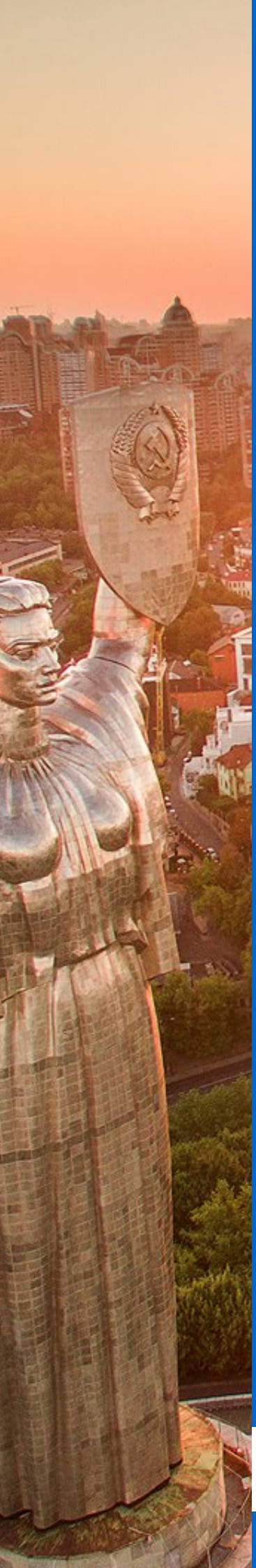

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Ilker Camkerten
Güzin Camkerten
Gaye Bulut
Duygu Budak

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Dear Scientist,

The second International Congress on Advances in Veterinary Sciences & Technics (icavst) was organized in Kiev, Ukraina. We are very happy for organizing this congress in such a beautiful city and country that we have strong historical ties.

We wanted to make this conference little bit special by bringing scientist together from different disciplines of veterinary area and also to open new research and cooperation fields for them. In this sense, we desired to bring the distinguished scientist together to get know each other and to develop and implement new joint projects.

The scientist joined the congress was from different country and mostly from Turkey. Total over the one hundred scientist were registered in the congress. The total number of submission were 50 and after a careful evaluation 77 submissions were accepted by our scientific committee and 7 of them were accepted as poster presentation and 70 of them were accepted as oral presentation and all those presentation was taken place in the conference booklet.

We would like to send our special thanks to Mr. Musa Köse and Mr. İsmet Uzun, ZENITH Group workers for their special efforts. and finally the most importantly I would like to thank to all the participants individually who came from far away to join this conference.

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FVM: Faculty of Veterinary Medicine

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INVITED SPEAKER

Nanotechnology in Veterinary Medicine: Current and Future Prospects

Mert Pekcan

ANKARA UNIVERSITY FACULTY OF VETERINARY MEDICINE DEPARTMENT OF BIOCHEMISTRY

pekcan@ankara.edu.tr

Nanotechnology is a branch of science, engineering, and technology conducted at the nanoscale which is usually kept below 100 nanometers. In another perspective, it is the manipulation of matter at the atomic and molecular level to show remarkably distinguished properties. The application of nanotechnology in medicine covers using nanoparticles to deliver drugs, heat, light or agents to certain types of cells or tissues. These nano sized particles are fabricated which allows targeted treatment of those cells. Nanotechnology has been a choice in diagnostic and therapeutic areas in human medicine more than several decades but its application in veterinary medicine is fairly new. Nanotechnology commonly utilized in human and veterinary medicine is for the diagnosis and treatment of the disease. The nanodelivery systems provide the delivery of pharmaceuticals, nutraceuticals, nutrients, food supplements, bioactive compounds, probiotics, chemicals, and vaccines. The mutual concern in both human and veterinary medicine is the increase in antibiotic resistance. In this respect, nanomedicine proved to be an efficient tool in fighting bacterial malignant infections. Other than those mentioned above it is possible to apply nanotechnology in cryopreservation or nanopurification of sperm in the veterinary field which does not seem to be possible in human medicine. In this context, various applications and the use of nanotechnology in veterinary medicine will be discussed and presented.

ORAL PRESENTATIONS

Relationship of unconscious flaxseed consumption with pancreas: An in vivo study

Meltem Ozgöçmen[a], **Sükriye Yesilot[b]**

[a] SULEYMAN DEMIREL UNIVERSITY, SCHOOL OF MEDICINE, ISPARTA-TURKEY
[b] BURDUR MEHMET AKIF ERSOY UNIVERSITY, BUCAK SCHOOL OF HEALTH, BURDUR-TURKEY

syesilot@mehmetakif.edu.tr

Abstract:

Aim: Flaxseed is an important plant grown worldwide. Most of the observed benefits and the preventive properties related to illnesses have been attributed to its Omega-3 fatty acid and α-linoleic content. Due to the high cost of drugs, people resort to alternative medication to treat diabetes and other diseases. Flaxseed was usually studied in diabetic patients and decreased the amount of insulin. Studies mostly focuses on the positive effects of flaxseed. Very few studies are aimed investigate harmful effect of flaxseed. The purpose of this study was to investigate negative effects of flaxseed on short-term and more than necessary consumption on pancreas tissues. Material and methods: In our study, 32 female Wistar rats were used; Group I; control (n: 8, given drinking water every day with gavage), Group II (Low-dose flaxseed group; 1,4 mg / g flaxseed gavage daily for 7 days) Group III (Medium-dose flaxseed group; 2,8mg / g flaxseed gavage every day for 7 days), Group IV (High-dose flaxseed group; 5,6mg / g flaxseed was given by gavage every day for 7 days) and grouped. Results: At the end of the experiment, the pancreas tissue was taken by histochemical analysis and stained with H-E and examined under a microscope. No histopathological findings were observed in the control group. In the experimental group (group IV) given flaxseed, shrinkage in langerhans islets, mononuclear cell infltrasions and in some area; hemorrhage-congestion was observed when compared to the control group. Conclision: Flaxseed cause damage to the pancreas tissue in the case of short-term and more than necessary consumption. In this sense, we believe that our study will lead other studies for time and dose of the experiments.

Keywords: Flaxseed, pancreas, rat

Factors affecting the increase in inventory value per cow in dairy cattle enterprises

Ahmet Cumhur Akın[a] , Cevat Sipahi[a]

[a] MEHMET AKIF ERSOY UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF ANIMAL HEALTH ECONOMICS AND MANAGEMENT, BURDUR-TURKEY

a.cumhurakin@gmail.com

Abstract:

In today, the profitability and sustainability of dairy cattle enterprises depend on many factors. In this context, the right decisions in the management of enterprises will help reduce costs and increase profitability. In the reduction of costs in dairy cattle farms, as important as feed is to manage the herd inventory correctly and to provide the inventory value increase at the optimum level. The material of this study is data on the inventory records of 50 medium-sized dairy cattle farms operating in Burdur province in 2017 and 2018. In this study, backward stepwise regression analysis procedure was used in dairy cattle farms in order to evaluate the factors affecting the increase in inventory value per farm. The T-test and F-test were used to measure the degree of interaction between dependent and independent variables in the model and to determine whether the results were statistically significant in the confidence interval. According to the results of the analysis, regression analysis was applied with the backward method to 40 variables which were estimated to have an effect on the increase in inventory value per farm in dairy cattle farms. As a result of the analysis, the model was reduced to three variables that were statistically significant. These variables were determined as the percentage of cows being culling, profit-loss per cow, and total income per cow. The regression analysis results of the model were found as R2:0.654, F:31.853 and p:<0.0001. In addition, Durbin-Watson coefficient was 1.524 and VIF values were 1.180; 1.801 and 1.995. Inventory asset change is one of the factors that are important in the profitability of dairy cattle enterprises. It is important to implement herd management correctly and rationally in order to ensure the increase in inventory value in dairy cattle. In this context, especially the correct selection of the cows to be culling, herd management and the effective use of animal health economy in decision-making mechanisms of enterprises can increase profitability due to increases in inventory assets.

Keywords: inventory asset increase, culling cow, income

Ultrasonographic features of kidneys in the honamli goats

Omer Gürkan Dilek[a] ,**Ramazan Yıldız[b]**

[a] MEHMET AKIF ERSOY UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF ANATOMY, BURDUR, TURKEY
[b] MEHMET AKIF ERSOY UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF ANATOMY, BURDUR, TURKEY

ramazanyildiz@mehmetakif.edu.tr

Abstract:

Ultrasonography helps us to evaluate changes in kidneys size, status of cortex, medulla and pelvis, existence of massive lesions, neoplasia, urolithiasis, hydronephrosis, bladder diverticulum cystitis, calculies, obstructions of lower urinary tracts and patient response to treatment. The aim of the present study was to provide a reference range of normal values for the ultrasonographic appearance, dimensions and location of the kidney at Honamlı goats. Ten mature female Honamlı goats were used in the current study. Ultrasonography was performed by longitudinal and transversal planes to evaluate renal structures. Ultrasonographic examination was performed by specialist of diagnostic imaging and internal medicine. Echogenicity and size of cortex, medulla, and renal sinuses were evaluated. The echogenicity of the renal cortex, medulla and sinus was assessed and compared. The renal cortex could be easily distinguished from the renal medulla and its pyramids. The kidney had a longitudinal oval shape, and the renal capsule appeared as a thin echogenic line, which was not always distinct, surrounding the renal parenchyma. The renal parenchyma surrounding the renal sinus was homogeneous with fine, evenly distributed echoes. The results of this study will help to anatomical assessment of kidney on Honamlı goats using ultrasonography.

Keywords: Ultrasonograpy, kidney, Honamlı goats

Eco-Friendly preparation of zinc oxide nanoparticles using grape seed extract and it's antimicrobial activity

Soner Dönmez[a], **Erhan Keyvan[b]**

[a] MEHMET AKIF ERSOY UNIVERSITY, BUCAK SCHOOL OF HEALTH, BURDUR, TURKEY
[b] MEHMET AKIF ERSOY UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF FOOD HYGIENE AND TECHNOLOGY, BURDUR, TURKEY

erhankeyvan@mehmetakif.edu.tr

Abstract:

Objective: Plant extracts are used to syntheses nanoparticles as possible eco-friendly alternatives to chemical and physical methods. Eco-friendly green synthesis processes avoid the use of toxic chemicals and high energy inputs. Zinc oxide nanoparticles (ZnO NPs) are known to be one of the nanoparticles with effective antibacterial activity. In the present work, ZnO NPs were synthesized by green method and evaluated its antimicrobial activity. Material-Method: Green synthesis of ZnO NPs was carried out by using grape seed extract. ZnO NPs were characterized by UV-Vis spectroscopy and scanning electron microscopy (SEM) with Energy dispersive X-ray (EDX) patterns. The antibacterial activity was performed against Staphylococcus aureus bacteria by disc diffusion agar assay using different concentrations (0.03125, 0.0625, 0.125, 0.25, 0.5 and 1.0) mg/ml of ZnO NPs with gentamicin and ciprofloxacin antibiotics. Results: The peak related to ZnO NPs was observed at around 350 nm by the UV-Visible analysis. The SEM micrographs of ZNPs proved that they had nano-sized range and uniform distribution. Zone diameters of the disc diffusion agar assay against to S. aureus were detected as 8 to 12 mm at 0.25, 0.5 and 1.0 of the ZnO NPs concentrations.

Conclusion: The current study has clearly demonstrated that eco-friendly prepared ZnO NPs shows good bactericidal activity against Gram-positive (Staphylococcus aureus) bacteria.

Keywords: Zinc oxide nanoparticles, grape seed extract, antimicrobial activity

Nasopharyngeal polyp in a cat: Clinical assessment

Kerim Emre Yanar[a], Murat Ilgün[b], Omer Aydın[a], Mustafa Sinan Aktaş[a]

[a]Ataturk University, Faculty of Veterinary Medicine, Department of Internal Medicine, Erzurum, Turkey
[b]Ataturk University,Graduate School of Health Sciences, Depertmant of Veterinary Internal Medicine, Erzurum, Turkey

emre.yanar@atauni.edu.tr

Abstract:

A 3-month-old mixed breed female cat with sneezing, runny nose, inappetence and voice change was included in the present case. Clinically was defined serous tear discharge, mucopurulent nasal discharge and increased sensitivity in trachea. Examination of the oral cavity, it was observed that the soft palate was bulged and had a different appearance from the normal anatomical structure. In the hematological (WBC, LYM, MON, NEU, BAS, EOS, LYM %, BAS %, MON %, NEU %, EOS %, RBC, HGB, HCT, MCV, MCH, MCHC, RDWc, PLT, MPV, PCT, PDWc, PDWs, RDWs), biochemical (Urea, creatinine, ALT, AST, ALP, CK-MB, CK-NAC, GGT, LDH, amylase, total protein, triglyceride, cholesterol, glucose, uric acid, P, Mg, Ca, Cl) and radiographic examinations were not detected significant alterations. On the other hand, examination of the by the contrast-enhanced computed tomography (CT) nasopharyngeal polyp was determined in the cat. After the polyp was removed by a simple invasive procedure, clinical findings of the cat began to improve on the second day. As a result, it was concluded that the possibility of nasopharyngeal polyps should be evaluated in cats with inappetence, sneezing, runny nose and voice changes, additionally oropharyngeal examination and computed tomography should be used for definitive diagnosis of the diseases.

Keywords: Cat,Nasopharyngeal Polyp, Voice Change, Computed Tomography

Bilateral tibial tuberosity advancement with cranial fixation

Zbigniew Adamiak[a], Katarzyna Kalinowski[b], Joanna Glodek[a], Piotr Holak[a], Marek Jalynski[a]

[a]UWM OLSZTYN, Department of Surgery and Radiology with Clinic, POLAND
[b]PRIVATE CLINIC, POLAND

zbigniew.adamiak@wp.pl

Abstract:

Rupture of the cranial cruciate ligament of the stifle joint is a common cause of hind limb lameness in dogs. Bilateral cruciate ligament rupture has been reported to occur in up to 31% of dogs5. Bilateral ruptures can be stabilized in a two-stage procedure involving two separate surgeries of each knee or in a single-stage procedure where both stifle joints are operated in the same session. The main advantages of single-stage reconstruction include a single exposure to general anaesthesia and lower treatment cost. Disadvantages include higher risk of implant breakage, avulsion fractures and infection. The present case report describes the outcome of stifle joint stabilization by a single-stage bilateral tibial tuberosity advancement technique with cranial fixation (TTA CF) in five dogs. In all cases return to the limbs normal function was achived.

Aims: The aim of the study was to present a new technique of tibial tuberosity advancemet in the treatment of bilateral cranial cruciate ligament rupture.The TTA CF procedure was carried out in five dogs. Both cage and screw size and cage advancement size were estimated using the common tangent method

Clinical significances of the results: In this report, a single-stage bilateral TTA CF technique was effective at resolving lameness associated with cranial cruciate ligament rupture without major complication.

