LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

VETERINARY MEDICAL USE OF CANNABIS, CANNABINOID RECEPTORS AND ENDOCANNABINOIDS SYSTEM IN MAMMALS

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Summary

The use of medical cannabis was proved since ancient when the emperor Shen Nung wrote a book in 2737 BC about medical benefits of cannabis. Historical evidences from India, Greek and Egypt explained and presented the effectiveness of cannabis use in different medical conditions: cancer, non-specific chronic pain, multiple sclerosis, epilepsy, gastrointestinal disorders, drug addiction, post-traumatic stress disorders, inflammation, acute pancreatitis, and oxidative stress. In medicine, Cannabis plants are not recognized or regulate approved as medicinal plant. The main components of cannabis (Cannabis sativa) which are important from medicinal point of view are tetrahydrocannabinol (THC) and cannabidiol (CBD) because both components interact with cannabinoid and other neurotransmitter receptors found mainly in brain. The active form of cannabis used in medicine is CBD, while THC causes intoxication and euphoria. In U.S.A., Food and Drug Administration approved in June 2018 one drug (Epidiolex) containing CBD as active ingredient for treatment of severe epilepsy forms in humans. If in humans the cannabis can be used in medicinal purpose, why cannot be promoted as treatment in animals with severe medical conditions? Literature data present the use of CBD oil, tincture, soft chews or tablets in dogs, cats and horses, which are legal in several states and is also safe. Known as cannabinoids receptors (noted as CB), CB1 and CB2 are lipophilic G protein-coupled receptors, recognized as cell membrane receptors, being part of endocannabinoid system. The cannabinoids receptors can be activated by endocannabinoids from mammals, by cannabinoids from plant (Cannabis sativa), or by synthetic cannabinoids. Prescription of CBD products for animals has to take in consideration if the products are organic or not, the concentration in CBD, and if the products are free of THC.

Keywords: cannabis, veterinary medical use, CBD, THC

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

EPIDEMIOLOGICAL ASPECTS OF SPLENIC TUMORS IN DOGS: A RETROSPECTIVE STUDY

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Summary

Splenic tumoral pathology in dogs has a high prevalence and is often diagnosed late. For the present study we reviewed records of canine patients submitted to the Pathology department between April 2007 and June 2018. Gross inspection and histological analyses were performed. According to our results, splenic tumors represented 6% (97 cases) of the total tumors diagnosed in canine patients (1629 cases). Splenic tumoral lesions were histologically diagnosed as malignant (89%) and benign tumors (11%), hemangiosarcoma being the main malignant tumor diagnosed (75%), followed by splenic lymphoma (22%). Of the 97 splenic tumours included in the present study, 64 were diagnosed as primary splenic hemangiosarcoma and 56% had metastases in different organs. Regarding breed predisposition, German Shepherds (21%), as well as mix-breed dogs (24%) seemed to be more frequently affected.

