

**PRELIMINARY RESULTS REGARDING THE MOLECULAR
DIAGNOSIS OF CANINE DEGENERATIVE MYELOPATHY IN
CARPATHIAN SHEPHERD DOG BREED**

COCOSTÎRC V., PAȘTIU A.I., PUSTA D.

University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca,
Faculty of Veterinary Medicine, 400374,
Calea Mănăștur No. 3-5, Cluj-Napoca, Romania
E-mail: vlad.cocostirc@usamvcluj.ro

Summary

Canine degenerative myelopathy (CDM) is an autosomal recessive disease characterized by progressive ascending degeneration of the spinal cord. The clinical features of CDM include progressive, asymmetric upper motor neuron paraparesis and lack of paraspinal pain. According to the literature, there are two mutations associated with CDM: a transition (*c.118G>A*) in the exon 2 of *SOD1* gene that has been described in several breeds, and a transversion (*c.52A>T*) in exon 1 of the same gene that has been described in Bernese Mountain dogs (2, 17). This study aimed to identify the proper technique for the identification of the mutation *SOD1:c.118G>A* associated with CDM, and to apply it on samples from Carpathian Shepherd dogs. Oral swabs were collected from 19 Carpathian Shepherd Dog and tested using the polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) method. The results would classify the dogs as homozygous individuals for the normal allele (GG), heterozygous individuals (AG) or homozygous dogs with the mutation associated with CDM (AA). All of the dogs included in the study were identified as homozygous for the normal allele. Currently, there is no standard test for the identification of CDM. The diagnosis is mostly based on the exclusion of other diseases with similar symptomatology, and the definitive diagnosis is made following the postmortem histopathologic examination of the spinal cord. Therefore, DNA tests may be used to aid the presumptive diagnoses and for screening of CDM. Our preliminary results of the PCR-RFLP testing further recommends this technique as a mean to identify heterozygous carriers (AG) and establishing the affected individuals (AA).

Keywords: canine degenerative myelopathy, Carpathian Shepherd dog, PCR-RFLP, *SOD1*.

RESULTS REGARDING THE USE OF THERAPEUTIC PROTOCOLS IN ROMANIAN SPOTTED COW WITH REPRODUCTIVE DISORDERS

CODREAN F., TORDA I., SPĂTARU I.I., MARC S.

Banat's University of Agricultural Sciences and Veterinary Medicine" King Michael I of Romania" from Timisoara, Faculty of Veterinary Medicine, 300645, Calea Aradului No 119, Timisoara, Romania
E-mail: simona.marc@usab-tm.ro

Summary

Ovarian dysfunction, repeated breeding and postpartum endometritis are the most common reproductive disorders in cattle breeding because they lead to a large economic loss for the farmer due to more inseminations, an increase in calving interval, an increase dry periods length, increase in veterinary examination and treatment costs. Hormonal therapy is used as a treatment for repeat breeding, ovarian dysfunction or to ensure postpartum reproductive health. In our study performed on 35 cattle raised in the traditional system, we evaluate the results of hormonal therapy in repeat breedings, ovarian cysts, and endometritis. Of these cows with an average lactation of 3.91; 20 had ovarian dysfunction such as follicular cyst or luteinic cyst (group A1), 9 cows had repeated breeding (group A2) and 6 cows had endometritis (group A3). The average insemination rate in this study was 4.4. The treatments applied were the following: in group A1 GnRH followed at 7 days by PGF2 α (for lutein cyst) and HCG twice at 0 and 6 days followed after 7 days by PGF2 α (for follicular cyst), in group A2 progesterone and multivitamins were administered on days 4 and 7 after artificial insemination and in group A3 antibiotics and intramuscular anti-inflammatory drugs were used. The cows were artificially inseminated at the first signs of heat after treatment. The rate of conception after the therapeutic protocols was 95% for group A1, 100% for group A2 and 33.33% for group A3. In conclusion, the data of this study highlight the differences in therapeutic protocols applied in some reproductive diseases in cattle, suggesting the diversity of factors that can induce these disorders.

Keywords: cattle, reproductive disorders, ovarian cyst, endometritis.

MORPHOLOGY OF THE SKULL IN BADGER (*MELES MELES*)

CRĂCIUN I., MARIN A.M., HULEA C., MOȘNEANG C., PENTEA M.

Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timisoara, Faculty of Veterinary Medicine, 300645,
Calea Aradului No.119, Timișoara, Romania
E-mail: craciunionutz86@yahoo.com

Summary

Badger is a small stout carnivore spread in different parts of the world, including our country. Taxonomical studies of the carnivores do not include the descriptive and comparative anatomy of the skull. In the last decade, osteological features of some wild animals were studied within the Anatomy department from our faculty and many changes were recorded. No one of them involved badger.