Keywords: Dog, Stifel Joint , TTA Cf

Canine Parvovirus Type 2 (CPV-2): Strains circulating in some selected states in Nigeria

Tion Matthew Terzungwe[a], Jambol Anvou[b], Saganuwan Alhaji Saganuwan[a], Apaa Thaddaeus Ternenge[a], Ogbu Kenneth Ikejiofor[c], Igoh Ann Fvour[a], Shima Felix Kundu[d], Tarlinton Rachael[e], Fotina Hanna[f]

[a]COLLEGE OF VETERINARY MEDICINE, UNIVERSITY OF AGRICULTURE, MAKURDI, BENUE STATE, NIGERIA
[b]DEPARTMENT OF BIOTECHNOLOGY, NATIONAL VETERINARY RESEARCH INSTITUTE, P.M.B. 01, VOM, PLATEAU STATE, NIGERIA
[c]FEDERAL COLLEGE OF ANIMAL HEALTH AND PRODUCTION TECHNOLOGY, P.M.B. 01, VOM, PLATEAU STATE, NIGERIA.
[d]FACULTY OF VETERINARY MEDICINE, UNIVERSITY OF IBADAN, OYO STATE, NIGERIA.
[e]SCHOOL OF VETERINARY MEDICINE AND SCIENCE, SUTTON BONINGTON CAMPUS, UNIVERSITY OF NOTTINGHAM, LE12 5RD, UNITED KINGDOM
[f]SUMY NATIONAL AGRARIAN UNIVERSITY, 160 HERASYMA KONDRATIEVA STREET, SUMY, UKRAINE

tions_doc@yahoo.co.uk

Abstract:

Canine Parvovirus type 2 (CPV-2) is a highly contagious virus affecting dogs and cats of all ages, but puppies between 6 weeks to 6 months of age are mostly affected. *CPV-2a, CPV-2b* and *CPV-2c* known to cause gastroenteritis and myocarditis (puppies) are the three current strains recognized globally. The gross impact of *CPV-2* gastroenteritis on the health of owned dogs informs the decision to investigate *CPV-2* variants prevalent in Nigeria. Faecal samples were collected from 44 dogs presented at five different veterinary clinics across Nigeria in 2016 to 2017. All samples were collected following clinical examination of dogs with clinical signs consistent with *CPV-2* gastroenteritis and SensPERT® *CPV-2* antigen test. Over eighty percent of dogs examined were positive for *CPV-2* via both the commercially available in-clinic SensPERT® *CPV-2* antigen test kit and PCR. Further sequencing and analysis of fragments of VP2 gene amplified from a total of 28 samples indicated the presence of *CPV-2a* and *CPV-2c.* High prevalence of *CPV-2* gastroenteritis was recorded in dogs <6 months (72.3%) than those >6 months (22.7%) of age, and male dogs were more affected (61.4%) than female (38.6%) dogs. Our findings also demonstrated that clients presented more exotic (79.5%) dogs than Nigerian indigenous dogs (20.5%) and only 43.2% of the total dogs presented received vaccination against *CPV-2*. This study indicates that *CPV-2a* and *2c* variants are currently circulating in Nigeria.

Keywords: Dogs, *Canine Parvovirus Type 2* Strains, PCR, DNA, Sequencing

Acknowledgements: *This study is supported by University of Agriculture Makurdi through TET-Fund Intervention.*

Isolation and proliferation of spermatogonial cells from ghezel sheep

Babak Qasemi-Panahi[a], Mansoureh Movahedin[b], Gholamali Moghaddam[c], Parviz Tajik[d], Mortaza Koruji[e], Javad Ashrafi-Helan[f], Seyed Abbas Rafat[g]

[a]UNIVERSITY OF TABRIZ, FACULTY OF AGRICULTURE
[b]DEPARTMENT OF ANATOMY, FACULTY OF MEDICAL SCIENCE, UNIVERSITY OF TARBIAT MODARES, TEHRAN, IRAN
[c]DEPARTMENT OF ANIMAL SCIENCE, FACULTY OF AGRICULTURE, UNIVERSITY OF TABRIZ, TABRIZ, IRAN
[d]DEPARTMENT OF THERIOGENOLOGY, FACULTY OF VETERINARY MEDICINE, UNIVERSITY OF TEHRAN, TEHRAN, IRAN
[e]DEPARTMENT OF ANATOMY, FACULTY OF MEDICAL SCIENCE, IRAN UNIVERSITY OF MEDICAL SCIENCES, TEHRAN, IRAN
[f]DEPARTMENT OF PATHOBIOLOGY, FACULTY OF VETERINARY MEDICINE, UNIVERSITY OF TABRIZ, TABRIZ, IRAN
[g]DEPARTMENT OF ANIMAL SCIENCE, FACULTY OF AGRICULTURE, UNIVERSITY OF TABRIZ, TABRIZ, IRAN

babakpanahi98@gmail.com

Abstract:

Background: Sheep industry has taken steps toward transforming itself into a more efficient and competitive. There are many varieties of sheep breeds in the world that each breed served a useful purpose in the economies of the different civilizations. Ghezel sheep is one of the Iranian important breeds that are raised for meat, milk and wool. Field of spermatogonial cell technologies provides tools for genetic improvement of sheep herd and multiple opportunities for research. Spermatogonial cells are only cells capable of transmitting genetic information to future generations.

Methods: This study was designed to extend the technique of isolation and invitro proliferation of spermatogonial cells in Ghezel sheep. A testis biopsy were interred in two digestion process. Firstly, testis pieces was floated in DMEM riched with 1 mg/ml collagenase type IV, 1 mg/ml trypsin, 1 mg/ml hyaluronidase type II and then incubated at 37°C for 40 min. After washing in DMEM, seminiferous tubules were interred in secondary digestion process, with the same enzymes for 20 min in 37°C.

Results: Isolated cells were characterized further by using specific markers for type A spermatogonia, including PLZF. Also, cells were characterized by vimentin that is specific marker for sertoli cells. After 10 days of co- culture, viability rates of the cells were above 94.7%, but after the freezing process the viability rates were 74 percent.

Conclusion: In this study we have developed a standard method to isolation and invitro proliferation of spermatogonial stem cells in sheep.

Keywords: Sheep, Spermatogonial Stem Cell, Isolation, Proliferation

The effects of ivermectin treatment on immune responses in sheep with *Psoroptes ovis*

Mustafa Sinan Aktaş[a], Fatih Mehmet Kandemir[b], **Omer Aydın[a]**, Kerim Emre Yanar[a], Nergis Ulas[a]

[a] Ataturk University, Faculty of Veterinary Medicine, Department of Internal Medicine, Erzurum-Turkey
[b] Ataturk University, Faculty of Veterinary Medicine, Department of Biochemistry, Erzurum-Turkey

omer-aydin1609@hotmail.com

Abstract:

The aim of this study was to investigate the effect of ivermectin treatment on immune system in sheep naturally infected with *Psoroptes ovis*. Study groups are consisted of 12 sheep, 6 healthy and 6 with Psoroptes ovis. 0.3 mg/kg ivermectin was used subcutaneous to sheep with *Psoroptes ovis*. Blood samples were taken to both anticoagulant and serum tubes, one times before using ivermectin (day 0), two times after using ivermectin (3. and 7.th days) from sheep with *Psoroptes ovis* and one times from healthy sheep. IgG and IgM levels were determined with using ELISA in serum samples after centrifuging blood samples. Also lymphocyte levels were determined using with veterinary hemogram device in blood with anticoagulated tubes. There was no significant difference between healthy and with *Psoroptes ovis* sheep on day 0 when IgG, IgM and lymphocyte levels were compared. When the IgG and IgM levels of sheep with *Psoroptes ovis* were compared on day 0 and day 3, a significant increase ($P<0.01$) was observed and lymphocyte levels were increase but not significant ($P > 0.05$). Similarly when the IgG and IgM levels of sheep with *Psoroptes ovis* were compared on day 0 and day 7, a significant increase ($P<0.01$, $P<0.05$) was observed and lymphocyte levels were increased but not significant ($P > 0.05$). When the IgG, IgM and lymphocyte levels of the sheep with *Psoroptes ovis* were compared on the 3rd and 7th days, no significant difference was detected ($P >0.05$). As a result, it was determined that serum IgG and IgM levels were increased in sheep naturally infected with *Psoroptes ovis* using subcutaneous ivermectin at a dose of 0.3 mg / kg.

Keywords: *Psoroptes Ovis*, Immun Response, Igg, Igm, Ivermectin

The determination of the effects of in ovo administrated bisphenol a on bone tissues by means of histological methods in chicken

Yasemin Oznurlu[a], Tuğba Ozaydin[a], Emrah Sur[a]

[a] University of Selçuk, Faculty of Veterinary Medicine, Department of Histology and Embryology, Konya-Turkey

yoznurlu@selcuk.edu.tr

Abstract:

Bisphenol A (BPA) is one of the most widely used chemicals in the world. This chemical which is largely used in the manufacture of polycarbonate plastics and epoxy resins, acts as an endocrine disruptors. BPA enters the food chain via dissolution from the polymers into the food and water. Because BPA can cross the placenta barrier and maternal transfer into yolk, both mammals and avian species are exposed to BPA in all periods of their lives from embryonic period.

In this study, the determination of the effects of in ovo administrated BPA in different doses on embryonic development of the tibial growth plate using histological methods in chickens. For this purpose, 310 fertile eggs of Isa Brown laying parent stock were divided into 5 groups as control, vehicle, 50,100, and 250 µg/egg BPA. Test solutions were injected into yolk before incubation. At the 18th and 21th days of incubation, 10 eggs were opened from each group. Tibial tissue samples was removed, cleaned of muscle and connective tissues and weighed. Tibial length was measured with a digital caliper. Tissue samples were fixed in 10% buffered-formal saline and decalcified through successive changes of ethylenediamine tetraacetic acid solution, dehydrated, cleared and embedded in paraffin blocks. Sections were stained with Safranin O and Crossmon's triple staining methods. The histomorphometric analysis of the tibial growth plate were performed.

The mean tibia weight and tibia length were significantly lower in BPA treated groups when compared to the control and vehicle groups ($p<0.05$). The measurements of the tibial growth plate have showed that proliferative zone get significantly narrowed whereas the transitional zone thickened in BPA treated groups ($p<0.05$).

In conclusion BPA exposure can effect bone development. The result have suggested that some skeletal deformities might be expected at further stages of the posthatch period in the affected animals.

Keywords: Bisphenol A, Chicken, Histomorphometry, Tibial Growth Plate

***Acknowledgements**: This study was supported by Selçuk University Scientific Research Projects Coordination Unit (Project No: 17401163)*

The protective effect of melatonin on some antioxidant enzymes in rats with cerulein-induced acute pancreatitis

Deniz Uluışık[a], Ercan Keskın[a], Yasemin Oznurlu[b], Tuğba Ozaydın[b], Durmuş Hatipoğlu[a]

[a] University of Selcuk, Faculty of Veterinary Medicine, Department of Physiology, Konya, Turkey
[b] University of Selcuk, Faculty of Veterinary Medicine, Department of Histology and Embryology, Konya, Turkey

denizfedai@selcuk.edu.tr

Abstract:

The purpose of our study was to evaluate the effect of melatonin on some antioxidant enzymes in rats with cerulein-induced acute pancreatitis. In the study, 32 adult male Wistar Albino rats were used. While the animals in the control group do not have any application, the animals in the melatonin group was administrated 2 intraperitoneal injections of melatonin (50 mg/kg) at 2-hour intervals. Acute pancreatitis was induced by intraperitoneal administration at first dose of 50 µg/kg and then second dose of 25 µg/kg cerulein at 2-hour intervals in the animals in the acute pancreatitis group. Acute pancreatitis was induced in the same way in animals in melatonin-treated acute pancreatitis group and the rats received an intraperitoneal injection of 50 mg/kg melatonin 30 min before each cerulein injection. At the end of the study, malondialdehyde (MDA), glutathione peroxidase (GPx) and superoxide dismutase (SOD) levels were determined in blood samples taken from all animals. GPx and SOD levels were significantly lower in rats with acute pancreatitis compared to the control group ($p<0.05$), whereas the levels of GPx and SOD were significantly higher in melatonin-treated acute pancreatitis group than acute pancreatitis group ($p<0.05$). There was no significant difference in MDA level among groups. These results suggest that melatonin may have protective effects against acute pancreatitis.

Keywords: Cerulein, Acute Pancreatitis, Melatonin, Antioxidant, Rats

***Acknowledgements**: This study was supported by Selçuk University Scientific Research Projects Coordination Unit (Project No: 17401160).*

The effect of melatonin on insulin, glucose, hemoglobin A1c and C-reactive protein levels in rats with cerulein-induced acute pancreatitis

Deniz Uluışık[a], Ercan Keskin[a], Yasemin Oznurlu[b], Tuğba Ozaydin[b], Durmuş Hatipoğlu[a]

[a] University of Selcuk, Faculty of Veterinary Medicine, Department of Physiology, Konya, Turkey
[b] University of Selcuk, Faculty of Veterinary Medicine, Department of Histology and Embryology, Konya, Turkey

denizfedai@selcuk.edu.tr

Abstract:

It was investigated the protective effects of melatonin on insulin, glucose, hemoglobin A1c and C-reactive protein levels in rats with cerulein-induced acute pancreatitis. The animals in the control group do not have any application. The animals in the melatonin group was administrated 2 intraperitoneal injections of melatonin (50 mg/kg) at 2-hour intervals. Acute pancreatitis was induced by intraperitoneal administration at first dose of 50 µg/kg and then second dose of 25 µg/kg cerulein at 2-hour intervals in the animals in the acute pancreatitis group. Acute pancreatitis was induced in the same way in animals in melatonin-treated acute pancreatitis group and the rats received an intraperitoneal injection of 50 mg/kg melatonin 30 min before each cerulein injection. At the end of the study, insulin, glucose, hemoglobin A1c (HbA1c) and C-reactive protein (CRP) levels were determined in blood samples. Plasma insulin and glucose levels in acute pancreatitis group significantly increased compared to the control group ($p<0.05$). In melatonin-treated acute pancreatitis group, plasma insulin levels were significantly higher ($p<0.05$) and plasma glucose levels were significantly lower when compared to acute pancreatit group ($p<0.05$). There was no significant difference in HBA1c level among groups. Whereas CRP level was significantly higher in acute pancreatitis group than control group ($p<0.05$), pretreatment of melatonin in rats with acute pancreatitis significantly decreased CRP level compared to the pancreatitis group ($p<0.05$). In conclusion, melatonin administration may alleviate the abnormalities in insulin, glucose, HbA1c and CRP levels caused by acute pancreatitis.