Keywords: dog, epidemiology, hemangiosarcoma, spleen

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

TESTING THE PHARMACO-THERAPEUTIC EFFICACY OF THE ALCOHOLIC EXTRACT OF *CENTELLA ASIATICA* ON THE CELL LINE HaCat

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Summary

Centella asiatica is an important medicinal herb, widely used in the Orient and popular in the West, with a broad therapeutic action that is given by the main constituents of the plant, which are the triterpenoid and saponins. The aim of this study was determination of the total and individual polyphenols content of the 10% *Centella asiatica* alcoholic extract and the evaluation of its biological and proliferative properties on the HaCat cell line, represented by human keratinocytes. For this study, the cells (keratinocytes) were divided into several batches, the extract being applied to the following concentrations: A-control, B- 5 µg / ml, C- 10 µg / ml, D- 20 µg / ml. The rate of cell proliferation expressed as a percentage, at a 24h exposure time, after application of *Centella asiatica* alcoholic extract was of 88% for the concentration of 5 µg /ml and of 87% for both 10 µg/ml and 20 µg/ml. Instead, at 48h we achieved a lower proliferation rate, of 83% for the concentration of 5 µg / ml and a proliferation rate of 84% for concentration of 10 and 20 µg / ml. The total polyphenols content at *Centella asiatica* averaged 1133.4 µg/ml with an SD of 1.3129 µg/ml and after determining the individual polyphenols at *Centella asiatica*, the most representative are: Kaempferol with the highest content of 248,209 µg / ml, Quercitin 25,001 µg / ml and Resveratrol with 20,975 µg / ml, substances with strong antioxidant properties. After studying the cellular effect and analyzing the therapeutic effect of 10% *Centella asiatica* alcohol extract on HaCat cell lines, we obtained the following: cell proliferation was observed at all doses, without dose dependence; cell growth was observed at 24h, compared with the control group; the proliferation test revealed an increase in cell development, independent of the dose administered, at both 24 and 48 hours; we did not detect any changes in the shape of the cells at 24 h exposure time, but at 48 h we observed cytoplasmic vacuoles, which suggesting lipid accumulations in the cytoplasm. Based on the research, the use of topical formula with applicability in veterinary medicine could be recommended in the treatment of various skin conditions but with further research on appropriate formulation.

Keywords: *Centella asiatica*, 10% alcoholic extract, polyphenols, antioxidants, keratinocytes

LUCRĂRI ȘTIINȚIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019 TIMIȘOARA

SPINAL CORD INJURY IN DOGS: A RETROSPECTIVE STUDY

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Summary

The most common spinal cord injury in dogs is the Intervertebral disc disease type 1 or 2. It is known that two types evolve differently depending on breed and age. The aim of this study is to assess the incidence of clinical syndrome in patients with spinal syndrome between years 2015 and 2018. To conduct this research we used the medical data registered in the Faculty of Veterinary Medicine Iași. From 524 neurological patients, 118 were included in this study and further analyzed for the following factors: breed, sex, age and neurolocalization of spinal cord syndrome. Thoraco-lumbar syndrome present in 50% of cases had the highest incidence, while lumbo-sacral syndrome was constituted only 11%. The results indicate that mongrels represented 56% of patients with spinal cord syndrome followed by Bichon with 29%. Beagles are susceptible for cervical syndrome (15% of all cases). Bichon breed 12% for the cervico-thoracic region. Mongrels represented 56% for the thoraco-lumbar region and 17% for the lombo-sacral region. Analyzing sex, the following data was obtained: 76% of males had injuries in the cervical region, 55% females in the cervico-thoracic region, 51% of females in the thoraco-lumbar region and of 60% females in the lumbo-sacral region. Patients aged less than 6 years and over 6 years had approximately an equal incidence on thoraco-lumbar syndrome, 57% and 58%. Based on this data, we can conclude that breeds such as Beagle are prone to the pathology of cervical syndrome, Bichon to cervico-thoracal syndrome and mongrels to thoraco-lumbar and lumbo-sacral syndrome. Thereby, could create an algorithm and use it for differential diagnosis.

Keywords: dog; spinal cord injury; spinal syndrome

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

RESEARCH ON ALLERGIC DISEASES IN DOGS

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Summary

In this study we tried to identify the allergens with the highest potential in triggering allergies in dogs in the western area of Romania. Through the Polycheck® test, 32 dogs with allergic symptoms aged between 6 months and 8 years were tested. We mention that the period, considered critical in triggering allergic conditions in dogs, is around the age of 3 years. Test dogs are part of breeds with predisposition for allergies and mixbreeds. The tests concluded that the main allergens involved in triggering allergic symptoms were mites, of which *D. farine* was involved in 26 out of 32 cases (81.2%), *Acarus siro* in 13 cases (40.6%), *D. pteronyssinus* in 10 cases (31.2%), *Lepidoglyphus* in 7 cases (21.8%) and *Tyrophagus* in 4 cases (12.5%). Only values that exceeded 2kU / L were considered, these being considered with increased reactivity. Other allergens that ranged above 2kU / L were represented by the different types of pollen (rye, ragweed, plantain, birch, sorrel, parietaria) în proportion of 21.8%. Based on the results, dog desensitization therapy with positive results was attempted in 5 of the 32 dogs, the rest requiring continued treatment along with desensitization.