Keywords: badger, skull, descriptive anatomy.

THE EFFECT OF TEMPERATURE ON *IN VITRO* BIOFILM FORMATION IN MULTIDRUG RESISTANT *ESCHERICHIA COLI* AND *STAPHYLOCOCCUS AUREUS*

**CUBIN S., TRIPON R.M., BRZÓSKA H., GAȘPAR C.M., TULCAN C.,
LĂZĂRESCU C.F., ȚIBRU I., HUȚU I.**

Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timisoara, Faculty of Veterinary Medicine, 300645,
Calea Aradului No. 119, Timisoara, Romania
E-mail: gasparcristina99@yahoo.com

Summary

The crystal violet (CV) microplate assay is the most commonly used quantitative method to analyse biofilm-biomass formation, inhibition and eradication. This protocol allows variable incubation periods and temperatures, depending on the studied microorganism, but for microorganisms that do not require special temperature the value of 37°C is usually chosen. This study aimed to compare the biofilm formation through the optical density measurement (OD at 540 nm) of two multidrug resistant *E. coli* and *S. aureus* strains, at different temperatures: 22, 30 and 37°C (22.34 ± 0.12 ; 30.11 ± 0.42 ; 36.97 ± 0.13 °C) for 48 h, in a controlled environment incubation unit (invention currently under review for patent) – a system designed to prevent the higher gas exchange and evaporation from the outer wells of the microplate. The temperature proved to be a significant factor in biofilm

formation for both pure and mixed culture biofilms (ANOVA - $F_{E. coli}=557.124$, $F_{S. aureus}=87.538$ and $F_{mixed (E. coli + S. aureus)} = 596.119$ all at $p < .001$). Both bacterial strains in pure culture showed significantly higher biofilm formation (OD mean \pm SE) at 30°C (*E. coli* 1.32 ± 0.015 and *S. aureus* 1.26 ± 0.048), compared with 37°C (*E. coli* 1.14 ± 0.009 and *S. aureus* 0.9 ± 0.024) and 22°C (*E. coli* 0.73 ± 0.012 and *S. aureus* 0.53 ± 0.039) – comparison by *Tukey HSD*, with $p < 0.001$. However, no significant differences were recorded in mixed-species biofilm formation at 30°C and 37°C (1.165 ± 0.013 vs. 1.163 ± 0.014 – *Tukey HSD*, with $p > 0.05$). The results of the trial support the hypothesis of stronger biofilm formation at 30°C in a controlled environment incubation unit.

Keywords: biofilm formation, optimal temperature, CV microplate assay.

CLINICAL LOCALIZATION OF NEUROLOGIC LESIONS AND IMAGISTIC CONFIRMATION IN INTERVERTEBRAL DISC DISEASE IN DOGS

**DANDEA S.M., PURDOIU R.C., SEVASTRE B., MIRCEAN M.V., BIRIȘ A.,
POPOVICI C.P.**

University of Agricultural Sciences and Veterinary Medicine in Cluj-Napoca,
Faculty of Veterinary Medicine, 400372,
Mănăștur street No. 3-5, Cluj-Napoca, Romania
E-mail: stefania-madalina.dandea@student.usamvcluj.ro

Summary

Intervertebral disc disease (IVDD) in small breed dogs is a commonly encountered neurological disease and patients may present with various forms of primary complaints, histories and symptoms. Thereby, a complete neurological exam must be performed so as to refer for further imagistic investigation. The aim of this study was to establish the accuracy of neurological localization of spine lesions in IVDD which were further compared with the imagistic examination for confirmation of clinical localization. The clinical aspects were evaluated in 8 dogs between 3 and 12 years old registered between February 2021- May 2021 at the department of Internal Medicine, Faculty of Veterinary Medicine, Cluj-Napoca. The canine patients presented with characteristic symptoms that suggested medullary compression determined by Hansen II type disk hernias. In a constructive research, a neurologic examination was performed on each patient using specific known tools and methods and the NeuroMap System for localization guiding. The dogs with suspected of spinal lesions were registered and staged suitable for each individual. Subsequently a Computer Tomography was performed under general anesthesia. Lesions identified on the CT scans were later compared to the clinical localization. Results of the following study concluded an accuracy of 75% of the clinical localization of spinal

lesions in intervertebral disk disease in dogs, numerical aspects considering two of the evaluated patients whom clinical diagnosis was not confirmed by imagistic examination.