Keywords: Cerulein, Acute Pancreatitis, Melatonin, HbA1c, Crp

***Acknowledgements**: This research was supported by Selçuk University Scientific Research Projects Coordination Unit (Project No: 17401160).*

Multi-Residue analysis of organochlorine pesticides in wild boar tissues from southern turkey by GS-MS/MS

Ibrahim Ozan Tekeli[a], Mustafa Yipel[b], Fatih Sakin[a], Seydi Ahmet Sengul[a]

[a]HATAY MUSTAFA KEMAL UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY, HATAY-TURKEY
[b]TEKIRDAG NAMIK KEMAL UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY, TEKIRDAG-TURKEY

ozantekeli@hotmail.com

Abstract:

Increased environmental pollution due to the population growth has become a serious concern by causing contamination of usable resources and degradation of the ecosystem. Increased domestic, industrial and agricultural pollutants due to anthropogenic activities constitute risks as a result of bioaccumulation in plants, animals and people in the ecosystem at the level of individual and population. Pesticides are widely used chemical substances in order to increase agricultural yield by controlling various pests (animal or plant) and diseases caused by them. Organic chlorinated insecticides (OCI's), which are widely available in terrestrial and aquatic ecosystems, have been banned in many countries due to their long-term degradation time in nature. The bioindicator animals are used in monitoring to determine the quality or changes in the quality of the environment. Wild animals such as wild boars are among the ecotoxicologically important bioindicator species due to advantages such as wide geographic distribution, eating habits, long life spans and easy sampling. The aim of the study is to investigate the pesticide pollution of an ecologically important region where exposed intensive agricultural activities by multi OCI's (n:20) residue concentration analysis in various organs and tissues of wild boars. For the purpose; liver, kidney and muscle tissue were collected from 23 wild boar hunted in the region. As a result of the validation study, the recovery values were between 60% and 120%, and the RSD values were <20. After the extraction process, the concentrations of OCI's were determined by GC-MS/MS. Only 44-DDE residues (<LOD-12.8 ppb) were found among the studied pesticides. The highest residue levels among the studied tissues were found in the liver samples. Periodical monitoring of pesticides and other pollutants with an ecotoxicological risk assessment process is necessary for the region.

Keywords: Wild Boar, Organochlorine Pesticides, Multi-Residue Analyses, Gc-Ms/Ms

***Acknowledgements**: This study was supported by Hatay Mustafa Kemal Unv. Coord. of Sci. Research project with project number 18.M.020*

The effects of vortioxetine, fluoxetine and resveratrol on anxiety and spatial memory in rats exposed to chronic immobilization stress

Gökhan Oto[a], Bariş Celik[a]

[a]VAN YUZUNCU YIL UNIVERSITY, SCHOOL OF MEDICINE, DEPARTMENT OF MEDICAL PHARMACOLOGY, VAN-TURKEY

gokhanoto@yyu.edu.tr

Abstract:

This study was designed to investigate the effect of vortioxetine, fluoxetine and resveratrol on spatial learning and anxiety in rats exposed to chronic immobilization stress. Seventy two Wistar male rats average weight of 200 ± 20 g were used in this study. The animals were divided into 9 groups of 8 rats each group. Group 1: control group, was not exposed to stress. Group 2: DMSO-solvent group, was not exposed to stress. Group 3: stress group (S), was exposed to chronic immobilization stress. Group 4: Vortioxetine + stress group, rats were given 10 mg/kg /day vortioxetine 30 minutes before the stress application. Group 5: Fluoxetine + stress group, rats were given 10 mg/kg /day fluoxetine 30 minutes before the stress application. Group 6: Resveratrol + stress group, rats were given 100 mg/kg /day resveratrol 30 minutes before the stress application. 7: Vortioxetine (10 mg/kg/day) + Resveratrol (100 mg/kg/gün) + stress group, rats were given vortioxetine and resveratrol 30 minutes before the stress application. 8: Fluoxetine (10 mg/kg/day) + Resveratrol (100 mg/kg/gün) + stress group, rats were given fluoxetine and resveratrol 30 minutes before the stress application. 9: Vortioxetine (10 mg/kg/day) + Fluoxetine (10 mg/kg/day) + Resveratrol (100 mg/kg/gün) + stress group, rats were given vortioxetine, fluoxetine and resveratrol 30 minutes before the stress application. For chronic immobilization stress application animals were put in restrainer 60 minute in day during 30 days. The assessment of behavior was performed on 15th and 30st day of stress in Elevated plus-maze (EPM) and Morris Water Maze (MWM) apparatus. In elevated plus maze, time spent in open arms and number of entries in open arms were significantly low in stress control group when compared to normal control group. These values increased in treatment groups. In Morris Water Maze, chronic immobilization stress significantly reduced latency to find the platform. These values increased in treatment groups. The results of this study showed that chronic immobilization stress increases anxiety and learning functions. However, treatment with vortioxetine and fluoxetine together with resveratrol reduced anxiety and learning functions.

Keywords: Immobilization Stress, Vortioxetine, Fluoxetine, Resveratrol, Rat

Effects of zingerone on experimental toxicity model induced by bisphenol a in rats

Mehmet Güvenç

HATAY MUSTAFA KEMAL UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF PHYSIOLOGY, HATAY-TURKEY

vetguvenc@gmail.com

Abstract:

In the study, protective effects of zingeron against bisphenol a (BPA) induced experimental toxicity model were investigated. For this purpose, 24 wistar albino rats were randomly divided into 4 groups. Groups were created as follows; Control (DMSO), BPA (Bisphenol A 25 mg / kg), Zng (Zingerone 50 mg / kg), BPA + Zng (Bisphenol A 25 mg / kg + Zingerone 50 mg / kg). The study lasted 30 days for all animals. At the end of the study, biochemical parameters of liver and kidney tissue (MDA, GSH, GSH.PX, CAT) and serum biochemical parameters (AST, ALT, Urea, Creatinine, CRP) were analyzed. According to the data obtained, it was observed that the levels of MDA increased significantly ($p < 0.001$) and BPA + Zng group ($p < 0.001$). Similarly, liver and kidney tissue GSH.Px activities were decreased with BPA ($p < 0.01$) and BPA + Zng group had the same level with control group. Serum biochemical parameters were examined; The levels of AST ($p < 0,01$), ALT ($p < 0,05$), Urea ($p < 0,01$) and Creatinine ($p < 0,05$) were increased with BPA. In the BPA + Zng group, serum urea ($p < 0.01$) and creatinine ($p < 0.05$) levels were found to be at the same levels as the control group.

In conclusion, it was determined that BPA application increased oxidative stress in liver and kidney tissue, decreased antioxidant activity and had negative effects on serum biochemical parameters. However, with Zingeron application, it was determined that oxidative stress decreased, antioxidant activity was increased and the serum biochemical parameters had limited healing effects.

Keywords: Bpa, Zingerone, Oxidative Stress, Antioxidant

The protective effect of allium schoenoprasum l. on serum total sialic acid and lipid-bound sialic acid in carbon tetrachloride-induced female rats

Yılmaz Koçak[a], **Gökhan Oto**[b], Suat Ekin[c], Ufuk Mercan Yücel[d], Ahmet Bakır[c]

[a]UNIVERSITY OF HEALTH SCIENCES, VAN EDUCATION AND RESEARCH HOSPİTAL, VAN-TURKEY
[b]VAN YUZUNCU YIL UNIVERSITY, FACULTY OF MEDICINE, DEPARTMENT OF PHARMACOLOGY, VAN-TURKEY
[c]VAN YUZUNCU YIL UNIVERSITY, FACULTY OF SCIENCES, DEPARTMENT OF BIOCHEMISTRY, VAN, TURKEY
[d] VAN YUZUNCU YIL UNIVERSITY, VETERINARY FACULTY, DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY, VAN, TURKEY

gokhanoto@yyu.edu.tr

Abstract:

In this study, the effects of Allium schoenoprasum L. (AS) administration on total sialic acid (TSA) and lipid-bound sialic acid (LSA) in serum of rats were investigated following carbon tetrachloride (CCL4) damage. 70 Wistar-albino female rats weighing 170-210 g were used. Rats were divided into 10 groups each consisting of seven rat as follows; control, carboxymethylcellulose (CMC), Carbon tetrachloride (CCL4), Legalon (silymarin), AS 100 mg/kg, AS 200 mg/kg, AS 400 mg/kg, AS 100 mg/kg + CCL4, AS 200 mg/kg + CCL4, AS 400 mg/kg + CCL4 groups. 1ml/kg single dose CCL4 i.p. was administered to induce damage in tissues. A. scohoenoprasum extract was administered to the rats with oral gavage at 100, 200, 400 mg/kg for 9 days. At the end of the study, TSA and LSA values were measured in serum levels. TSA was found to be the highest in the CCL4 group ($P<0.01$). There was a difference between CCL4 group and the group control as well as alone AS extract administered groups ($P<0.01$). but there was no statistically significant difference in terms of TSA compared to CCL4 + AS extract group and CCL4 group ($P>0.05$). LSA levels in serum increased compared to CCL4 treated group, control and AS extract only groups ($P<0.001$). While CCL4 + AS extract groups brought the serum LSA level closer to the control group, no statistically significant difference was found between the CCL4 and the treated group $P>0.05$). As a result, it was determined that TSA, LSA serum concentration levels of CCL4 treated rats were affected by A. schoenoprasum administration. In the CCL4 treated groups, approached to control group after administration of A. schoenoprasum in TSA, LSA serum levels. This study shows that A.schoenoprasum has a beneficial effect on serum TSA and LSA concentration levels.

Keywords: Allium Schoenoprasum L., Carbon Tetrachloride, Total Sialic Acid, Lipid-Bound Sialic Acid

Some results of reproductive traits and milk yield of akkaraman sheep under selection for fertility and milk yield

Afşin Kocakaya[a], Ömer Faruk Güngör[a], Necmettin Ünal[a], Ceyhan Ozbeyaz[a]

[a]ANKARA UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF ANIMAL SCIENCE, ANKARA-TURKEY

afsinkocakaya@gmail.com

Abstract:

The aim of this study was to investigate some reproductive traits and milk yield of Akkaraman sheep breed. Akkaraman is a native sheep breed of Turkey. It is reared in Central Anatolia, in where steppe climate condition prevails. It is a fat - tailed sheep breed and tail weight is ranging from 4 to 6 kg. The colour is white, and sometimes black around the nose and eyes. The study was conducted in Gözlü state farm in Konya province. The data were collected from 2700 ewes during 2015 - 2017 years. The means were obtained as 79 % for lambing rate, 53 % for single birth rate, 47 % for twinning rate, 116.2 % for lamb production rate and 1.47 for litter size. The means of 120 day lactation period were 151.7 and 165.5 kg for milk yield and 1264.4 and 1390.2 g for daily milk yield in 2016 and 2017 years, respectively. Finally, it may be concluded, reproductive traits and the milk yields of Akkaraman ewes were better than literature published before. This shows that Akkaraman sheep reproductive traits and milk yields can be increased with selection studies and Akkaraman seems to be a suitable breed for milk production.

Keywords: Akkaraman, Fertility, Lactation, Milk Yield, Sheep

Effects of dietary turmeric powder (curcuma longa l.) on performance, carcass parameters and some blood metabolites of broiler chicks

Mihriban Gündoğdu[a], Dilan Esen[a], Uğur Serbester[a], Fatma Yenilmez[a], Yusuf Uzun[a], Mehmet Celik[a], **Ladine Baykal Celik[a]**

[a]ÇUKUROVA UNIVERSITY AGRICULTURAL FACULTY DEPARTMENT OF ANIMAL SCIENCE, ADANA, TURKEY

ladine@cu.edu.tr

Abstract:

The purpose of the present study was to determine the effects of dietary turmeric powder on performance and some blood metabolites of broiler chicks. A day old male broiler chicks (ROSS 308) were divided 4 treatments groups with similar live weight (45.88 g), containing 20 birds each. The birds were fed basal diets (control group), 2, 4 and 8gr/kg turmeric powder supplemented diets for 5 weeks period.

Feed and water are given ad libitum. Broiler performance was assessed by recording weekly feed intake, weekly live weight gain, carcass weight and abdominal fat weight end of the experiment. At the end of the experiment all birds from each group were randomly chosen to take blood samples. The serum was analyzed for total antioxidant status (TAS), total oxidant status (TOS), alanine transaminase (ALT) and aspartate aminotransferase (AST).

The results showed turmeric powder supplementation did not have significant effects on feed intake, live weight gain, feed efficiency ratio, hot and cold carcass weights, liver and abdominal fat weight. However, dietary supplemental 8 g/kg turmeric powder increased carcass yield ($P<0.02$). The supplementation of turmeric powder to the ration reduced the serum concentration of the ALT; particularly, this reduction was linearly decreased by the addition of 4 ve 8 g/kg of turmeric powder supplementation. In addition, serum AST, TAS and TOS concentrations and oxidative stress index (OSI) status of blood metabolites were not influenced by turmeric powder supplementation.

The results suggest that carcasses yield and serum ALT concentration were significantly improved by increased turmeric powder supplementation.

Keywords: Broiler Chick, Turmeric Powder, Performance, Blood Metabolites

***Acknowledgements**: This study is supported by Cukurova University Research Fund (FYL-11255).*

Investigation of *Coxiella burnetii* (Q hummasi, Q fever) with ELISA in sheep of a farm in Ankara

Bülent Baş

ANKARA UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF MICROBIOLOGY, ANKARA-TURKEY

bbas@ankara.edu.tr

Abstract:

Q fever (Q fever) is a zoonotic disease caused by *Coxiella burnetii*, which affects largely ruminant animals. The causitive agent often excreted via vaginal discharge, milk, placenta, urine, feces and birth fluids of infected animals. Veterinarians, slaughterhouse employees, animal care workers and laboratory workers in contact with animals are at risk. Serological and molecular methods are preferred in diagnosis because of the fact that not only culture of the agent is difficult, but also it takes a longtime and requires Biosafety level-3 (BSL-3) laboratory. In this study, it was aimed to investigate cause of abort cases occurring in an establishment in Ankara. In the anamnesis, we were informed that the herd had been screened and found negative for some abortion agents. Serum samples collected from 184 sheep some of which have abortion history were evaluated by ELISA method. Out of 184, 23 animals (12.5%) were found seropositive; all 17 aborted animals (100%) and 6 of non-aborted 167 animals (3.6%). As a result, it was concluded that *C. burnetii* should be taken in to consideration in sheep abort cases in Ankara region.

Keywords: *Coxiella burnetii*, sheep, Elisa, Ankara

Prevalence of *Eimeria species* in goat in the Isparta province

Ahmet Göksu[a], **Hatice Çiçek[a]**, Mahmut Sinan Erez[a], Mustafa Köse[a]

[a]AFYON KOCATEPE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF PARASITOLOGY, AFYON-TURKEY

hcicek@aku.edu.tr

Abstract:

This study was conducted to prevalance of *Eimeria species* in goats in Isparta province. For this purpose, 279 samples were collected from adult goat (1 year or 1 year more) in 4 different (Aşağıgökdere, Balkırı, Beydere and Sarıidris) towns. Oocysts in faecal samples were detected using a flotation technique. Coccidia were detected in the faeces of 48 out of 279 goat (17.20 %). The highest rate of prevalence was observed in Aşağıgökdere town ($p<0.001$). The number of oocysts per gram of feces (OPG) was determined by the modified McMaster technique. The mean coccidia oocyst counts were found range 50-1300 in goats. Mixed infections were 52.08 %. The coccidia in each infected faecal sample was sporulated at 27 C° in 2.5 % potassium dichromate. They were then identified on the basis of the morphological characteristics of the oocysts and sporocysts. Eight species of Eimeria were recognized. These species were: *Eimeria arloingi* (%41.67), *E.caprina* (%33.33), *E. jolchijevi* (%25), *E.alijevi* (%25), *E.caprovina* (%16.67), *E.aspheronica* (%14.58), *E.ninakohlyakimovae* (%8.33*), E.hirci* (%8.33) and *E.christenseni* (%2.08).