Keywords: dogs, allergy, allergy tests (Polycheck®)

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

ANTIBACTERIAL PROFILE OF STAPHYLOCOCCAL ISOLATES ASSOCIATED WITH THE BUBALINE MASTITIS

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Summary

Between January and May 2017, 68 samples of milk were collected from bubalines reared for milk production in the south-western part of Arad County, Pecica, in a herd summing a total of 43 Bubalines. The samples were examined using indirect tests for the detection of mastitis, California Mastitis Test. From the positive tests to indirect tests, 38 samples of milk were processed for the bacteriological examination and antibiogram. The identification of the bacterial agents was realized according to standard methodology by studying the cultural, morphological and biochemical characters. The antibiotic susceptibility test was performed using Kirby-Bauer diffusion method using the following antibiotics: methicillin, ampicillin with sulbactan, tetracycline, doxycycline, gentamycin, kanamycin, erythromycin, vancomycin, ciprofloxacin, polymyxin B, novobicin, rifampicin, ceftrioxone, cefoxitin, cefaclor. Following the evaluation of the milk samples, 26 strains of staphylococcus were have been isolated, 19 of the coagulase-positive (*S. hyicus* and *S. aureus*) and 7 coagulase-negative strains (*S. haemolyticus*, *S. sciuri* and *S. epidermidis*). The antibiotic susceptibilty of these staphylococcus strains isolated from the mastitic milk was variable depending on the antibiotic groups. For the β-lactams used (methcillin, ceftriaxone, cefoxitin, cefaclor, ampicillin with subactan), the antibiotic sensitivy was maximal, except methcillin where resistant strains were isolated from. All the isolated strains were resistant to polymyxin B, and sensitive to ciprofloxacin.

Keywords: bubaline, mastitis, Staphylococcus, antibacterial

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII (1), 2019, TIMIŞOARA

MEGAESOPHAGUS DUE TO MYASTHENIA GRAVIS IN DOG – CASE REPORT

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Summary

A 9 years old male mixed breed of shepherd dog was diagnosed with megaesophagus. The subject showed evident clinical signs of a severe pathological state, occurred in about two weeks. The symptoms were cough, dyspnea, dysphagia, regurgitation, general weakness state and fever. Megaesophagus was confirmed by radiography, which revealed the dilation of the thoracic part of the organ. It was not possible to do the specific test for the Myasthenia gravis but the specific clinical signs lead to the diagnostic. The co-existence of Myasthenia gravis and megaesophagus usually occurs in small animals, in particular in dogs, and it starts up with megaesophagus as an initial symptom of Myasthenia gravis. The disease management was difficult because of the complication with aspiration pneumonia, which caused the death of the patient due to cardiorespiratory insufficiency.

Keywords: dog, megaesophagus, Myasthenia gravis, aspiration pneumonia

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

COMPARATIVE RESEARCH ON ANTIMICROBIAL RESISTANCE IN BACTERIA ISOLATED FROM DOMESTIC AND WILD ANIMALS (CHAMOIS - *RUPICAPRA RUPICAPRA*)