Keywords: intervertebral disk disease, neurologic examination, lesion localization, computer tomography, NeuroMap System.

CAMELPOX, CURRENT STATUS, EPIDEMIOLOGY AND CHALLENGES

GAȘPAR T., HERMAN V., COSTINAR L., PASCU C.

Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timisoara, Faculty of Veterinary Medicine, 300645, Calea Aradului No 119, Timisoara, Romania
E-mail: corinapascu@usab-tm.ro

Summary

Camelpox is considered an emerging public health problem due to increased reported cases and outbreaks in camels during this decade. Camelpox is a highly contagious skin disease of camelids caused by camelpox virus (CMLV), a member of the genus *Orthopoxvirus* within the family *Poxviridae*. The disease is often manifested as a mild local skin infection and sometimes in severe form with systemic involvement. Camelpox virus is very host specific and does not infect other animals. The disease is enzootic in the camel-rearing areas of arid and semiarid regions of the world and causes economic loss in terms of morbidity, mortality, loss of weight, and reduction in milk and wool production. The CMLV infection is transmitted mostly by direct contact and aerosol route. Zoonotic camelpox virus infection in humans associated with outbreaks in dromedary camels (*Camelus dromedarius*) was described in the north-eastern region of India during 2009. This was a single incident illustrating that camelpox is of limited public health importance. A very strict surveillance for any camelpox outbreak with particular attention for any human case has to be implemented. This work is timely because very strict surveillance must be implemented for any outbreak of smallpox with special attention to any human case.

Keywords: camelpox, epidemiology, Orthopoxvirus.

EPIDEMIOLOGY OF EQUINE PIROPLASMOSIS AND ITS ASSOCIATED RISK FACTORS IN EUROPE: A REVIEW OF THE LAST 21 YEARS

GIUBEGA S., ILIE M.S., DREGHICIU I.C., OPRESCU I., MORARIU S.,
DĂRĂBUȘ GH.

Banat's University of Agricultural Sciences and Veterinary Medicine" King Michael I
of Romania" from Timisoara, Faculty of Veterinary Medicine, 300645,
Calea Aradului No. 119, Timisoara, Romania
E-mail: simonagiubega@gmail.com

Summary

Theileria equi and *Babesia caballi* are the primary pathogens of the intraerythrocytic parasitic disease, equine piroplasmosis (EP). Natural transmission of EP occurs via specific ixodid tick vectors, of which, *Ixodes*, *Haemaphysalis*, *Dermacentor* and *Rhipicephalus* species have been described. Numerous articles on EP have been published in the last decade. This study aims to characterize the circulation of EP in European countries and associated risk factors, as well as to have an overview of current knowledge. In order to achieve the aim of this study, a systematic database search was carried out, resulting, after a preliminary selection, in a total of 32 publications considered eligible. By combining all relevant studies carried out in Europe on the circulation of piroplasms, we determined that the prevalence of *B. caballi* and *T. equi* in Europe is 10.15% (0% - 47.8%) and 25.36% (1% - 66%), respectively, and the total prevalence is 35.51% (1.5% - 88.4%). The most studied variables in risk factor analyses performed in European countries were individual characteristics, with different results. As some countries have several published studies while others have only one, the estimated prevalence and seroprevalence should be interpreted with caution. This study also identified a number of European countries, including Romania, for which there is insufficient information on the epidemiology of EP. The lack of knowledge of the spread of piroplasms species and their vectors represents a risk both for these countries and for the rest of Europe.

Keywords: *Babesia caballi*, *Theileria equi*, equine piroplasmosis, risk factors, Europe.

**RELATIONSHIP BETWEEN THE EVOLUTION OF THE
PUERPERIUM MILK KETONE BODIES VALUES AND THE
REPRODUCTION PARAMETERS IN DAIRY CATTLE**

**GIURGIU O., BEREAN D.I., CIUPE S., BOGDAN L. M., IONESCU A.D.,
RADU C.I.**

University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca,
Faculty of Veterinary Medicine, 400372,
Calea Mănăștur, No. 3-5, Romania
E-mail: ovidiu.giurgiu@usamvcluj.ro

Summary

Data generated by 176 cows in the days 4-80 postpartum were collected between March 2019 - July 2020, animals come from four different farms by way of maintenance, feeding and breed. According to the clinical data, the cows were divided into two groups: group 1 – cows with pathology of the reproductive system, and, group 2- cows without pathology of the reproductive system. BHB (beta-hydroxybutyrate), average number of inseminations for a new gestation, service period and milk protein / fat ratio were statistically reported at season and breed for the both groups. According to the data available in the literature, the animals studied were classified in terms of the clinical evolution of ketosis, comparing the concentration of beta-hydroxybutyrate the results were as follows: for the group 2: 86.2% were negative, 3.44 % suspicious and 10.34% positive; in the group 1: 55.68% were negative, 9.10% suspicious and 35.22% positive. The average number of inseminations needed for a new gestation was 1.9 for the group 1 and 1.36 for group 2. The mean of the variables BHB, service period, protein / fat ratio and the number of inseminations needed for 1 gestation indicates influences of ketosis on the cow's puerperium.