The results of this first investigation in goats in Isparta province indicate that further studies will reveal more information about the economic effects of this parasite which will be useful for control programs.

Keywords: Coccidiosis, Eimeria, Goat, Isparta

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Investigation of the sexual behaviors of angora cats

Serkan Erat[a], Ruhi Kabakçı[b]

[a]KIRIKKALE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF ANIMAL BREEDING AND HUSBANDRY, KIRIKKALE-TURKEY
[b]KIRIKKALE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF PHYSIOLOGY, KIRIKKALE-TURKEY

serkanerat@gmail.com

Abstract:

The purpose of this study was to investigate the sexual behaviors of Angora cats. Ten adult Angora male and female cat pairs were used in the study. Each pair were separately placed in a room with a size of approximately 7.5 m2 during two reproductive seasons and recordings were done for 24 hours. A wide angle infrared camera (CCTV) was used for recording. Sexual behaviors were neck grip (NG), mounting (MT) and penis licking (PL) for tom cats; rolling (RL) and vaginal licking (VL) after copulation for queens. Video recordings were randomly selected to cover all season hours so that entire day (24 hours) was watched. All behaviors were recorded as duration and frequency and presented as mean duration time (second) (s) and frequency per hour. Mean duration time and frequency of male Angora cat sexual behaviors were 29.91 s/hour and 15.08/hour for NG, 55.92 s/hour and 8.46/hour for MT, 23.90 s/hour and 2.05/hour for PL. Mean duration time and frequency of female Angora cat sexual behaviors were 45.59 s/hour and 3.67/hour for RL, 24.48 s/hour and 5.75/hour for VL. Sexual behaviors of Angora cat, which is a significant cat breed in Turkey and their numbers are declining, were documented as quantitative data so that these results will be a good source for further domestic cat studies.

Keywords: Angora Cats, Sexual Behaviors, Camera, Estrus, Video Recording

***Acknowledgements**: This study was supported by Kirikkale University Scientific Research Project Coordination Unit (Project No: 2015/054).*

Effects of vitamin e on t cells in gut-associated lymphoid tissue (galt) of broiler chickens under heat stress

Sadiye Kum[a], Ulker Eren[a], **Deniz Korkmaz[c]**, Mustafa Sandıkcı[a], Işıl Aydemir[e]

[a]ADNAN MENDERES UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF HISTOLOGY AND EMBRYOLOGY, AYDIN-TURKEY
[c]HARRAN UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF HISTOLOGY AND EMBRYOLOGY, URFA-TURKEY
[e]NIGDE OMER HALISDEMIR UNIVERSITY, FACULTY OF MEDICINE, DEPARTMENT OF HISTOLOGY AND EMBRYOLOGY, NIGDE-TURKEY

denizkorkmaz@harran.edu.tr

Abstract:

The aim of this study was to explore the effects of vitamin E on T cells number and distribution within GALT (Gut associated lymphoid tissue) in broiler chickens submitted to heat stress. For that, the CD3, CD4 or CD8 positive cells were investigated by immunohistochemistry in the oesophageal, pyloric, jejunum, ileum and caecal tonsils from 4, 5, 6 weeks old Ross 308 male broilers reared under standard temperature conditions (22 } 2°C) (group C) or submitted to heat stress (35°C for 5 hours per day) (group HS) and eventually treated with vitamin E (DL-α-tocopherol acetate, 300 mg/kg, (group HSE), each group containing 21 birds. Heat stress markedly depleted T cell population in GALT but the cell distribution was not modified. By contrast, the vitamin E treatment has considerably increased the T cell population by acting on all T cell types in every lymphoid area (inter-follicular zones, germinal centers, epithelial crypts). This study was conducted to determine the effects of heat stress and application of vitamin E against heat stress in oesophageal, pyloric and caecal tonsils as well as in jejunum and ileum lymphoid structures. These results show that vitamin E can remarkably counteract the adverse effect of heat stress on the immune function and dietary vitamin E supplementation can be recommended in broilers, especially in the summer months.

Keywords: Broiler Chickens, Heat Stress, Vitamin E, Gut-Associated Lymphoid Tissue, T Cells

The evaluation of heart measurements using vertebral heart scale in calves with pneumonia

Ekin Emre Erkılıç

KAFKAS UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF INTERNAL MEDICINE, KARS-TURKEY

ekin_emre_24@hotmail.com

Abstract:

Pneumonia is a common disese in calves. In pneumonia cases, heart load increases, therefore, measurement of heart size is clinically important for diagnosis and treatment. The aim of the study was to determine the heart size of calves with pneumonia using vertebral heart scale method.

The study material consisted of 16 calves (10 diseased, 6 healthy) with mean age 30 days-old, referred to Department of Internal Diseases, Faculty of Veterinary Medicine of Kafkas University. On anamnesis, the diseased calves had dyspnea and cough. Pathological lung sounds were heard on lung auscultation. The mean body temperature, pulse and respiratory rate of these animals were determined as 39.21±0.22°C, 116.40±9.67/min and 40.40±4.41/min, respectively. In healthy calves vital values were in reference range. Measurements were made by vertebral heart scale method in all animals which evaluated by clinical and radiographical examination. On the radiographic images, the long axis of the heart was measured from the ventral border of the largest main stem broncus to the most distant ventral contour of the cardiac apex. The short axis was measured from the vena cava caudalis line to the to the widest point of the radiographic image which was perpendicular to long axis. Both measurements placed the cranial edge of the fourth thoracic vertebra (T4) and extended to the caudal. The lengths obtained were recorded as vertebral length (v).

It was determined that, the long axis was 5.57±0.14 v, the short axis was 4.31±0.15 v and the vertebral heart scale was 9.88±0.27 v in diseased calves. In healthy animals these values were determined 5.13±0.07 v, 4.15±0.08 v and 9.28±0.10 v, respectively. Vertebral heart scale in diseased calves were higher than healthy calves but this differences were not significant statistically. Vertebral heart scale method can be used to determine heart sizes in cases of pneumonia which increase heart load.

Keywords: Calf, Pneumonia, Vertebral Heart Scale

Prevalence of *Eimeria species* in sheep in the Afyonkarahisar province

Ahmet Göksu[a], **Hatice Çiçek[a]**, Mahmut Sinan Erez[a], Hasan Cicek[b], Murat Tandoğan[b], Esma Kozan[a]

[a]AFYON KOCATEPE UNIVERSITY, FACULTY OF VETERINARY MEDICINE,DEPARTMENT OF PARASITOLOGY, AFYON-TURKEY
[d]AFYON KOCATEPE UNIVERSITY, FACULTY OF VETERINARY MEDICINE,DEPARTMENT OF ANIMAL HEALTH AND ECONOMICS, AFYON-TURKEY

hcicek@aku.edu.tr

Abstract:

Fecal samples from 300 sheep in Afyonkarahisar province examined to determine the prevalence and intensity of the multiple species of *Eimeria* that infect the sheep in this region. Different *Eimeria species* were found in all the properties assessed, in which 32.67 % of the animals were infected. The number of oocysts per gram of feces (OPG) was determined by the modified McMaster technique. The mean coccidia oocyst counts were found range 150-36.000 in lambs (1 year or less than 1 year) and 50-1750 in adult sheeps (1 year more) . Intensity of the infection was significantly higher in young sheep compared with older animals ($p<0.001$). Higher prevalence of *Eimeria* was observed in closed housing systems that had larger herds and using sheep feces as a litter ($p<0.05$). Oocysts in faecal samples were detected using a flotation technique, sporulated and identified to species based on morphological features of the sporulated oocysts. *Eimeria* oocysts were found in % 32.67 of the fecal samples and ten species of *Eimeria* were identified. *Eimeria ovinoidalis* (% 38.77), *Eimeria bakuensis* (% 36.73), E.ahsata (31.63), E.parva (23.47) and E.faurei (% 18.37) were the most prevalent species. Other species present were *E.intricata* (% 5.10), *E.weybridgensis* (% 4.08), *E.granulosa* (% 2.04*), E.crandalis* (% 2.04) and *E.pallida* (% 1.02).

In conclusion, the management system seems to play an important role to control of coccidiosis in Afyonkarahisar province.

Keywords: Coccidiosis, *Eimeria*, Sheep, Afyonkarahisar

***Acknowledgements**: This study is supported by Scientific Activities Support Program of Afyon Kocatepe University*

Evaluation of neutrophil to lymphocyte ratio in dogs with cholangitis-cholangiohepatitis complex

Ekrem Çağatay Çolakoğlu[a], Ufuk Kaya[b]

[a]ANKARA UNIVERSITY FACULTY OF VETERINARY MEDICINE DEPARTMENT OF INTERNAL MEDICINE, ANKARA-TURKEY
[b]ANKARA UNIVERSITY FACULTY OF VETERINARY MEDICINE DEPARTMENT OF BIOSTATISTICS, ANKARA-TURKEY

colakoglu@ankara.edu.tr

Abstract:

Cholangitis and cholangiohepatitis complex appears to be more common than thought in dogs. The complex is associated with inflammation or infection of biliary tract with a wide variety of organisms. Neutrophil to lymphocyte ratio (N/L) is a simple, inexpensive and effective marker associated with various inflammatory and neoplastic disease in medicine. The purpose of the study was to obtain the N/L ratio in dogs with cholangitis and cholangiohepatitis complex and to compare it with a reference population. Dogs with a diagnosis of cholangitis and cholangiohepatitis complex based on blood analyses and ultrasonographic images enrolled into the study. Physical examinations, complete blood counts, serum profiles and abdominal ultrasonography were performed in all dogs. Before statistical analyses, data were examined with shapiro-wilk test for normality and levene test for homogeneity of variances as parametric test assumptions. Student t test was used to evaluate the differences between groups for the variables when parametric assumptions were provided and Mann-Whitney U test was used if the assumptions were not provided. $P < 0,05$ was considered as significant in all analyses. N/L ratio was statistically higher in dogs with cholangitis and cholangiohepatitis complex (N/L Ratio: 0,36 ± 0,06) compared to reference population (N/L Ration: 0,12 ± 0,03). In conclusion, N/L ratio could be use as a diagnostic marker in dogs with cholangitis and cholangiohepatitis complex.

Keywords: Cholangitis, Cholangiohepatitis, Dog, Lymphocyte, Neutrophil

Does increased immune response at early postpartum period have a role on subsequent fertility?

Hatice Esra Colakoğlu[a], Murat Onur Yazlık[a]

[a]ANKARA UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF GYNECOLOGY AND OBSTETRICS, ANKARA-TURKEY

canatan@ankara.edu.tr

Abstract:

The aim of the current study was to investigate blood composition, postpartum clinical endometritis, and subsequent fertility in cows with increased postpartum immune function.

The study was performed with 15 Brown Swiss breed cows between 1-3 lactations. Blood samples for phagocytic activity and oxidative burst activity were collected at 14±3 days before the expected parturition date and 14±3 days after parturition in all cows. The cows were classified into two groups according to their immune response between -14±3 and +14±3 days. Cows which maintaned their immune response compared to prepartum period were classified as Group I (n=7), and cows which increased immun response in comparison to prepartum period were defined as Group II (n=8). Blood samples for NEFA and Ca concentrations were collected at 14±3 days before parturition, at parturition and 14±3 days after parturition. Serum BHB concentration was measured at parturition and +14±3 after parturition. Vaginal discharges were scored at 30 ±4 days postpartum and vaginal discharge score ≥2 were interpreted as clinical endometritis. Total pregnancy rates, the number of insemination, and calving to pregnancy interval were evaluated.

NEFA ($P<0.05$) and BHB ($P<0.05$) concentrations at all sampling times in Group I were higher compared to Group II. Conversely, at all sampling times Ca concentrations were lower in Group I cows than Group II ($P<0.05$). The calving to pregnancy interval were lower in Group II cows ($P<0.05$). However, total pregnancy rates and the number of insemination in both groups were similar ($P>0.05$). Although clinical endometritis were higher in control group, statistically similarity was present in groups ($P>0.05$).

In conclusion, although no interations between the rate of clinical endometritis and higher immune functions were present in cow with early postpartum, some fertility parameters were higher in these cows.

Keywords: Cow, Endometritis, Fertility, Immunity, Metabolites

Hystopathological findings and hepatic satellite cells increase in the liver of the rats applied radioidin (131I)

Rahşan Yılmaz[a], Nihat Yumuşak[a], Hasan Ikbal Atılgan[b], Gökhan Koca[c], Meliha Korkmaz[c]

[a]HARRAN UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF PATHOLOGY, SANLIURFA-TURKEY
[b]MUSTAFA KEMAL UNNIVERSITY, FACULTY OF MEDICINE, DEPARTMENT OF NUCLEAR MEDICINE, HATAY-TURKEY
[c]ANKARA TRAINING AND RESEARCH HOSPITAL, DEPARTMENT OF NUCLEAR MEDICINE, ANKARA-TURKEY

rmilliogullari@hotmail.com

Abstract:

Radioactive iodine (131I) is a radionuclide used for the diagnosis and treatment of hyperthyroidism and thyroid cancers. The aim of this study was to investigate the histopathological examination of liver damage after radioiodine (131I) administration and to evaluate the immunohistochemical evaluation of glial fibrillary acidic protein (GFAP) density in damaged areas. In the study, twenty female Wistar Albino rats were used and they were randomly divided into two groups as control group (n = 10) and 131I experimental group (n = 10). Experimental group was administered the radioactive iodine (131I) 111 MBq (~ 3 mCi) dose via nasogastric route. At the end of the third month, the liver tissues were taken of rats in the groups at the necropsy, the tissue specimens underwent routine tissue processing. In the histopathological examination of the liver after Hematoxylin-Eosin (H&E) staining, granuloma formation was observed under the capsule in the 131I group. The results of immunohistochemical staining were firstly assessed for negativity or positivity by light microscopy. Immunocytochemical scoring was performed in view of the distribution and intensity of staining by counting the number of positively stained cells GFAP in randomly selected 5 regions per section using a x40 objective. In immunohistochemical staining, especially in areas with granulomas GFAP staining showing the density of the hepatic satellate cells (HPCs) was found to be higher in the 131I group than control group.