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Summary

Monitoring the circulating pathogens in domestic and wildlife populations is extremely important in order to understand the transmission and evolution of bacterial diseases between wild and domestic animals as well as the epidemiological circuit between them.
The research aimed the frequency of resistance phenotypes in eight bacterial strains, isolated and identified from wild living chamois (*Rupicapra rupicapra*) from alpine environments, compared to strains isolated from domestic animals (dogs). The eight strains from the chamois isolated from faeces were included in *L. monocytogenes*, *E. coli* and *Salmonella spp.*, based on cultural and morphological characters, as well as by the use of selective chromogenic media.
Antimicrobial resistance was determined by the Kirby-Bauer disc-diffusion method using, for this purpose, Mueller-Hinton medium and biodiscs with nine antibiotics. The results showed a higher resistance to strains collected from domestic animals compared to wild animals, with higher resistance to colistin sulphate and penicillin G, followed by tetracycline, amoxicillin with clavulanic acid and streptomycin.

Keywords: antimicrobial resistance, bacteria, chamois, phenotypes

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

PREVALENCE OF CANINE GASTROINTESTINAL HELMINTHS IN TIMIȘOARA

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Summary

In Romania, the number of dogs with owners, as well as stray dogs, has increased significantly in recent years. The level of environmental pollution with parasitic elements has also increased, some of them of great importance to humans.

In this study, 207 dogs (103 strays from the public shelter and 104 dogs with owners) from Timișoara were investigated for gastrointestinal helminths, using the Willis flotation method. The prevalence of nematodes in fecal samples gathered from owned dogs, in descending order, was: *Trichocephalus vulpis* (42.85%), *Toxocara canis* (36.73%), *Ancylostoma caninum* (14.28%), *Toxascaris leonina* (4.08%) and *Strongyloides stercoralis* (0.96%). In shelter dogs, the following prevalence was recorded: *Ancylostoma caninum* (97%), *Toxascaris leonina* (32%) and *Toxocara canis* (19%). The occurence of parasitism was found to be high among the age group of 0-6 months and in large breeds and mixed breeds. The most common monoparasitism was with *Ancylostoma caninum* (25%), found in the public shelter. In the case of multiparasitism, the most frequent combination was *Ancylostoma caninum* and *Toxascaris leonina* (11.5%).

Keywords: gastrointestinal helminths, prevalence, public shelter

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

STUDY ON THE VARIATION OF WHITE BLOOD CELLS COUNT IN DIGESTIVE DISORDERS IN DOGS

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Summary

The aim of this study was to evaluate the association between the magnitude of the leukocyte quantitative changes and the primary disorders of the digestive system in which they occurred. The study was performed by analyzing the complete blood count (CBC) from 45 dogs diagnosed with digestive disorders. The disorders of the digestive system in which the presence of leukocytosis was found more frequently were represented by: non-specific gastroenteritis (32%), acute pancreatitis (29%), inflammatory bowel disease (24%), chronic hepatitis (9) and other digestive disorders in proportion of 6%. The magnitude of leukocytosis was moderate in chronic hepatitis, inflammatory bowel disease and acute pancreatitis, while in non-specific gastroenteritis the increase in leukocyte count was of small magnitude. In this study, the digestive diseases that developed leukopenia in dogs, with the highest prevalence was parvoviral enteritis (72%), followed by non-specific gastroenteritis (14%) and other digestive disorders (14%).

In conclusion, non-specific infections and inflammations of the digestive tract are more frequently accompanied by moderate leukocytosis, while specific enteritis lead at least in the onset to leukopenia.

Keywords: white blood cell, leukocytosis, leukopenia, digestive disorders, dog

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

RESEARCH ON FELINE HERPESVIRUS INFECTION

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Summary

The presence of feline herpesvirus infection in a cat population was demonstrate using a commercial kit – Fluo FELINE HERPES VIRUS Agrolab. From 20 serum samples which are tested, 8 samples were positive. It is well known that subclinical cats, which are serologically positive, are carriers and spread the virus, contributing to the persistence of virus in animal population.