Keywords: ketosis, reproduction, beta-hydroxybutyrate.

DIAGNOSTIC IMAGING AND CLASSIFICATION OF PORTOSYSTEMIC SHUNTS IN DOGS

GLĂVAN C.

University of Agronomic Sciences and Veterinary Medicine of Bucharest, Faculty of
Veterinary Medicine, 050097, Splaiul Independenței nr.105, Bucharest, Romania
St. George's Veterinary Hospital, WV2 1BD, St. George's Parade 8,
Wolverhampton, U.K.
E-mail: cristi.glavan@yahoo.com

Summary

Portosystemic shunts affect the physiological trajectory of splanchnic blood in the gastrointestinal tract and abdominal organs, draining it directly into the systemic circulation. Consequently, portal blood bypasses the liver and is not subject to hepatic metabolism, making intra- and extrahepatic shunts an abnormal vascular connection (4). The most common types of shunts in veterinary medicine are represented by extrahepatic portosystemic, intrahepatic, and multiple acquired portosystemic shunts. Recent studies described breed predisposition and a genetical, inherited base of shunts component with no sex predilection: intrahepatic shunts most common seen in large breeds of dogs (Irish Wolfhounds, Golden Retrievers, Labrador Retrievers, Australian Cattle Dogs, Old English Sheepdogs) and extrahepatic shunts observed in small breeds such as Cairn Terrier, Yorkshire Terrier, Russell Terrier, Dachshund, Schnauzer, Bichon Maltese. (1, 5-17, 21-23). Multiple acquired extrahepatic shunts form secondary to portal hypertension, often due to primary hepatic parenchymal disease. There are a variety of shunts with portal and periportal starting point, including gastrophrenic, pancreaticoduodenal, splenorenal, mesenteric, and hemorrhoidal collateral vessels. The classification of the systemic shunts is a continuous and dynamic process with multiple changes and new connections found every year. Imaging diagnostic methods followed a gradual transition from ultrasound to CT, computed tomography being able to describe the complexities of shunts providing a detailed assessment of the abdominal blood vessels and a better understanding of the abnormal connections. The aim of the article is to describe and review the most common types of shunts and their pathophysiological implications.

Keywords: Portosystemic shunts, ultrasound, CT, dogs.

PREVALENT AEROBIC BACTERIAL FLORA ISOLATED FROM EMBRYONATED EGGS AND NON-VIABLE PHEASANT CHICKS

**GLIGOR A., IANCU I., PASCU C., COSTINAR L., DÈGI J., HULEA A.,
NICHITA I., HERMAN V.**

Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timisoara, Faculty of Veterinary Medicine,
300645,
Calea Aradului No. 119, Timișoara, Romania
E-mail: ionicavet@gmail.com

Summary

The study aimed to identify aerobic bacteria isolated from pheasant eggs incubated in the hatchery incubator, as well as from pheasant chicks that died on the first day of life. 323 hatching eggs and 101 one-day-old non-viable pheasant chicks were studied for the repopulation of game funds: common pheasant (*Phasianus colchius colchius*) and black pheasant (*Phasianus colchius varietas tenebous*). From the pathological material examined, it was observed that a pathogenic conditioned aerobic bacterial flora predominated: *E. coli*, *Pseudomonas*, *Staphylococcus aureus* and *Proteus vulgaris*. Sensitivity to various antimicrobial substances was tested for isolated strains.

Keywords: pheasant eggs, *E. coli*, *Pseudomonas*, *S. aureus*, *Proteus*.

DIAGNOSTIC TOOLS IN CANINE KIDNEY DISEASE. CASE REPORT

IGNĂTESCU (ȚIMPĂU) R.M., GOANȚĂ A.M., BĂDULESCU A.M., IONIȚĂ L.