Keywords: 131I, Histopathology, Liver, Hpcs, GFAP, Immunohistochemistry, Rat

Effects of prebiotic addition into milk of suckling simmental calves at increasing levels on the growth performance and health

Mehmet Akif Karslı[a], Ersin Yavuz[b]

[a]KIRIKKALE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF ANIMAL NUTRITION AND NUTRITIONAL DISEASE, KIRIKKALE-TURKEY
[b] VETERINARIAN, ÇORUM-TURKEY

mehmetakifkarsli@hotmail.com

Abstract:

The aim of this study was to evaluate the effects of Farmanax® as prebiotic on calf live weight gain, daily live weight gain, fed intake, feed efficiency and health. A total of 30 new born Simmental calves were randomly divided into one of 3 groups using birth date and sex as block. A commercial calf starter diet was used to feed calves present in the experiment. Three groups were created by using calf fed commercial starter diet without prebiotic (Control group=CG), with 8ml/calf/day prebiotic (Low dose probiotic=LDP) or 16ml/calf/day probiotic (High dose probiotic=HDP). Each calves were housed in an individual plastic cages throughout the experiment. Calves in all of three groups consumed same amount of milk and prebiotic were offered within milk. All of calves had free access to clean water and diet ad libitum starting at age of 7 days. Average birth weights of calves present in the experiment were 48.83, 48.89 and 48.15 kg while average weaning live weights were 78.75, 82.00 and 86.84 kg($P<0.05$) for CG, LDP and HD, respectively. Total amount of weight gained during experiment has been calculated as29.91, 33.11, 38.77 kg for CG, LDP and HD, respectively. Total amount of feed consumed throughout the experiment and mean daily feed intakes have been calculated as20285.30,28849.17 ve 35122.03 kg/d; 338.06, 480.65 ve 585.37 gr/d for CG, LDP and HD, respectively. Mean feed efficiency values were 627.77,863.42, and 892.43 gr feed/kg daily weight gain for CG, LDP and HD, respectively. Percentage of calves who had diarrhea during experiment were 33.33, 10.00, and 0 %for CG, LDP and HD, respectively. In conclusion, it was thought that addition of prebiotic improved live weight gain, feed intake, and calf health. It was thought that it will be useful if further more detailed studies should be carried out to determine right dose of prebiotic with more calves.

Keywords: Prebiotic, Suckling Simmental Calf, Live Weight Gain, Feed Intake Diarrhea.

Determining the effects of frosting on the nutrient contents and digestibilities of some cereal and legume herbages

Mehmet Demirci[a], Mehmet Akif Karslı[b]

[a]KIRIKKALE UNIVERSITY, VOCATION HIGH SCHOOL, DEPARTMENT OF LABORATORY AND VETERINARY HEALTH, KIRIKKALE-TURKEY
[b]KIRIKKALE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF ANIMAL NUTRITION AND NUTRITIONAL DISEASES, KIRIKKALE-TURKEY

vetmehmetd@yahoo.com

Abstract:

The aim of this study was to determine the nutrient contents and digestibilities of some cereal and legume herbages exposed to frost killing. Some cereal and legume herbages commonly used in animal diets, namely alfalfa, pea grass, vetch, triticale, and ryegrass were utilized in this study. One group of these plant species was hand-harvested and dried as hay. The another group of same plant species were placed into pot as alive and exposed to -18 oC using freezer while they were alive (Frost killed). Nutrient contents and 48-h in situ degradabilities of hay and frost killed herbage samples were then determined. In general, while dry matter, ash, and crude protein contents of hay and frost killed samples were statistically similar ($p>0.05$), NDF and ADF contents were significantly different between hay and frost killed samples ($p<0.05$), frost killing has decreased both NDF and ADF contents of all plant species. NDF contents of hay and frost killed samples were 37.45, 31.82, 40.64, 57.86 and 61.97 %; 22.31, 28.17, 32.21, 51.85 and 54.24 % for alfalfa, pea grass, vetch, triticale, and ryegrass, respectively. ADF contents of hay and frost killed samples were 26.99, 21.30, 27.90, 32.08 and 34.34%; 15.33, 18.75, 21.75, 29.47 and 30.57% for alfalfa, pea grass, vetch, triticale, and ryegrass, respectively. The effects of frost killing seemed to be the highest in alfalfa samples. In situ DM degradabilities of hay samples were 70.22, 78.86, 70.13, 61.44 and 59.87% whereas these values for frost killed samples were 82.41, 81.62, 77.71, 67.13 and 65.52% for alfalfa, pea grass, vetch, triticale, and ryegrass, respectively, indicating that frost killing increased degradabilities of samples. In conclusion, frost killing has caused especially changes at NDF and ADF and in situ degradability values of green herbages, thus, frost killing of green herbages seemed to improve digestibility and metabolisability of green herbages based on these results.

Keywords: Legumes, Cereals, Green Herbage, Frost Killing, In Situ Degradation

The morphology of the pecten oculi in the northern bald ibis (*Geronticus Eremita*)

Bestami Yılmaz[a], Ismail Demircioğlu[a], Aydın Alan[b], Deniz Korkmaz[c]

[a] HARRAN UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF ANATOMY, SANLIURFA-TURKEY
[b] ERCIYES UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF ANATOMY, KAYSERI-TURKEY
[c]HARRAN UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF HISTOLOGY AND EMBRYOLOGY, SANLIURFA-TURKEY

byilmaz@harran.edu.tr

Abstract:

Eyes are the most primarily required sensory organs during the migration of migratory birds and Northern Bald Ibises are known to make long migrations. This study examined fort he first time the structure of pecten oculi in northern bald ibises by using macroscobic anatomy as well as light and electron microscobic methods.

In the study 20 eye globes from 10 adult bald bises were used. The pecten was of pleated type. As in most bird species it was located on the optic nerve head and projects into the vitreous from the optic nerve head. The wider basal part was observed to attached to retina and its free apical part was found in camera vitrea bulbi embedded in corpus vitreum. The pecten had 13-14 accordeon like plaits lying between the basal and apical parts. In addition to arterial and venous vessels, numerous capillary vessels as well as melanocytes were observed within each plaits. The bridge binding the plaits at the apical part showed a stronger pigmentation compared to other parts of the pecten.

The results of the study indicated that the general morphology of pecten oculi in northern bald ibises which is a migratory bird species were similar to that in other diurnal bird species.

Keywords: Northern Bald Ibis, Pecten Oculi, Anatomy, Sem

Acknowledgements: This study was supported by Scientific Research Center of Harran University with K19109 project number.

The relationship between ultrasonographic image digital echotexture parameters of uterus and preovulatory follicle development and ovulation in mares

Omer Korkmaz[a], Tuğra Akkuş[a], Birten Emre[a], Abuzer Kafar Zonturlu[a]

[a]UNIVERSITY OF HARRAN, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF OBSTETRIC AND GYNECOLOGY, SANLIURFA-TURKEY

omerkorkmaz1978@gmail.com

Abstract:

The objective assessment of the ultrasonographic image is only possible with computer-assisted echotexture analysis. The aim of this study is to investigate the relationship between cyclic digital echotexture analysis of ultrasonographic uterine image and preovulatory follicle development and ovulation in cyclic purebred Arabian mares.

The study was carried out in 12 cyclic purebred Arabian mares in breeding season. When the ovarian follicle diameters of the mares exceeded 30 mm, ultrasonographic examinations were performed and ultrasonographic images were recorded with uterine endometrial edema degrees following follicle development until ovulation day. Echotexture measurements including the mean grayness value (MGV), heterogeneity (HET) and contrast (CON) parameters were performed on days that ovarian follicle diameters reached 30 mm (Group 1), 35 mm (Group 2), 40 mm (Group 3), and 45 mm (Group 4) in images recorded the day before ovulation and on the day of ovulation.

In the study, there was a direct relationship between follicle diameter size and uterine endometrial edema ($p<0.001$). MGV was the lowest in Group 2 and the difference among the other groups was statistically significant ($p<0.001$). CON value was significantly higher in Group 2 than Group 3 and Group 4 ($p<0.01$), however there was no significant difference compared to Group 1 ($p> 0.05$). No difference was found among the groups in terms of HET ($p>0.05$). Variations in heterogeneity ($p <0,05$), contrast ($p <0,05$) and MGV ($p <0,01$) were statistically significant on the day before ovulation and ovulation day.

As a result, ultrasonographic echotexture parameters of the uterus are associated with preovulatory follicle development in mares and it is believed that these parameters can give an idea about the day of ovulation in mares.

Keywords: Mare, Follicle Diameter, Ovulation, Uterus Echotexture.

Intra and postoperative effectives of oral transmucosal administration of phenylbutazone for pain management in dogs

Murat Kibar

ARTVIN ÇORUH UNIVERSITY, ARTVIN-TURKEY

muratkibartr@yahoo.com

Abstract:

The aim of the present study was to evaluate the efficacy and analgesic duration of single dose of phenylbutazone (PBZ) administered by OTM route immediately before induction of anesthesia in dogs undergoing elective OVH. Eight-teen sexually intact female dogs (weiging between 5 and 30 kg, and 1 to 7 yrs of age) referred for OVH procedure from a local shelter at regular intervals over 3 months were included in the study. The dogs were administered PBZ on the basis of their respective treatment group (20 mg/kg via OTM administration) immediately before anesthetic induction. The syringe was placed in the cheek pouch of the dog, and PBZ was slowly administered over a period of 1 to 3 minutes to ensure the drug did not drip out of the dog's mouth, or was not swallowed by the dog. In control group, 0.9% NaCl was administered in the cheek pouch of the dog. Throughout the study, pre and postoperative pain was assessed at baseline (before induction of anesthesia) and then at 0.5, 1, 2, 3, 8, and 24 hrs after the surgery. Group OTM had significantly lower CMPS-SF scores than the control group at the 0.5, 1, 2, 4, and 6 hour postoperative periods. In conclusion, a single dose of PBZ administered via the OTM route before surgery may be particularly beneficial for acheiving reasonable perioperative analgesia, but not in postoperative period.

Keywords: Ovariohysterectomy; Pain; Phenylbutazone; Transmucosal

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Efficacy of intravenous phenylbutazone for pain management in dogs undergoing ovariohysterectomy

Murat Kibar

ARTVIN ÇORUH UNIVERSITY, ARTVIN-TURKEY

muratkibartr@yahoo.com

Abstract:

The aim of the present study was to evaluate the efficacy and analgesic duration of single dose of PBZ administered the IV route immediately before induction of anesthesia in dogs undergoing elective OVH. Eight-teeen sexually intact female dogs (weiging between 4.5 and 28 kg, and 1 to 8 yrs of age) referred for OVH procedure from a local shelter at regular intervals over 4 months were included in the study. The dogs were administered PBZ on the basis of their respective treatment group (20 mg/kg, IV administration) immediately before anesthetic induction. For the IV treatment, PBZ was administered over a period of one minute. Time of completion of PBZ administration was designed as time 0. In control group, 0.9% NaCl was administered as over a period of one minute. Throughout the study, pre and postoperative pain was assessed at baseline (before induction of anesthesia) and then at 0.5, 1, 2, 3, 8, and 24 hrs after the surgery. Group IV had significantly lower CMPS-SF scores than the control group at the 0.5, 1, 2, 4, and 6 hour postoperative periods. In conclusion, a single dose of PBZ administered via the IV route before surgery may be particularly beneficial for acheiving reasonable perioperative analgesia, but not in postoperative period.

Keywords: Ovariohysterectomy; Pain; Phenylbutazone

The effect of two prostaglandin f2alpha injections with a 24-hour interval on the pregnancy rate in ovsynch protocols performed in simmental cows

Mushap Kuru[a], Cihan Kaçar[a], Semra Kaya[a], Nebi Çetin[b], **Murat Can Demir[a]**, Duygu Kaya[a], Hasan Oral[a]

[a] KAFKAS UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, KARS-TURKEY
[b] YÜZÜNCÜ YIL UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, VAN-TURKEY

murat.can.demir@hotmail.com

Abstract:

The aim of the present study was to determine the effect of a second injected dose of prostaglandin F2α (PGF) on the pregnancy rate (PR) in the Ovsynch protocols. On day 0, 100 µg gonadorelin diacetate tetrahydrate (GnRH) was injected in group 1 (n = 62). On day 7, 25 mg dinoprost tromethamine (PGF2α, PGF) was administered, and GnRH was injected 56 h later. Fixed-time artificial insemination (TAI) was performed 16 h following GnRH injection. In contrast to group 1, a second dose of PGF was injected into cows in group 2 (n = 63) on day and 8, prior to GnRH injection. Pregnancy was determined by transrectal ultrasonography on days 30 and 60 post-TAI. The SPSS 18 (SPSS®, Chicago, IL, USA) software package was used for statistical analysis. The pregnancy rate (PR) on day 30 post-TAI was not significantly different among the groups (P = 0.373). The PR was 29%, and 36.5%, in groups 1 and 2, respectively. There was no statistical difference in the PR 60 days post-TAI (P = 0.244). Pregnancy loss was between 4.34% and 11.11% (P > 0.05). The PR was not significantly different in primiparous or multiparous cows (P > 0.05). In conclusion, two injections of PGF in Simmental cows with a 24-hour interval may increase the PR in the Ovsynch protocols.

Keywords: Ovsynch, Second Dose PGF2α, Simmental Cow, Pregnancy

Effects of melatonin and melatonin + progesterone on estrus synchronization and fertility parameters in tuj ewes during non-breeding season

Rıdvan Kaya[a], **Mushap Kuru[a]**, Hasan Oral[a]

[a] KAFKAS UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, KARS-TURKEY

mushapkuru@hotmail.com

Abstract:

This study determined the effect of melatonin and melatonin + progesterone on estrus synchronization and fertility parameters in Tuj ewes during non-breeding season. Group 1 (G1, n=15) received melatonin implants under the skin behind the ear. Group 2 (G2, n=15) was injected with 500 IU equine chorionic gonadotropin (eCG) 40 days after the melatonin implant. Then, sheep were mated and estrus was checked in G1 and G2. Group 3 (G3, n=15) received melatonin implants and after 40 days, progesterone-impregnated sponge (60 mg, medroxyprogesterone acetate) were placed intravaginally for 9 days. On the day of the removal, 500 IU eCG was injected. In Group 4 (G4, n=15), progesterone-impregnated sponge was placed intravaginally for 9 days. On the day of the removal, 500 IU eCG was injected. Then sheep were mated, and estrus was checked in G2 and G3. Group 5 (G5, n=10) was the control group. After 32 ± 4 days of mating, transrectal ultrasonography was performed. The highest estrus rate was found in G3 (73.33%) and G4 (80%) ($P<0.05$). The mean estrus duration was 32.00-35.83 hours ($P>0.05$). The pregnancy rate was 20%, 13.33%, 60%, 46.67%, and 10% in groups, respectively ($P<0.05$). Twinning rate was 33.33%, 37.5%, 28.57% in G1, G3, and G4, respectively. Litter size was 1.33, 1, 1.38, 1.29, 1 in groups (G1-G5), respectively. In conclusion, the use of a melatonin implant alone for the synchronization of Tuj sheep in the anestrus period was insufficient to induce estrus. Although melatonin combined with progesterone increased some fertility parameters.