Keywords: cat, herpes virus, serum

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

MAGNETIC RESONANCE IMAGING FINDINGS IN TWELVE DOGS WITH HYDROCEPHALUS

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Summary

Hydrocephalus is defined as an excessive accumulation of cerebrospinal fluid (CSF) in the cranial cavity and dilation of the ventricular system. It is not a specific disease, but rather a multifactorial disorder with a variety of pathophysiological mechanisms. Is a common congenital or acquired neurological disorder in dogs, affecting both young and adults patients of any breed but frequent toy-breeds. Neurologic signs associated with hydrocephalus are variable and include a specific series of signs depending on the age of the patient. In young animals with congenital hydrocephalus we can usually see signs like restlessness, behavior problems and seizures, while older animals with acquired hydrocephalus can show signs such as blindness, circling and in severe cases patients often deteriorate to stupor or coma. The aim of this study was to evaluate the cerebral ventricular system morphology and to compare cases and make correlations between them using Low-field Magnetic Resonance Imaging (MRI). Therefore, medical records from the Imaging Center of the Faculty of Veterinary Medicine of Bucharest were reviewed in order to identify dogs diagnosed with hydrocephalus. Twelve dogs, 8 males (M) and 4 females (F) of different breeds, between five months and eight years old, with clinical, neurological signs were included in the study. The most common clinical sings were represented by seizures, ataxia and circling. Following the MRI examination, we were able to describe and classify the affection in order to make a differential diagnosis .Six cases were included in the category of congenital hydrocephalus; five cases showed acquired hydrocephalus and one idiopathic case. Due to the fact that clinical symptoms differ, using advanced imaging techniques is important in order to have a precise diagnosis and to classify the pathology. Therefore MRI is an essential tool for the detection of hydrocephalus because it has the best diagnostic volume and is a very sensitive method.

Keywords: magnetic resonance imaging, hydrocephalus, dogs

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

PRELIMINARY STUDY ON THE PREVALENCE OF *DIROFILARIA IMMITIS* AND TREATMENT EFFICACY IN SHELTER DOGS

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Summary

Due to an increased number of dogs diagnosed with dirofilariosis in a dog shelter from Timisoara, a protocol was introduced in order to detect and treat dogs with *Dirofilaria immitis*. A number of 257 samples were taken in EDTA vacutainers and consecutively examined by drop test and Knott modified test. Furthermore, certain characteristics, such as sex, age, length of fur and body weight were evaluated. Blood analysis determined that 23.3% of dogs were positive.They were subsequently treated with doxycycline, followed by topical imidacloprid / moxidectin solution. So far 30 dogs had a 6 month waiting period after having been treated; those were tested again with an Idexx SNAP Heartworm RT Test. The post-treatment test revealed that a number of 22 dogs were negative and 8 dogs tested positive again. The treatment efficacy rate was 73.3 % which, taking the alternative treatment schemes and their benefits and risks into consideration, can be stated as satisfying. The risk group is represented by older, high-weight, male dogs with short fur. The evaluation of the characteristics allows a better understanding of risk groups in dogs.

Keywords: *Dirofilaria immitis*, dirofilariosis, shelter dogs

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

PCR DIAGNOSIS OF FASCIOLA HEPATICA IN INTERMEDIARY HOSTS-SNAILS COLLECTED FROM THE ENVIRONMENT

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Summary

Fasciolosis is a zoonotic trematodosis of great importance, transmitted to definitive hosts, such as herbivorous mammals and even humans through contaminated water or green grass. The causative agents of this disease are *Fasciola hepatica* or *Fasciola gigantica*.
The aim of this study was to identify the juvenile life cycle stages of this trematode in the *Lymneidiae* snails which act as intermediate hosts. This was done in order to establish the *Fasciola*-contaminated areas in the context of animal movement as help in the parasitic control of this disease.
123 (51.3%) of the total number of collected snails were positive for the presence of *F.hepatica* cercaria, confirmed by PCR. The prevalence of the disease, respectively of the juvenile forms ranged according to the collection sites of the snails from 40 to 70.6. Two sample sites were negative.
The current study brings back aspects of a very important disease, of great economical interest in the pathology of farm animals and it is the first that we know of, conducted in Romania.
Keywords: *Fasciola hepatica,* intermediary host, *Galba truncatulla,* PCR

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

OVERVIEW ON THE DIAGNOSIS AND TREATMENT OF CANINE ATOPIC DERMATITIS (CAD) -WHAT IS OLD AND WHAT IS NEW

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Summary

Canine atopic dermatitis (CAD) is a multifaceted disease, with causes among the most various-from environmental allergens to food allergens.