University of Agronomic Sciences and Veterinary Medicine of Bucharest,
Faculty of Veterinary Medicine,
Marasti Blvd No 59, District 1, Bucharest, Romania
E-mail: roxana_mariana_12@yahoo.ro

Summary

Kidney disease in dogs is a very common condition in veterinary practice nowadays and can be extremely aggressive in both young and geriatric patients. Kidney disease, as a generically defines any renal lesion (of any size or degree) or clinic-pathological abnormality that pertains to renal function (Lattimer, K.S., 2011). It is known that kidney disease in dogs encompasses acute kidney injury (AKI), chronic kidney disease (CKD) and their primary conditions: neoplasia, glomerulopathies, etc.

Diagnostic of a certain renal disease might be challenging because of nonspecific clinical and laboratory findings. Special attention should be paid to the anamnesis, physical examination and to the formulation of an individual well-established diagnostic plan in accordance with the available guidelines. Therefore, to accurately assess the extent of the lesion and loss of function, various diagnostic tools might be considered. These include non-invasive procedures: blood biochemistry (Creatinine, Urea, Calcium Phosphate, electrolytes), blood pressure measurements, urinalysis, (proteinuria, urine specific gravity, urine culture), diagnostic imaging, glomerular filtration rate (GFR) and other surrogate plasma markers of reduced GFR: Symmetric dimethylarginine (SDMA), completed by invasive procedures (renal biopsy) when necessary. This article aims to describe the principles of these tests and emphasize their usefulness in the diagnosis of canine kidney disease based on a case report.

Keywords: kidney, disease, diagnosis, urinalysis, dimethylarginine.

RESEARCH IN PASTEURELLOSIS OF DOMESTIC RABBITS FROM EXTENSIVE GROWING

**IORGONI V., IANCU I., PASCU C., COSTINAR L., DÈGI J., HULEA A.,
GLIGOR A., NICULA M., HERMAN V.**

Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I
of Romania" from Timisoara, Faculty of Veterinary Medicine, 300645,
Calea Aradului No. 119, Timișoara, Romania
E-mail: ionicavet@gmail.com

Summary

The paper presents the results of investigations performed on a number of 154 rabbits, from 5 locations, females and males, of different ages and breeds. The rabbits showed the following symptoms: sneezing, whitish nasal and ocular secretions, subcutaneous abscesses in the region of the head, neck, and forelimbs. With a lower frequency, but still considerable, there were abscesses on the nipple chain in some lactating females, but also in a dry period. Otitis externa has also been reported in 2 rabbits, one of these also has torticollis. At the necropsy examination, lesions characteristic of pasteurellosis were highlighted, the diagnosis was confirmed by bacteriological examination. Antibiotic susceptibility testing was performed for the proper choice of antimicrobial substances for therapy.

Keywords: *Pasteurella multocida*, rabbits, pasteurellosis, antimicrobial susceptibility.

GENTIANA ASCLEPIADEA: IN VITRO EVALUATION OF OVICIDAL AND LARVICIDAL EFFECTS

IOZON I., BUZA V., CERNEA M., ANDREI S., MATEI LAȚIU M.C., VLASIUC I., ȘTEFĂNUȚ L.C.

University of Agricultural Sciences and Veterinary Medicine,
Faculty of Veterinary Medicine, 400372,
Calea Mănăștur No. 3-5, Cluj-Napoca, Romania
E-mail: ilinca.iozon@student.usamvcluj.ro

Summary

The research was conducted at the University of Agricultural Sciences and Veterinary Medicine in Cluj-Napoca between October 2020 and October 2021. The aim of the study was to determine *in vitro* the possible ovicidal and larvicidal effects of 70% ethanol extract of *Gentiana asclepiadea* roots on donkey strongyle. The anthelmintic potency of the extract was evaluated using egg-hatching assay (EHA) and larval development assay (LDA). The objectives of the research were to test the potential *in vitro* anthelmintic activity of *G. asclepiadea* alcoholic extract and to quantify the biologically active compounds of plant extract. This plant was chosen because it contains bitter substances (e.g. gentiopicrozide, oligosaccharides gentianose, phenolic acids, tannins) that stimulate the entire digestive system (salivary secretions, the liver, glands with internal secretion). It is also known that standardized preparations based on gentian have antipyretic, antimalarial, antibacterial, and anthelmintic action. Fecal samples from fifteen donkeys raised in a family farm located in Cluj County were collected for the testing. The obtained egg suspension was used for the following determinations: egg-hatching assay (EHA), larval development assay (LDA), and larval identification (preparation of faecal culture). The obtained results were analysed statistically and the mean reduction (%) of egg hatch and larval development were calculated. The total phenolic content of plant extract was determined using the Folin-Ciocalteu method, and total flavonoid concentration using the colorimetric assay kit (Elabscience Biotechnology Inc.). The study showed that the tested plant extract express strong ovicidal and larvicidal *in vitro* activity against donkey gastrointestinal nematodes at a concentration of total phenolic content higher than 75 µg/mL.