Keywords: Non-Breeding Season, Intravaginal Sponge, Melatonin, Pregnancy, Progesterone, Tuj Ewes

Determination of *Staphylococcus species* isolated from mastitis in dairy cows

Seçkin Salar

ANKARA UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, ANKARA-TURKEY

ssalar@ankara.edu.tr

Abstract:

The aim of this study was to isolate and identify the main staphylococcal species causing cow mastitis in a commercial farm at Western part of Turkey. The study was conducted between September 2012 to May 2015. One-hundred six staphylococcal bacteria (26.85%) were identified from the 596 mastitic milk samples on the basis of cultural features, gram staining and oxidase test. Identifications of the isolates were performed using API-Staph Kit (bioMe´rieux SA, l'Etoile, France). Coagulase positive (CPS) and negative staphylococci (CNS) were isolated from the examined mastitic milk samples with percentages of 33.96% and 66.04%, respectively. *Staphylococcus aureus* (97.22%) and Staphylococcus intermedius (2.78%) were identified as CPS species, respectively. *Staphylococcus epidermidis* (%17.14), *Staphylococcus haemolyticus* (14.29%), *Staphylococcus xylosus* and Staphylococcus lentus (12.86%), Staphylococcus chromogenes (11.43%), *Staphylococcus capitis* (10%), *Staphylococcus hominis* (7.14%), *Staphylococcus caprae* (5.71%), *Staphylococcus warneri* (2.86%), *Staphylococcus lugdunensis* (1.43%), *Staphylococcus saprophyticus* (1.43%), *Staphylococcus sciuri* (1.43%) and *Staphylococcus simulans* (1.43%) were identified as CNS species, respectively. In conclusion, a large number of different species in CNS group can be isolated from clinical and subclinical mastitis cases in dairy cows. Coagulase negative staphylococci have higher prevalence within staphylococcal mastitis cases. Further researches are needed to investigate epidemiology of CNS species due to knowledge of these species in cow mastitis is limited.

Keywords: Coagulase Negative Staphylococci, Coagulase Positive Staphylococci, Dairy Cow, Epidemiology, Mastitis

Antimicrobial activity of secondary metabolites of *Beauveria bassiana* against some human pathogenic microorganisms

Mahmoud W. El Hindi, **Adil Aksoy**[a], Ashraf A. Shafei[a], Farida N. Mosleh[a], Sabreen El Mazloom[a], Abboud Y. El Kichaoui[a]

[a] DEPARTMENT OF BIOTECHNOLOGY, FACULTY OF SCIENCE, ISLAMIC UNIVERSITY OF GAZA, GAZA-PALESTINE
[b]AKSARAY UNIVERSITY, ESKIL VOCATIONAL SCHOOL, AKSARAY-TURKEY

adilaksoy@aksaray.edu.tr

Abstract:

Background: Fungi play a major role in the ecosystem along with bacteria, small invertebrates, and plants through complex trophic interactions. Most soil fungi are regarded as decomposers for organic matter and key contributors to nutrient cycling. As prolific secondary metabolite producers, fungi have provided several bioactive compounds and chemical models currently used as pharmaceuticals. They recognized as producers of a wide range of secondary metabolites with high therapeutic value as antibiotics, cytotoxic substances and insecticide compounds that promote or inhibit growth, work as attractor and repellent from which they gained their importance in biotechnological applications.

Objective: To evaluate the antimicrobial activity of secondary metabolites of *Beauveria bassiana* against some human pathogenic microorganisms (*Staphylococcus aureus, Escherichia coli, Klebsiella pneumonia, and Candida albicans*).

Methods: Crude extract of *B. bassiana* was prepared using culture broth extract. One ml of aqueous conidial suspension (107conidia/ml) was inoculated in 100 ml liquid medium in 250 ml Erlenmeyer flasks. The flasks were incubated on a rotary shaker (180 rpm) for 7 days at 27 ± 2 ºC. The fermented broth filtered to remove the biomass of *B. bassiana* and to obtain its crude extract.The antibacterial properties of the crude extract evaluated by using the microdilution method and disc diffusion method againist the selected microbial pathogens. During the antibacterial test, different concentrations of the crude extracts were used.

Results: The results revealed that Crude extract showed powerful antimicrobial against most of the tested organisms, both bacteria, and fungi.

Conclusion: These results improved the importance of crude extract in controling of some human pathogenic microorganisms. So this study supports the development of the new antimicrobial drug from the crude extract of *B. bassiana* as a therapy against various diseases.

Keywords: *B. Bassiana*, Antimicrobial Activity, Secondary Metabolites, Human Pathogenic Microorganisms.

Maltitol including milk chocolates by BV seeding: sensorial, micro-structural, and some physical properties

Nevzat Konar[a], Omer Said Toker[b], Derya Genç Polat[c], Sirin Oba[d], Ibrahim Palabıyık[e]

[a]SIIRT UNIVERSITY, DEPARTMENT OF FOOD ENGINEERING, SIIRT-TURKEY
[b] YILDIZ TECHNICAL UNIVERSITY, CHEMICAL AND METALLURGICAL ENGINEERING FACULTY, D EPARTMENT OF FOOD ENGINNERING, ISTANBUL-TURKEY
[c]R&D CENTER, TAYAS FOOD
[d] AMASYA UNIVERSITY, SULUOVA VOCATIONAL SCHOOL, DEPARTMENT OF FOOD PROCESSING, AMASYA-TURKEY
[e] NAMIK KEMAL UNIVERSITY, FACULTY OF AGRICULTURE, DEPARTMENT OF FOOD ENGINEERING, TEKIRDAG-TURKEY
nevzatkonar@hotmail.com

Abstract:

Tempering is an important step in chocolate production to achieve chocolate products with desired quality in terms of texture, appearance and fat bloom. This process is the realization of pre-crystallization of cocoa butter which has a different polymorphic structure to get the most stable solid form. An alternative tempering process can be accomplished by adding/inoculating the crystalline nuclei of form V and/or form VI obtained from solid chocolate and /or cocoa butter to the molten chocolate. In this study, sensorial, micro-structural and some physical properties of milk chocolates manufactured using maltitol in the formulation instead of sucrose and prepared by seeding technique were investigated. For this aim, different concentrations of βv seeds (0.5, 0.6, 0.7, 0.8, 0.9 and 1.0 g/100 g chocolate) were studied. Some important quality parameters of those samples such as water activity, colour values, volatile, sensory and micro-structural properties were compared with those of the control sample tempered with conventional method. The results were analysed with analysis of variance (ANOVA). Tukey's test was applied to determine if the effect of seeding concentration on the quality parameters of maltitol including milk chocolates was significant or not at confidence level of 0.05. Fat blooming observed in the samples was evaluated using white index (WI) values calculated using L*, a* and b* colour parameters and WI values of all samples changed in a narrow range, indicating that chocolate products can be sufficiently tempered using βv crystals. As usage of βv seeds at different concentrations slightly affected the quality parameters, this effect was found to be at acceptable limits especially according to sensory analysis results ($P>0.05$). Regarding overall acceptability, milk chocolates including βv seeds had very close scores compared with conventional one.

Keywords: Chocolate, Maltitol, Seeding, Tempering

***Acknowledgements**: This study was funded by the Scientific and Technological Research Council of Turkey (TUBITAK), Project No. TOVAG-115O028.*

Effects of hydrocolloids on quality parameters in fruit molasses based soft candies: A model study

Nevzat Konar[a], Omer Said Toker[b], Derya Genç Polat[c]

[a]SIIRT UNIVERSITY, DEPARTMENT OF FOOD ENGINEERING, SIIRT-TURKEY
[b] YILDIZ TECHNICAL UNIVERSITY, CHEMICAL AND METALLURGICAL ENGINEERING FACULTY, DEPARTMENT OF FOOD ENGINNERING, ISTANBUL-TURKEY
[c]TAYAS R&D CENTER, TAYAS FOOD

nevzatkonar@hotmail.com

Abstract:

Confectionery products have widespread consumption in all regions and age groups. These products have a globally growing market. In particular, soft candies having a chewable structure is among the fastest growing product groups among confectionery products. However, in parallel with the changes in consumer trends and expectations, there are important demands for reducing sugar, gelatin, artificial aroma, and colorants levels or substituting of them by using natural components in confectionery. Especially excessive consumption of sugar may be related with an increased incidence of obesity, tooth decay, and hyperglycemia. Fruits, fruit by-products and wastes are among the substances that can be used to substitute sugars in the confectionery products. The number of studies performed for this aim is limited. In this study, model soft candy samples were obtained by using gelatin and starch (5.0 g / 100 g) as hydrocolloid in mulberry and grape molasses (18.7-25.0 g / 100 g) based formulations. Color (L *, a * and b *), moisture content and water activity properties of soft candy samples were determined. TPA analysis showed that firmness and cohesion values were between 226.3-305.7 g and (-13.4) - (- 38.2), respectively. In addition, the moisture content (0.90-2.64 g / 100 g), water activity (0.64-0.84), brightness (L*) (14.5-21.0) properties of samples have affected by used hydrocolloid and molasses significantly (P> 0.05). When the sensory properties (brightness, color, springiness, chewability, flavour, taste, and appearance) were taken into consideration, it was found that the samples prepared with gelatin had higher liking (P> 0.05). As a result, hydrocolloid type was found to be effective in product quality properties and shelf life. Also, it was determined that grape molasses have advantages in terms of sensory properties and gelatin as hydrocolloid had an advantage for sensory properties as well as product structural properties.

Keywords: Confectionery, Texture, Fruit Molasse, Hydrocolloid

Prevalence and risk factors for maedi-visna in sheep herds in the inner aegean region of Turkey

Omer Barış İnce[a,b]

[a] PROVINCE DIRECTORATE, MINISTRY OF AGRICULTURE AND FORESTRY, AFYONKARAHISAR-TURKEY
[b] PAMUKKALE UNIVERSITY, ANIMAL BREEDING AND GENETIC RESEARCH AND IMPLEMENTATION CENTER, DENIZLI-TURKEY

incebaris@gmail.com

Abstract:

Disease associated with Maedi-Visna Virus (MVV) infection results in substantial economic losses in affected sheep producing areas of the world. This disease is considered to affect the international trade and is classified in the World Organization for Animal Health (OIE) list of notifiable animal diseases. An epidemiological study was conducted to estimate herd and individual seroprevalence in the inner Aegean region of Turkey (Afyonkarahisar, Kütahya, Uşak) and analyze risk factors related to MVV infection in sheep. Between March 2014 and May 2018, a total of 551 sera samples were randomly collected from 46 sheep herds. The required minimum within herd sample size was calculated based on the epidemiologic research. Herd size in the studied area ranged from 10 to 250. Sheep farms were grouped into 3 categories; small (10-50), medium (51-100) and large (more than 100 sheep). Potential MVV risk factors were statistically evaluated for significance in univariable model. On an individual level, herd size, age and sex recorded a significant association with seropositivity of CAEV infection ($P < 0.05$). Sera samples were examined for MVV antibodies using indirect-enzyme linked immunosorbent assay (i-ELISA) . A total of 27 sheep were found seropositive with overall prevalence of 4.9%. On herd level, 12 farms out of 46 were found seropositive (26.08%). The results of this study provide useful information to consider epidemiological programs against MVV infection in Turkey.

Keywords: Maedi-Visna Virus, Epidemiology, Sheep, Risk Factors

Detection of Canine Kobuviruses in dogs in Turkey

Ilke Karayel Hacıoğlu[a], Selda Duran Yelken[b], Feray Alkan[a]

[a]ANKARA UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF VIROLOGY, ANKARA-TURKEY
[b]SIIRT UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF VIROLOGY, SIIRT-TURKEY

ilkeekarayel@gmail.com

Abstract:

Canine kobuvirus (CaKoV) is classified as a member of the Aichivirus A species, which taxonomically belongs to the *Kobuvirus genus* in the family Picornaviridae. The members of this genus infect a wide range of mammals including humans and frequently cause asymptomatic or mild infection with diarrhea. In this study, we aimed to investigate the presence and molecular characterization of *CaKoV* in dogs with or without diarrhea in Turkey.

In this study, a total of 137 fecal samples from diarrheic (n=80) and non-diarrheic dogs (n=57) aged 0-6 months were tested for *CaKoV*. For this purpose, viral RNA was extracted by using Trizol LS Reagent and then RT-PCR targeting the RdRp gene region was carried out. The expected sized amplicons were sequenced and the sequences were compared with cognate sequences available in GenBank by using the MEGAX software. The CaKoV positive samples were also tested for the most common enteropathogens such as *CDV, CRV, CPV* and the data was interpreted with these results.

Out of 137 fecal samples, 9 (6.6%) were positive for *CaKoVs* by RT-PCR. Of the 80 samples from diarrheic dogs six (7.5%), 57 non-diarrheic dogs three (5.2%) were found to be positive. Seven samples were able to be sequenced for the partial RdRp region. Phylogenetic analysis indicated that these sequences are more closely related to other CaKoV sequences from Europe, Africa and the Americas than with sequences from Asia. *CaKoVs* detected in dogs, some of which were found to be infected by *CaKoV* alone while some had mixed infections with other studied enteropathogens.

In conclusion, the present study showed that *CaKoVs* may cause diarrheic or asymptomatic infection in dogs. Since there are few studies about this virus, further studies on the detection and the molecular characterization of circulating *CaKoV* are likely to provide more detailed data of its molecular epidemiology and pathogenic aspects.

Keywords: *Canine Kobuvirus*, Diarrhea, Dog

Presence of *bovine herpes virus type 1* and *type 5* in turkish cattle with respiratory disease

Murat Sevik[a], Veysel Soydal Ataseven[a], Ozgür Kanat[b]

[a] HATAY MUSTAFA KEMAL UNIVERSITY, VETERINARY FACULTY, DEPARTMENT OF VIROLOGY, HATAY-TURKEY
[b] HATAY MUSTAFA KEMAL UNIVERSITY, VETERINARY FACULTY, DEPARTMENT OF PATHOLOGY, HATAY-TURKEY

muratsevik@mku.edu.tr

Abstract:

Aim of the study: *Bovine herpesviruses type 1 (BoHV-1)* and *type 5 (BoHV-5*) are two genetically and antigenically closely related *alphaherpesviruses* that infect cattle. BoHV-1 has been associated with various clinical syndromes, such as respiratory and genital infections, whereas *BoHV-5* has been associated with meningoencephalitis in young cattle. This study reports the presence of *BoHV-1* and *BoHV-5* infections in cattle with respiratory disease.

Material and Methods: Lung tissue samples (n=50) were collected from cattle that were culled due to respiratory disease in the Afyonkarahisar, Aksaray, Hatay and Konya Provinces in Turkey. The presence of *BoHV-1* and *BoHV-5* was investigated by multiplex real time PCR. Furthermore, histopathologic examination carried out in *BoHV-1* and/or *BoHV-5* positive lung tissue samples.

Results and Conclusion: *BoHV-1* DNA was detected 3 (6%) of the 50 lung tissue samples whereas *BoHV-5* was detected in 1 (2%) lung tissue samples. Histologically, lesions in the positive lung samples were characterized by necrosis of bronchial epithelium and eosinophilic intranuclear inclusion bodies. Results of the study showed that *BoHV-1* is more common than BoHV-5 in cattle with respiratory disease in investigated provinces, but *BoHV-5* should be also taken into consideration in respiratory disease of cattle. To the best of our knowledge, this is the first report on the presence of the BoHV-5 infection in cattle with respiratory disease in Turkey.