The diagnosis of this disease is very challenging for the veterinarian because none of the signs are pathognomonic. Various criteria regarding the clinical signs have been selected as eligible in order to help the clinician set a diagnosis. Despite the fact that serology is helpful in identifying the implicated allergens, it is of no use for the primary diagnosis of the condition.

The treatment options are also a challenge especially from the pet-owner-vet relationship point of view. Since CAD is a life-long condition, it is very difficult for the clinician to give the owner a treatment plan, which can satisfy him financially and to have a quick onset in relieving their pet from symptoms. The classical treatment includes corticotherapy and antihistaminic drugs. More recent treatment options are based on immunotherapy or immunomodulating agents such as oclacitinib (Apoquel), cyclosporine or tacrolimus and the latest discovery in the field of CAD treatment is based on monoclonal antibodies that target a key-point of the allergic disease: IL-31 (Cytopoint).

Keywords: Canine, atopic, dermatitis, treatment, diagnosis

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

DETECTION OF POLYPARASITISM IN A LION HEAD RABBIT AND THERAPEUTIC PROTOCOL RESULTS. CASE REPORT

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Summary

In the Parasitology Clinic of the Faculty of Veterinary Medicine Timisoara, an owner brought a 7-month-old Lion Head rabbit. The reason for the consultation was the presence of auricular injuries. Skin dermatological examination, microscopic examination of the skin scrapings and fecal exams were performed. The results revealed the presence of *Psoroptes spp.* mites in the rabbit's ears, a large population of *Pulicidae spp.* flees and *Eimeria spp.* oocysts. A topical acaricide and therapeutically protocol against protozoa has been applied. After 12 days of treatment, remission of auricular lesions, reduction in the number of oocysts and the flea population were observed. A rabbit polyparasitism can have serious health effects, but a suitable therapeutic protocol can heal the animal.

Keywords: rabbit, polyparasitism, treatment

LUCRĂRI ŞTIINŢIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019, TIMIŞOARA

MONITORING THE INTESTINAL BARRIER FUNCTION USING TEER MEASUREMENT TECHNIQUE

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Summary

Over the time, *in vitro* models have been developed to study molecular transport across barrier tissues. The epithelial and endothelial cell layers provide a barrier between different tissues while also selectively transporting molecules across the barrier. The presence of tight junctions (*zonula occludens*), specifically regulate the flow of ions and solutes through the paracellular space, and the adherens junctions, regulate cell-cell interactions.

To study the function of a barrier tissue, especially an *in vitro* cultured barrier tissue, the cell layer must have high integrity.

This property can be measured using a simple and very convenient technique, the transepithelial/transendothelial electrical resistance (TEER).

The electrical resistance values measured by this method are a powerful indicator to assess the integrity of cell monolayers before they are used as experimental models to determine the transmembrane transport of some drugs or chemicals.

The equipment used for TEER measurements in epithelial cells in culture is the Millicell ERS-2 (Electrical Resistance System). TEER measurements can be performed in real time without cell damage. An increase in TEER detected with the electronic circuit of the Millicell ERS-2 meter and its electrode is an indicator of cell monolayer health and confluence.