Keywords: plant extract, *Gentiana asclepiadea*, anthelmintic, EHA, LDA.

CLINICAL AND ANATOMOPATHOLOGICAL ASPECTS FOUND IN CALVES WITH RESPIRATORY DISEASES

**LUCA I., STANCU A., OLARIU-JURCA A., MEDERLE N., HERMAN V.,
CĂRPINIȘAN L., CRĂCIUN I.**

Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I
of Romania" from Timisoara, Faculty of Veterinary Medicine, 300645,
Calea Aradului, No. 119, Timisoara, Romania
E-mail: iasmina.luca@usab-tm.ro

Summary

Respiratory diseases are common in cattle, especially in intensive breeding systems. In the present study, several calves from a fattening farm in Western Romania were examined clinically and anatomopathologically. They had respiratory symptoms and underwent various tests to determine the main biotic agents involved. The results of all investigations suggested a mixed infection with Bovine Parainfluenza Virus type 3 (BPIV3) and *Pasteurella multocida*. The source of infection was represented by the newly introduced calves on the farm and the observed results indicate major deficiencies and management errors in terms of isolation and early vaccination of animals.

Keywords: BRD, ruminants, BPIV3.

CONSIDERATIONS ABOUT INDUCED EXPERIMENTAL PERIODONTITIS IN RATS

**MUREȘAN S.M., DREANCA A., BOGDAN S., REPCIUC C., DEJESCU C.,
PANTEA S., OANA L.**

University of Agricultural Sciences and Veterinary Medicine,
Faculty of Veterinary Medicine, 400372,
Mănăștur Road No. 3-5, Cluj-Napoca, România
E-mail: stefanamuresan@gmail.com

Summary

A lot of research has been done in the recent years to find a suitable therapy for periodontal disease and it has been shown to be very elaborate. This periodontal pathology is a widespread disease in the world and affects a large majority of the human and animal population so that periodontal disease needed to be experimentally induced in certain species, in order to successfully evaluate all the

evolutionary factors involved in its development, but also to be able to test the effectiveness of various methods of therapy, some being experimental or ongoing implementation. Therefore this experimental framework was implemented in order to test a novel therapy represented by a biomaterial enriched with a photosensitizer and essential oils extract that has the potential of reversing the associated clinical and pathological symptoms.

Keywords: chronic inflammation, periodontium, alveolar bone loss, biomaterial.

EVOLUTION OF *BRUCELLA ABORTUS* INFECTION IN CATTLE IN EUROPE BETWEEN 2016 AND 2020

OIEGAȘ S., HERMAN V., PASCU C., COSTINAR L.

Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timisoara, Faculty of Veterinary Medicine, 300645,
Calea Aradului No. 119, Timisoara, Romania
E-mail: lulu.costinar@gmail.ro

Summary

Brucella infection is readily transmissible to humans, causing acute febrile illness (undulant fever) which may progress to a more chronic form and can also produce serious complications affecting the musculo-skeletal, cardiovascular, and central nervous systems. Infection is essentially acquired by the oral, respiratory, or conjunctival routes, but ingestion of raw milk products constitutes the main risk to the general public where the disease is endemic. The aim of this paper was to monitor the evolution of *Brucella abortus* infection in cattle in Europe in the last 5 years (2016-2020). Many countries from Europe are considered to be officially free of brucellosis (OFB) but, nevertheless, the EU's attention is directed to the countries where this disease is still evolving in countries such as Albania, Greece, Italy, North Macedonia, Portugal, Russia, and Serbia. The distribution of new outbreaks by year registered an increase in 2017 in the first semester (Jan-Jun) registering 675 new outbreaks of disease, then the distribution of new outbreaks decreases registering in the 2nd semester (Jul-Dec) 2019, 387 new outbreaks of the disease. The continuing presence of *Brucella abortus* infection in search high number of outbreaks requires epidemiosurveillance which be regularly reviewed and adapted accordingly.

Keywords: brucellosis, cattle, *Brucella abortus*.

**STUDY OF MATERNAL BEHAVIOUR AND NEWBORN
DEVELOPMENT IN AFRICAN PYGMY HEDGEHOG
(ATELERIX ALBIVENTRIS)**

POPP R., IGNA V.

Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I
of Romania" from Timisoara, Faculty of Veterinary Medicine, 300645,
Calea Aradului No. 119, Timisoara, Romania
E-mail: roxy.popp@yahoo.com

Summary

The attempts to observe parturition and hoglets until a certain age often result in cannibalism or abandonment of the young by the female. This explains the lack of information regarding hedgehog births and hoglets development from parturition until the weaning age. The objective of this study is to describe the maternal behavior of the dams and the evolution of newborns of *Atelerix albiventris* from parturition until the weaning age. The study was conducted for a period of one year and a half on 3 mature African hedgehog females, with ages varying between 7- 18 months and on the hoglets that they gave birth to. As regarding the maternal behaviour, females were very protective and careful with their babies, but agresivity, selective abandonment or cannibalism were also seen. The females cross-fostering behaviour was seen as well. They were feeding and taking care of each other's hoglets like they were their own. Also, they were observed nursing the hoglets together. The hoglets were observed from birth until 6 weeks of age. The pups were weighed and measured and the changes in physical features were seen through visual inspection and noted. The average length at birth for the hoglets was 4.77 ± 0.24 cm. The average body weight at birth was 9.2 g and at 5 weeks of age 84.5 g. Sexual determination of the hoglets was possible at 7-9 days of life. Fur apparition on face and on the body started at around 12-13 days of life. All the hedgehogs had their eyes opened between 14 and 19 days of age. Hoglets started consuming solid food at 4 weeks of life.

Keywords: *Atelerix albiventris*, hoglets, maternal behaviour, cross-fostering.

STUDY REGARDING THE PATHOGENETIC, CLINICAL, AND DIAGNOSTIC COORDINATES IN LIVER AND SPLENIC CYSTIC DISEASES IN COMPANION ANIMALS

PREDA (CONSTANTINESCU) V., CRISTIAN A., CODREANU M.

University of Agronomic Sciences and Veterinary Medicine of Bucharest,
Faculty of Veterinary Medicine, 011464,
Mărăști Blvd No. 59, District 1, Bucharest, Romania
E-mail: vally_rot@yahoo.com

Summary

Hepatic cysts are defined as cystic formations, bounded by a capsule with epithelium, which can be congenital or acquired, solitary or multiple. Splenic cysts are uncommon and are often found incidentally on imaging examinations. In general, it is estimated that the pathogenesis is extremely diverse and sometimes unknown, and clinically, expressions are often reduced and uncharacteristic or absent. In this paper are presented the results of our study regarding the incidence, feature and diagnostic coordinates of the liver and splenic cysts in dogs and cats.

Keywords: splenic cysts, liver cysts, dog, cat.

UNCOMMON BRONCHOPNEUMOPATHY IN A STRAY CAT – CASE REPORT

SCHAFHUBER S., MORAR D., VĂDUVA C.

Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timisoara, Faculty of Veterinary Medicine, 300645,
Calea Aradului No. 119, Timisoara, Romania
E-mail: sophia.schafhuber@web.de

Summary

An old stray cat presented with severe respiratory distress, lethargy and poor appetite. At the physical examination the body temperature was normal, respiration rate 62/minute and the heart rate 138 bpm without significant audible cardiac murmurs. Radiographic images showed the presence of the bronchopneumopathy with a diffuse bronchoalveolar pattern throughout the lung fields, characterized by bronchial and alveolar changes and a poorly structured interstitial pattern. Serum biochemical profile revealed creatinine 1.6 mg/dl, urea 151.11 mg/dl, total proteins 8.37 g/dl, albumin 2.69 g/dl, TGP 114.68 U/l, TGO 42.08 U/l, GGT 0.32 U/l, ALP 38.30 U/l, glucose 110.74, triglycerides 56.12 mg/dl, phosphorus 4.46 mg/dl. Hematological blood analysis showed a mild non-regenerative anemia (5.51 M/ μ l red

blood cells) and leukocytosis (30.45 k/ μ l white blood cells). Based on these findings the cat was diagnosed with stage I chronic kidney disease. A further fecal investigation by Baermann technique led to the identification of an *Aelurostrongylus abstrusus* severe infection. These findings indicate that aelurostrongylosis should be included in the differential diagnosis of feline respiratory distress even in non-endemic regions and should perform appropriate diagnostics procedures in the presence of compatible symptoms.

Keywords: cat, bronchopneumopathy, *Aelurostrongylus abstrusus*, lungworm.

RABBIT COCCIDIOSIS IN *LEPUS EUROPAEUS* AND *ORYCTOLAGUS CUNICULUS* IN EUROPE: ETIOLOGICAL AND EPIDEMIOLOGICAL REVIEW

SÎRBU B.A.M., FLOREA T., SÎRBU C.B., DREGHICIU I.C., MARIN A.M., MORARU M.F., DĂRĂBUȘ GH.

Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timisoara, Faculty of Veterinary Medicine, 300645, Calea Aradului No. 119, Timisoara, Romania
E-mail: jiteabeatrice@gmail.com

Summary

Coccidiosis is one of the most important protozoon diseases caused by *Eimeria* species. Rabbits are highly susceptible to coccidiosis, especially after weaning time. The prevalence of this disease in European countries is between 3 and 100%. Coccidiosis has been reported in both domestic (*Oryctolagus cuniculus*) and wild (*Lepus europaeus*) rabbits. One of the most pathogenic species of eimeria is *Eimeria stiedae* which parasitises the liver of domestic, wild and laboratory rabbits. All other eimeria species found in rabbits are found in the intestine. Of these gut-localised species, the most pathogenic are *Eimeria intestinalis* and *Eimeria flavescens*, and the least pathogenic, affecting young rabbits, are *Eimeria irresidua*, *Eimeria matsubayashii*, *Eimeria magna* and *Eimeria perforans*. The most common species of eimeria found in European countries in *Oryctolagus cuniculus* are: *Eimeria coecicola*, *Eimeria exigua*, *Eimeria flavescens*, *Eimeria intestinalis*, *Eimeria irresidua*, *Eimeria magna*, *Eimeria media*, *Eimeria perforans*, *Eimeria piriformis*, *Eimeria roobroucki*, *Eimeria stiedae* and *Eimeria vej dovskyi*, and the most common eimeria species in *Lepus europaeus* are: *Eimeria coquelinae*, *Eimeria europaea*, *Eimeria hungarica*, *Eimeria leporis*, *Eimeria macrosculpta*, *Eimeria stefanskii*, *Eimeria tailliezi*, *Eimeria inquirendae*, *Eimeria belorussica*. However, till now, only 11 species have been described: *E. magna*, *E. media*, *E. irresidua*, *E. flavescens*, *E. intestinalis*, *E. coecicola*, *E. piriformis*, *E. perforans*, *E. exigua*, *E. vej dovskyi* and *E. stiedae*. This article summarizes the current knowledge on the rabbit coccidia and

the diseases they cause. Various aspects, such as etiology, life cycle, localization in the host, epidemiology, pathology and prevalence are discussed.

Keywords: rabbit, coccidiosis, Europe, *Oryctolagus cuniculus*, *Lepus europaeus*.

CASE REPORT OF HYDROCEPHALUS IN KITTEN POSSIBLY CAUSED BY INBREEDING

TĂMAȘ A., VELESCU S., SPĂTARU I.I., MARC S.

Banat's University of Agricultural Sciences and Veterinary Medicine" King Michael I of Romania" from Timisoara, Faculty of Veterinary Medicine, 300645, Calea Aradului No 119, Timisoara, Romania
E-mail: simona.marc@usab-tm.ro

Summary

Hydrocephalus is a neurologic disorder characterised by an excessive accumulation of cerebrospinal fluid (CSF) in the brain ventricles and arachnoid cavity caused by excessive production or inadequate re-absorption into the bloodstream by blockage in the ventricular system. CSF accumulation enlarges the brain leading to increased pressure in the skull, followed by thinning of the cranial bones and compression of the brain, including brain atrophy and a variety of symptoms, some of which may be life threatening. Hydrocephalus is classified mainly as communicating when it does not involve a blockage in the ventricular system or noncommunicating when it involves a blockage. Factors that lead to an increased incidence of this disease may be related to gene mutations, disease processes (infectious agents, brain tumor, hemorrhage, or inflammation), or teratogenic substances (griseofulvin). This anomaly can be found in all species of animals such as cows, horses, exotic animals, birds, dogs or cats as we will describe later on in this paper. Our case report involves a 1 year old female domestic cat in its first litter, unvaccinated, and uncertain date of any antiparasitic treatment applied. The cat has received a treatment to prevent the heat cycle, more likely in the period that she already has been mounted. The cat was brought to the veterinarian due to the impossibility of normal parturition. A Caesarean section was performed and five kittens were obtained, two of them had hydrocephalus, one of them fetal anasarca and two were normal and viable. Anamnesis indicated that the kittens are the result of an inbreeding between the sister and the brother. Taking into account the inbreeding, the incidence of 40% congenital hydrocephalus in this litter, concomitantly with no history of teratogenic exposure, the presumptive cause of hydrocephalus in our case is a gene mutation.

Keywords: congenital hydrocephalus, cerebrospinal fluid (CSF), gene mutation, inbreeding.