Keywords: *Bovine Herpesvirus Type 1, Bovine Herpesvirus Type 5*, Cattle, Respiratory Disease, Multiplex Real Time Pcr

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The areas of using boron in health

Abuzer Acar[a], Ayhan Hilal Gezer[b]

[a]AFYON KOCATEPE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT INTENAL MEDICINE, AFYONKARAHISAR-TURKEY
[b]CELAL BAYAR UNIVERSITY, FACULTY OF MEDICINE, DEPARTMENT OF MEDICAL BIOLOGY, MANISA-TURKEY

abuzeracar@hotmail.com

Abstract:

Turkey is the biggest manufacturer of boron in the world. This situation increases the importance of this element for our country. Therefore, in recent years, studies have been increasing in the field of health as well as in the industrial field. Boron, which is an essential element for plants, animals and humans, plays a role in physiological and metabolic events in the organisms. In addition , boron has important functions in mineral metabolism, lipid metabolism and energy metabolism, immune and endocrine system and brain, also has a positive effect on performance, and might be effective in preventing osteoporosis, osteoarthritis and arthritis. It has been showed by several pharmacokinetic studies that boric acid is rapidly and nearly all (>90) absorbed from the gastrointestinal tract. There is evidence that boron has a protective effect against certain types of cancer. There are researches reporting that taking non-toxic doses of borax can change lipid and carbohydrate metabolism in dogs. Sodium borate is known to reduce liver fat in dairy cows during the early period of lactation. There are many studies on the effects of boron on bone metabolism in rats, broiler, laying hen and pigs. It has been shown that boric acid (3% solution) increases the treatment success in wound healing. The effects of boron on antibacterial properties, bone and immune response have attracted the intention of researchers in the field of periodontology. The antibacterial and anti-inflammatory effect of boric acid compounds has been reported in general medicine. One of the important results in human studies is that the addition of boron to the diet leads to an increase the level of 17-β oestradiol and testosterone. To conclusion, boron is used for preventive and curative treatment in many areas of health as supported by scientific studies.

Keywords: Boron, Health, Treatment

Thelazia callipaeda (railliet and henry, 1910) case in a dog: First record in TURKEY

Mustafa Eser[a], Özlem Miman[b], **Abuzer Acar[c]**

[a]ANADOLU UNIVERSITY OPEN EDUCATION FACULTY HEALTH PROGRAMS, ESKIŞEHIR - TURKEY
[b]DOKUZ EYLÜL UNIVERSITY, FACULTY OF MEDICINE, DEPARTMENT OF MEDICAL PARASITOLOGY, İZMIR - TURKEY
[c]AFYON KOCATEPE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF INTERNAL MEDICINE, AFYONKARAHISAR - TURKEY

abuzeracar@hotmail.com

Abstract:

A 2.5 years old male Golden Retriever breed dog with the itching, runny eyes, and continuous unease complaints was brought to a private veterinary medical centre in the Thrace region of Turkey, in September 2017. It was observed that there was a purulent conjunctivitis in the left eye and there was a mobile structure under the membrane nictitans after the examination. A drop of local anesthetic was dripped into the eye, and the mobile structure was removed with the help of a forceps. This removed structure was taken into the solution of 70% alcohol on suspicion of parasite. Both the extracted material and the blood samples were sent to the Department of Internal Medicine, Afyon Kocatepe University, Faculty of Veterinary Medicine for evaluation and it was evaluated with parasitologist. The parasite was cleared by taken into a 0.9% physiological saline and kept in the lactophenol for two days for transparency. Then, the transparent parasite was determined as *Thelazia callipaeda* after microscopic examination. The ocular form of thelaziasis caused by T. callipaeda in a dog has been reported for the first time in Turkey with this case report. By this report, first case of ocular thelaziasis reported seen a dog in Turkey and it was aimed to point out that this parasite can lead to significant eye problems in animals.

Keywords: Dog, Ocular Thelaziasis, Thelazia Callipaeda, Golden Retriever

Detection of helminth eggs contamination on raw vegetables in bazaar in Afyonkarahisar province

Esma Kozan[a], **Mahmut Sinan Erez[a]**, Ahmet Göksu[a]

[a]AFYON KOCATEPE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF VETERINARY PARASITOLOGY, AFYONKARAHISAR-TURKEY

mserez@aku.edu.tr

Abstract:

This study was conducted in Afyonkarahisar province which is located in Aegean, Mediterranean and Central Anatolia as a three different geographic region between October 2018 and April 2019. A total of 308 samples obtained from local markets consisting of lettuce, parsley, carrot, green onion, spinach, watercress, rocket, dill, mint and purslane were assessed for the presence of helminth contamination in Afyonkarahisar. Free-living nematode larvae were detected in 120 (38.96%) of 308 vegetable samples examined, and only 30 vegetable samples were contaminated with various helminth eggs. Both Moniezia spp. and Dicrocoelium spp. was found 2 of 24 examined carrot samples, respectively. Fasciola spp. was found 1 of 33 green onion samples and Dicrocoelium spp. also was found 1 of 41 rocket samples. This result was considered that contamination is occurred due to the use of infected ruminant faeces as fertilizer. Toxocara spp. eggs were found in 1 of 15 mint samples which may pose a serious risk to public health and Toxascaris leonina eggs were found 1 of 41 rocket samples. Taenia spp. eggs were found in 1 of 43 lettuce samples and 1 of 25 dill samples. Origin of contamination was considered as human-induced or carnivore-induced. Considering that it is not possible to separate Echinococcus spp. eggs from other Taenia spp. eggs found in carnivores microscopically, it can be thought that these eggs found in vegetable samples may belong to Echinococcus spp., which can cause deadly hydatid cysts in humans. It has been observed that the vegetables which are presented to consumers as unprocessed and consumed raw, could be contaminated with various parasitic eggs which could seriously threaten human health. As a result, access of animals to the fields where the raw vegetables are grown should be prevented and raw-consumed vegetables should be subjected to significant washing before consuming.

Keywords: Helminth, Egg, Raw, Vegetables, Contamination, Bazaar, Afyonkarahisar

The evaluation of serum oxidative stress and total antioxidant status during estrous cycle in bitches

Duygu Baki Acar[a], Murşide Ayse Demirel[b]

[a]AFYON KOCATEPE UNIVERSITY, VETERINARY FACULTY, DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY, AFYONKARAHISAR-TURKEY
[b]GAZI UNIVERSITY, FACULTY OF PHARMACY, DEPARMENT OF PHARMACOLOGY, LABORATORY ANIMAL CARE AND RESEARCH UNIT, ANKARA-TURKEY

dbakiacar@gmail.com

Abstract:

Bitches are monoestrous animals, and differs from other domestic animals due to hormonal profile of estrus cycle. Serum progesterone level increase rapidly during preovulatory LH surge. Oocyte maturation, follicular growth, ovulation, steroidogenesis, and luteolysis are physiologic process of reproduction; these physiologic processes affect reactive oxygen species and antioxidant status of animals. In the present study, we aimed to evaluate serum Total Antioxidant Status (TAS), Total Oxidant Status (TOS) and Oxidative Stress Index (OSI) in bitches during estrous cycle. A total of 13 bitches were used for this study. Vaginal smear samples were taken for determining estrous cycle, and stained with Giemsa. Blood samples were collected for TAS, TOS and progesterone analyzes. The TAS and TOS analyzes were performed using by Erel's method. The OSI was defined as the ratio of the TOS level to TAS level. TAS levels were converted to µmol. Specifically, OSI (arbitrary unit) = TOS (µmol H2O2 equivalent /L)/TAS (µmol Trolox equivalent /L) x 100. The serum levels of progesterone were measured by canine ELISA kits, according to the manufacturer's instructions. The bitches were divided into four groups as proestrus (n=2), estrus (n=3), diestrus (n=6), and anestrus (n=2) according to vaginal smear and serum progesterone levels. The lowest concentration of TAS (0.96±0.33 mmol/L), and the highest concentration of TOS (52.47±5.29 µmol/L) were detected in estrus phase. Mean level of OSI was 3.55 in proestrus, 5.84 in estrus, 4.86 in diestrus, and 4.53 in anestrus phases. In conclusion, the results of our study revealed the physiologic levels of TAS, TOS and OSI showed alteration during estrous cycle in bitches. Therefore, further studies about oxidative stress levels in relation with reproductive physiology are required with a large number of animals.

Keywords: Bitch, Estrous Cycle, TAS, TOS, Osi

The effect of intravaginal sponge treatment on fertility rates in ewe of sonmez

Deniz Yeni[a], Fatih Avdatek[a]

[a]AFYON KOCATEPE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTHMENT OF REPRODUCTION AND A.I., AFYONKARAHISAR-TURKEY

dyeni@aku.edu.tr

Abstract:

The object of this trial was to determine the efficacy of vaginal sponge treatment to synchronize oestrus in Sonmez (ChiosxTahirova) and Merino ewes during the non-breeding season. The experiment was performed under natural conditions in early February in Afyonkarahisar province, located in the west of Turkey. This region is situated at 38° 45´ N, 30° 32° W, and at an altitude of 1021 m above sea level. A total of twenty three Sonmez and twenty seven Merino ewes were used. Progesterone impregnated intravaginal sponges were inserted for 12 days. A total of 600 IU of eCG was injected intramuscularly following the removal of sponges. The ewes were mated with fertile rams after twelve hours of removal of vaginal sponges. Rams were removed after 4 days. The pregnancy of ewes was determined by transrectal ultrasonography using a real-time B-Mode ultrasound with linear - array transrectal probe on day 45 following the mating. It was observed that higher ($p < 0.05$) pregnancy rate was recorded in Sonmez ewes % 73.9 (17/23) than those detected in the Merino ewes % 44.82 (13/29). It is suggested that the response of the treatment of intravaginal sponge might be better in Sonmez ewes.

Keywords: Sonmez, Ewe, Progestagen, Pregnancy Rate

The Effect of Boron Addition on Some Spermatological Parameters Liquid Storage (+5 °C) Ram Semen

Deniz Yeni[a], Fatih Avdatek[a]

[a]Afyon Kocatepe University, Faculty of Veterinary Medicine, Department of Reproduction and Artificial Insemination, Afyonkarahisar-TURKEY

dyeni@aku.edu.tr

Abstract:

The study was conducted to determine the effect of boron on changes of ram sperm motility, abnormal sperm rate and membrane integrity (HOST) during short term storage (+5°C) for 48 hours. Between 3-4 years old three Ramliç rams were used as the material of study during non breeding season. Rams were maintained by Afyon Kocatepe University, Farm of Veterinary Medicine in Afyon, Turkey. Ejaculates were collected from three Ramlic Rams by artificial vagina (AV) and pooled at 37°C for evaluation. The study was replicated six times. Determined principle spermatological properties and having/with normospermie quality will pooled ejaculates were split into four equal aliquots. Each group was separately diluted to final concentration of approximately 120×106 (spt/ml) with control (without boron) or boron supplemented extenders (containing 1, 2 and 4 mM, respectively) then cooled to 5 °C within 60 min. Cooled samples were maintained at 5 °C during 0, 24 and 48 h. After 24 and 48 hours of storage, 2 mM Boron treated sperm samples presented higher motility and membrane integrity than control group ($P < 0.05$) in ram semen stored at +5°C. Furthermore, boron addition improved the ability of ram spermatozoa to motility and membrane integrity for short term storage

Keywords: Sperm, carnosic acid, short term storage, ram

Intestinal parasites in pet animals in some pet shops of Afyonkarahisar and Kütahya province

Kağan Turan[a], **Mahmut Sinan Erez[a]**, Esma Kozan[a]

[a]AFYON KOCATEPE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF PARASITOLOGY

mserez@aku.edu.tr

Abstract:

This study was carried out in a total of 8 pet shops between March and August 2016 in order to determine intestinal parasites in various animals which are offered for sale in Afyonkarahisar and Kütahya Province. In this study, fecal samples of 7 dogs, 2 cats, 14 rabbits, 22 hamsters and 102 bird cages which are sheltered budgerigars, canaries, pigeons, partridges, quails were collected from 8 pet shops in Afyonkarahisar and Kütahya provinces. Samples were processed with Fulleborn saturated salt flotation method than examined parasitologically. Parasitic infection rates were 42.86% (3/7) in dogs and 71.43% (10/14) in rabbits. *Isospora spp.* oocysts were detected in one of three infective dog (%33) and Toxocara canis eggs were seen in fecal samples of all three infective dogs (%100). *Eimeria spp*. was identified in stool samples of two quail cages, *Eimeria spp.* and *Capillaria spp* were detected in fecal samples of two pigeon cages. In addition to that eggs of Ascaridia columbae were detected in one pigeon cage. No parasitic infection was found in other birds, hamsters and cats except pigeons and quails. It has been thought that pet animals which are offered for sale should be controlled regularly in terms of parasitic infections and eliminated of parasites with proper treatment when required.

Keywords: Helminth, Petshop, Pet Animal

Transportation, adaptive and productive performance of transported buffalo herd in new environment

Hatem Abdel Kader M. Hamdon[a], Fayza I. Omran[b]

[a] NEW VALLEY
[b] ANIMAL PRODUCTION RESRARCH INSTUTUTE

hamdon@nv.aun.edu.eg

Abstract:

The study was carried out in El-Nobarya Station, Beheira Governorate and El-Nataf El-Kadeem Station, Kafr El-Sheikh Governorate. Twenty-two buffalo cows were included in the experiment. Animals were transported\d to El-Nobarya station to establish abuffalo herd in this station.The experiment included two stages, the first stage aimed to study the effect of transportation and the second stage aimed to study the effect of acclimatization in El-Nobarya station. Meteorological data were collected and recorded including air temperature (AT, °C), relative humidity (RH, %) and wind speed (WS, Km/hr.), from which temperature humidity index (THI) was calculated. The following physiological and hematological parameters were recorded: rectal temperature (RT, °C), respiration rate (RR,r/min), hemoglobin (Hb, g/dl), hematocrit value (Ht, %) and differential counts of leukocyte types; Neutrophils (Ne), Lymphocytes (Ly), Eosinophils (Eo), Monocytes (Mo) and Basophils (Ba). Meanwhile productive traits included dam weight at calving (DW, KG), birth weight of calves (BW, Kg), weaning weight of calves (WW, KG), calving interval period (CI, day), lactation period (LP, day), total milk yield (TMY, Kg) and persistency (PE, %).The present work was conducted to compare between physiological and productive performance of buffaloes before and after transportation. The main obtained results are: the decrease in THI and increase in WS were the main meteorological factors affecting physiological performance for animals. The high difference between animal body temperature and house temperature in El-Nobarya had been ameliorated by the effect of low THI and high WS. Transportation influenced significantly physiological (RR and RT) and hematological parameters. It increased significantly RR, RT, Ne and Mo and decreased significantly Ht, Hb, Ly and Eo after sustainability of animals. However, productive traits of the first season after transportation was better than before transportation except TMY due to better managerial and environmental conditions. Buffaloes can acclimatized to transportation stress during the first season as no significant differences were found between physiological and productive traits between the four season after transportation except milk yield and milk curve persistency which require three seasons to come back to pre-transportation levels. It could be concluded that buffaloes under conditions in El-Nobarya were better than those in El-Nataf El-Kadeem due to better environmental conditions (lower THI and higher WS) and management.

