numerous technological advancements, that have improved results and decreased surgical complications. The availability of a wide variety of equipment and instruments enables the performance of surgical procedures, avoiding the need for extensive incisions that are common in the field. Laparoscopic surgery is an expanding domain of knowledge within the veterinary profession, with patients being the primary beneficiaries. Laparoscopic and laparoscopic-assisted procedures are well established in veterinary surgery, with novel minimally invasive approaches and procedures described regularly in the peer-reviewed literature. It is expected that as this field progresses, the benefits associated with accessibility, visualisation, and magnification will continue to demonstrate the superiority of laparoscopic and laparoscopic-assisted procedures over conventional open surgery for specific procedures. This article describes the essential instruments required to perform laparoscopic surgical procedures, and examines several laparoscopic procedures that have been implemented in the field of veterinary medicine.

Key words*: laparoscopy, surgery, minimally-invasive-surgery, veterinary medicine.*

MICE MODELS IN METABOLIC SYNDROME RESEARCH - A REVIEW

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Abstract

Metabolic syndrome (MetS) is a clustering of metabolic complications, characterized by the simultaneous occurrence of at least three of the following medical conditions: central obesity, hyperglycemia, hypertension, and dyslipidemia. Being a multifactorial disorder, with an alarming rate of prevalence, establishment of appropriate animal models mimicking MetS in humans is crucial in order to understand the pathophysiological mechanism involved and to develop new therapeutic strategies. Even though numerous animal models of MetS have been established, the choice of a particular model requires a careful analysis in relation to the usefulness and suitability, in order to reduce the gap between preclinical and clinical research. This review aims to summarize the main mice models, this species being the most frequently used in the study of MetS and obesity The approaches used to induce MetS include dietary manipulation, genetic modification, and chemically-induction. Apart from pathophysiological similarity with the human MetS, a suitable animal model should also be reproducible, reliable, and affordable with minimal disadvantages.

Key words*: metabolic syndrome, obesity, animal models, mice.*

RESEARCH ON INFLAMMATORY ANEMIA INDUCED BY CORTICOSTEROIDS

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Abstract

Research was conducted on 10 CD1 laboratory mice, non-consanguineous strains, divided into two groups of 5 individuals per group. The body weight of individuals ranged from 20 to 30 grams. Both groups were given the same favourable climate, humidity and light conditions. The forage diet consisted of pelleted rodent feed, with feed and water administered at libitum. The control group was injected at the beginning of the experimental period with 1 ml NaCl subcutaneously and the experimental group with 1 ml dexamethasone i.e. 4 mg subcutaneously. The duration of the experiment was 14 days. At the end of the experiment, decreases in erythrocyte count, haemoglobin, haematocrit and increases in derived erythrocyte constants were observed. The results of the leukocyte formula showed an increase in the number of polymorphonuclear cells and a decrease in the other categories of leukocytes in the experimental group.

Key words*: anti-inflammatory, dexamethasone, glucocorticosteroid, mouse.*

MISCELLANEOUS

DISTRIBUTION AND PREVALENCE OF BRUCELLOSIS OUTBREAKS IN EUROPE IN THE PERIOD 2002-2022

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Abstract

Brucellosis is a contagious disease of livestock with significant economic impact. The disease is caused by various bacteria of the family Brucella. Brucellosis in cattle (B. abortus), in sheep and goats (B. melitensis) and in swine (B. suis) are diseases listed in the World Organisation for Animal Health (WOAH) Terrestrial Animal Health Code and must be reported to the WOAH. Brucellosis is a highly infectious zoonosis for humans. Based on data from Animal Disease Information System (ADIS) we analyzed the distribution of Brucella species and the prevalence of Brucellosis in animals within the European countries. Outbreaks in animals were declared by 5 countries over a twenty-year period (2002-2022). The findings showed that the predominant species was Brucella melitensis, followed by Brucella suis and lastly Brucella abortus. For the studied period, 21 outbreaks of Brucella melitensis were registered in sheep and goats. Another 18 outbreaks caused by Brucella abortus were declared in cattle. The development of regulatory measures for prevention, surveillance and eradication of Brucellosis is discussed based on the European legislation.

Key words*: animal health, Brucellosis, legislation, disease control, surveillance.*

DIROFILARIA IMMITIS INFESTATION IN A CAT FROM ROMANIA: FIRST NECROPSY REPORT

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Abstract

Dirofilaria immitis is a nematode, often encountered in dogs, known to be found in the right heart chambers causing cardiac arrest. In cats, Dirofilaria immitis is extremely rare, only a few clinical cases being noted, giving the fact that cats do not have the clinical signs as described in dogs. A 3 years old intact male domestic shorthair cat from Romania was submitted to standard necropsy, having no prior clinical signs. Gross examination revealed the presence of one adult of Dirofilaria immitis in the right chambers of the heart, confirmed by RT-PCR testing. The presence of the adult nematode was associated with secondary dilated cardiomyopathy and areas of pulmonary consolidation. Histologically, pulmonary lesions were dominated by interstitial pneumonia, thrombosis, severe arteriosclerosis alongside pulmonary oedema and type II pneumocytes hyperplasia. More often diagnosed in dog as cause of death, Dirofilaria immitis should be considered as one of the fatal diseases in cats. Being the first postmortem diagnosed case reported in Romania, the prevalence of heartworm disease in cats is not well-studied. Still, this nematode should not be dismissed in current diagnosis.

Key words*: Dirofilaria immitis, cats, heartworm disease, necropsy.*

ISSN 2457-323X
ISSN-L 2457-323X