Keywords: TEER, cultured cell, intestinal barrier

LUCRĂRI ȘTIINȚIFICE MEDICINĂ VETERINARĂ VOL. LII(1), 2019 TIMIȘOARA

PREVALENCE OF OVINE (*OVIS ARIES*) NON-NEOPLASTIC PULMONARY LESIONS IN TRANSYLVANIA (ROMANIA)

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Summary

Ovine respiratory diseases represent a major problem among sheep populations due to significant economic losses, especially affecting the adult animals. The purpose of this study was to determine the prevalence of the main ovine respiratory diseases in some counties from Transylvania (Romania); a detailed post-mortem characterization of the non-neoplastic pulmonary diseases of sheep was also performed. The samples were represented by pulmonary tissues that showed macroscopic changes, collected as a result of examination of 2349 lungs in two major slaughterhouses from Transylvania region (Sibiu and Bistriţa Năsăud counties). Samples were collected and processed appropriately for histological, microbiological and parasitological examinations. In this study, a very high prevalence (82.67%) of lung parasitic diseases was noticed. The highest prevalence was recorded for verminous pneumonia (58.1%), followed by mixed parasitic infestation of *Strongylus spp*. and *Echinococcus spp*. (14.9%). The predominant parasitic disease was the co-infestation with *Protostrongylus spp.* and *Muellerius spp.* Bacterial pneumonia with gross features consisting with caseous lymphadenitis and pasteurellosis had a relatively low prevalence (2.8%). Non-tumoral viral infections with lentivirus (ovine progressive pneumonia-Maedi) was encountered in 0.97% of the cases. No pulmonary lesions were detected in 13.56%. We concluded that parasitic infestation is the most important pulmonary disease in sheepflocks in Transylvania. Similar studies covering other geographical areas from Romania in order to obtain a complete picture of the ovine pulmonary pathology in our country are needed.

Keywords: epidemiology, sheep, pneumonia, strongyloses

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EFFECTS OF INTRAVENOUS GADOLINIUM ADMINISTRATION UPON PULSE RATE, RESPIRATORY RATE AND MEAN ARTERIAL PRESSURE ON GERIATRIC DOGS DURING MAGNETIC RESONANCE IMAGING

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Summary

This study was performed in order to evaluate the effects of contrast media administration upon pulse rate (PR), respiratory rate (RR) and mean arterial pressure (MAP) on geriatric dogs during magnetic resonance imaging (MRI). The study was conducted on 21 geriatric dogs that were presented at Faculty of Veterinary Medicine in Bucharest for neurological examination followed by MRI. Preanaesthetic examination was performed and patients assigned to their ASA II-III status (American Society of Anesthesiology). The patients were premedicated with Midazolam 0.2 mg/kg, Butorphanol 0.3 mg/kg and Ketamine 5 mg/kg intramuscularly (IM), induction was made with Propofol 4-6 mg/kg intravenously (IV). Afterwards, all patients were intubated and maintained with Isoflurane in 100% Oxygen. Gadolinium was administered 50 minutes after induction. Pulse rate, respiratory rate and mean arterial pressure were measured before intravenous administration of the gadolinium and 5 minutes after IV administration. The results suggested that minor variations of PR, RR and MAP were most frequent (12 dogs – 57,14%), followed by 3 dogs (14.28%) that had moderate variations and 6 dogs (28.57%) that didn`t show any changes. Before administration of contrast media, the mean average results for MAP was 75.33 mm/Hg, for RR was 12.28 bpm and for the PR was 98,95 bpm. Five minutes after administration of the contrast media, the mean average results were for MAP 66.71 mm/Hg, for the PR was 96 bpm and for RR was 12.94 bpm. There is a significant positive relationship between the values of MAP, PR and RR before administration of the contrast media and 5 minutes post administration ($p < 0.05$). In conclusion, minor to moderate reactions to the contrast media are frequent; severe reactions represented by a decrease of the PR, RR or MAP are not likely to occur following administration of the contrast media for MRI procedure.

Keywords: contrast media, geriatric dogs, magnetic resonance imaging, reactions