Keywords: Buffaloes, transportation, temperature humidity index (THI), Total milk yield, Persistency

Combating multidrug-resistant *Staphylococcus aureus* with extracts of Eucalyptus globulus and Calotropis procera, and their role in modulation of beta lactam drug resistance

Muhammad Avais[a], Mahboob Ali[a]

[a] UNIVERSITY OF VETERINARY AND ANIMAL SCIENCES, LAHORE-PAKISTAN

mavais@uvas.edu.pk

Abstract:

This study was carried out to determine the efficacy of Eucalyptus globulus and Calotropis procera against multidrug-resistant *Staphylococcus aureus* (MDRSA) and in modulating beta lactam drug resistance. Aqueous and ethanolic extracts of leaves of both plants were tested by well diffusion and broth dilution method against MDRSA isolated from mastitic camel milk. Effectiveness of cefotaxime and ampicillin was tested alone and in combination with several concentrations of the plant extracts. Treatment with ethanolic extracts of both plants produced significantly ($p<0.05$) higher zones of inhibition than did aqueous extracts. The ethanolic extracts combined with cefotaxime showed significant differences ($p<0.05$) from the combination of cefotaxime with aqueous extracts of each plant. Similar response was noted in case of ampicillin combination with ethanolic and aqueous extract of each plant. The modulation factor for both drugs combined with all concentrations of ethanolic extracts of both plants was less than 0.5, indicating strong synergy. The minimum inhibitory concentration (MIC) of the ethanolic extract was significantly lower than that in aqueous extracts of either plant ($p < 0.05$). In conclusion, MIC of ampicillin was reduced when combined with ethanolic extracts of C. procera at higher tested concentrations and with all ethanolic concentrations of E. globulus. The modulation factor was >2, indicating a synergistic response.

Keywords: Drug resistance, *Staphylococcus aureus, E. globulus, C. procera*, beta lactam drug resistance modulation

Cause of abortion in dairy cattle "Neosporiosis"

Gaye Bulut[a], Hikmet Un[b], Ilker Camkerten[c], Gökçenur Sanioğlu Gölen[d]

[a] AKSARAY UNIVESITY, FACULTY OF VETERINARY MEDICINE,DEPARTMENT OF OBSTETRIC AND GYNECOLOGY, AKSARAY-TURKEY
[b] AKSARAY UNIVESITY, FACULTY OF VETERINARY MEDICINE,DEPARTMENT OF VIROLOGY, AKSARAY-TURKEY
[c] AKSARAY UNIVESITY, FACULTY OF VETERINARY MEDICINE,DEPARTMENT OF INTERNAL MEDICINE, AKSARAY-TURKEY
[d] AKSARAY UNIVESITY, FACULTY OF VETERINARY MEDICINE,DEPARTMENT OF MICROBIOLOGY, AKSARAY-TURKEY

gayebulut@hotmail.com

Abstract:

The contribution of animal husbandry to the national economy cannot be ignored. The causes of infertility are various and complex. Economic losses are increasing in dairy cattle breeding due to infectious and non-infectious causes. The percentage of abortion due to infectious agents is not fully known, but infectious agents lie in about 90% of the cases whose etiology can be determined. Neospora caninum is considered to be one of the most important abortion factors of cattle. However, it is an infectious agent that is always ignored. This parasite causes high abortion in cows and causes lethal neuromuscular diseases in dogs. The aim of this study was to investigate the effect of *N. caninum* on blood from 137 head dairy cattle animals who had abortion and infertility problems to the Faculty of Veterinary Medicine of Aksaray University. For serological diagnosis, ELISA (Enzyme-Linked ImmunoSorbent Assay) test was performed. As a result, *N. caninum* agent was detected in 37.22% (51/137) of the samples due to abortion and infertility problems. 90% of the cows in the herd can be infected with this protozoon, which has a widespread transmission feature. Consequently, it has been concluded that economic losses due to infertility in dairy cattle breeding and protozoa, one of the infectious agents, should be given importance in recent years.

Keywords: *Neospora Caninum*, Infertılıty, Dairy Cow

***Acknowledgements**: This study is supported by Aksaray University Scientific Research Projects Coordinator (Project No: 2018-052).*

The effects of the addition of inactivated yeast metabolite (*Saccharomyces cerevisiae*) to rations prepared with different roughage materials on fattening performance, slaughter-carcass parameters and some internal organ weights of lambs

Duygu Budak[a], Aydan Yılmaz[b]

[a]AKSARAY ÜNİVERSİTESİ, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF ZOOTECHNICAL AND ANIMAL NUTRITION, AKSARAY-TURKEY
[b]ANKARA ÜNİVERSİTESİ, FACULTY OF AGRICULTURE, DEPARTMENT OF ANIMAL SCIENCE, ANKARA-TURKEY

budakduygu@hotmail.com

Abstract:

This study was planned in order to determine the effects of the supplementation of inactivated yeast metabolite (IYM) (*Saccharomyces cerevisiae*) to rations containing alfalfa hay (AH), meadow hay (MH) and wheat straw (WS) on lambs in terms of fattening performance, slaughter-carcass parameters and weights of some internal organs. In this study where 36 singleton born male Anatolian Merino lambs of 26.22±1.07 kg average live weight, weaned at age of 2.5 months were used; 6 groups were formed for each roughage, 3 with IYM additive and 3 without IYM additive and tests were performed on 3x2 factorial experiment design basis. Lambs were kept in individual partitions, were offered roughage in constant amounts (150 g/day) while concentrated feed and water were offered ad libitum. Extra IYM were added in constant amounts (7 g/day) to the roughage of the groups with supplement. Concentrate feed (metabolizable energy in dry matter; 2730 Mcal/kg DM, crude protein; 17.41%) were kept in the feeders after roughage and/or roughage + IYM mixture were consumed. Testing took 70 days in total; first 10 days being the adaptation period, followed by 60 days of main fattening period. At the end of the research, it has been determined that the feed type and IYM additive did not effect the fattening performance, slaughter-carcass parameters, spleen, liver and lung weights of lambs (P>0.05). Heart weight increased in lambs fed with AH (P>0.05). The conclusion that any one of AH, MH and WS may be used as roughage material for fattening of lambs based on concentrate feed has been reached.

Keywords: Lamb Fattening, Inactivated Yeast, Fattening Performance, Carcass Yield, *Saccharomyces Cerevisiae*

***Acknowledgements**: This work was supported by Ankara University Scientific Research Projects Coordination, grant number: 15L0447004*

Corneometric analysis among cats with head and neck dermatitis

Songül Erdoğan[a], Hasan Erdoğan[a], Mehmet Gültekin[a], Serdar Paşa[a], İlker Çamkerten[b], Kerem Ural[a]

[a]Adnan Menderes Üniversitesi, Veteriner Fakültesi, İç Hastalıkları Ana Bilim Dalı, Işıklı, Aydın-TURKEY
[b]Aksaray Üniversitesi, Veteriner Fakültesi, İç Hastalıkları Ana Bilim Dalı, Aksaray-TURKEY

songultp.09@hotmail.com

Abstract:

In recent years, many new disorders affecting cats, face, ear and skin have been identified and categorized by reviewing these disorders and were identified as Feline head and neck dermatitis (Fhnd). Pruritus is recognised as a diagnostic clinical symptom of the skin lesions in dogs and as well as in cats with Fhnd. The aim of this study was to classify the corneometric analysis for selected parameters (pH and hydration) in cats with Fhnd. For this propose a total of 27 cats (7 healthy and 20 Fhnd) were enrolled to the study and examined for corneometric analysis. Concerning mean (standard deviation) pH and hydration values a statistically significant difference (p=0.005) was detected in cats with Fhnd healthy ones. In conclusion, this preliminary result will be shed a new light to the topical treatment approaches to the clinicians in cats with Fhnd.

Keywords: Dermatitis, Corneometric analysis, Fhnd

Spatial distribution of selected parasitological agents among sheep in aegean and middle anatolian regions

Adnan Ayan[a], Deniz Aliç Ural[b], Songül Erdoğan[c], Hasan Erdoğan[c], Serdar Paşa[c], Mehmet Gültekin[c], Güzin Çamkerten[d], Ilker Çamkerten[e], Kerem Ural[c]

[a]VAN YUZUNCU YIL UNIVERSITY, FACULTY OF VETERINARY MEDICINE DEPARTMENT OF GENETICS, VAN-TURKEY
[b]AYDIN ADNAN MENDERES UNIVERSITY, FACULTY OF VETERINARY MEDICINE FACULTY FARM, AYDIN-TURKEY
[c]AYDIN ADNAN MENDERES UNIVERSITY, FACULTY OF VETERINARY MEDICINE DEPARTMENT OF INTERNAL MEDICINE, AYDIN-TURKEY
[d]AKSARAY UNIVERSITY, AKSARAY TECHNICAL SCIENCES VOCATIONAL SCHOOL, AKSARAY-TURKEY
[e]AKSARAY UNIVERSITY, FACULTY OF VETERINARY MEDICINE DEPARTMENT OF INTERNAL MEDICINE, AKSARAY-TURKEY

adnanayan@yyu.edu.tr

Abstract:

Tick-borne diseases such as babesiosis and anaplasmosis have a major impact on livestock production in tropical and subtropical areas. Infection by *Anaplasma* spp. or *Babesia* spp. have been reported to cause great economic impact in small ruminants. *Babesia* spp. and *Anaplasma* spp. are important intracellular agents that are transmitted by tick bites. The purpose of this study was the investigation of the spatial distribution of selected parasitological agents among sheep in Aegean and Middle Anatolian regions. The study was carried with the blood samples were collected from 94 sheep for *Babesia* spp. and 58 sheep for *Anaplasma* spp. in Aegean and Middle Anatolian Regions. Thin blood smears were fixed in methanol and stained using 1:10 dilution (stain:water) of Giemsa's stain for 45 min. Stained blood smears were examined microscopically for the presence of parasites under the oil immersion (100× magnification) objective of the light microscope. The piroplasms of *Babesia* spp. were observed in 26 (27.6%) of 94 blood smears. *Anaplasma* spp. were observed in 11 (18.9%) of 58 blood smears. In conclusion *Babesia* spp. rates such as 27.6% and *Anaplasma* spp. infection rates such as 18.9% in sheep were determined with microscopic examination.

Keywords: Aegean region, Middle Anatolian Regions, Parasitological agents, Sheep

Effect of drinking water vaccination on back scratch lesions in broilers

Kayhan Ozkan[a], Cem Konuk[b]

[a]DUZCE UNIVERSITY, HEALTH SCIENCES INSTITUTE, PHYSIOLOGY DEPARTMENT, DUZCE-TURKEY
[b]SELCUK UNIVERSITY, VETERINARY FACULTY, KONYA-TURKEY

kayhan.ozkan@ceva.com

Abstract:

This study aimed at evaluating the influence of drinking water vaccination on the percentage of back scratches on the rearing period. During the dehydration process for drinking water in broilers, animals undergo stress. When the water regime is over and the vaccination begins, the animals start drinking water and deform each other. Male and female broilers of one genetic strain reared during the growing period were evaluated. The study includes 20 broiler flock of contracted farms located in the state of Marmara region, Turkey, in 2018. 10 Broiler flock determined for control which have vaccinated in the hatchery with Newcastle vaccine against Newcastle disease. Vaccination in 10 other experimental group flocks was given to animals by drinking water on the 12th day. The vaccine strains were the same in both groups. After vaccination, every of each flock of 100 broilers at 43 days old were observed for back scratches examination in flocks. Each animal was were evaluated twice and broiler scratch lesions were classified as present or absent. Control group presented lower scratch rates ($p < 0.05$) than the experimental group. According to the study results that different vaccination administration practices can be adopted to minimize back scratches in broilers. As a result, the presence of skin lesions causes economic losses in white meat production.

Keywords: Back Scratch Lesions, Drinking Water Vaccination, Stress

Effect of various litter type on broiler respiratory system and foot pad

Kayhan Ozkan[a], Cem Konuk[b]

[a]DÜZCE UNIVERSITY, HEALTH SCIENCES INSTITUTE, PHYSIOLOGY DEPARTMENT, DUZCE-TURKEY
[b]SELÇUK UNIVERSITY, VETERINARY FACULTY, KONYA-TURKEY

kayhan.ozkan@ceva.com

Abstract:

An experiment was conducted to investigate the effect of litter type (sawdust, rice hull and milled sunflower seed) on respiratory defects (conjunctivitis and tracheitis) and foot pad lesion (pododermatitis) in "Cobb 500" broilers. Litter varieties used in broiler farming have increased in recent years. It has been reported that some of the litter materials have negative effects due to their structure. The most important factor in the formation of this structure is the moisture holding capacity of the base. In total, 75.000 "Cobb 500" broilers created the universe of the study. Each litter material was laid in 3 separate farm house without entry of animals. On the 35th day we visited all the houses. 50 Animals were selected from each flock for grading conjunctivitis, tracheitis and pododermatitis. Litter type and lesion score ratio results was statistically compared by t test for 3 groups. Statistically the results were considered to be significant when P value lower than 0.05 ($p < 0.05$). Respiratory damage grading of the flock in rise hull litter used was found to be better than the other litter materials statistically ($p < 0.05$). Despite the fact that, pododermatitis damage grading of the flock in milled sunflower seed litter used was found to be worse than the other litter materials statistically ($p < 0.05$). This study reveals the relationship between respiratory system lesions and pododermatitis findings of different types of litter.

Keywords: Sawdust, Rice Hull, Milled Sunflower Seed, Respiratory, Litter Type, Pododermatitis

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POSTER PRESENTATIONS

Changes in calcium, phosphorus and magnesium concentratons in neonatal sepsis suspected calves

Enes Akyüz[a], Erdoğan Uzlu[a], Mert Sezer[a], Mushap Kuru[b], Gürbüz Gökce[a]

[a] KAFKAS UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF INTERNAL MEDICINE, KARS-TURKEY
[b] KAFKAS UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,KARS-TURKEY

enesakyuz_44@hotmail.com

Abstract:

Neonatal septicemia has been described as a disease that causes severe mortality in neonatal calves and affects calves with passive transfer failure. The disease mostly affects calves in the first few weeks. Clinically, the increase in respiratory rate, increase or decrease in heart rate, increase or decrease in body temperature are noted. In this study, we aimed to determine the changes in calcium (Ca), phosphorus (P) and magnesium (Mg) concentrations before and after treatment in neonatal sepsis suspected calves. For this purpose, 10 neonatal calves suspected of sepsis and 10 healthy calves, 1-10 days old were included and cases were selected in accordance with sepsis criteria. Cases were from those refered to the Department of Internal Medicine, Veterinary Faculty of Kafkas University. Blood samples were taken from calves with sepsis before treatment (Day 0), after 24 and 48 hours of treatment. Blood samples were taken from healthy calves at the same time as cases. Serum Ca, P and Mg concentrations were measured in autoanalyser. The Ca mean value was measured as 11.24 mg/dL at 0 h, 10.27 mg/dL at 24 h, 10.10 mg/dL at 48 h and 9.99 mg/dL in control. The P value was measured as 8.83 mg/dL at 0 h, 6.71 mg/dL at 24 h, 6.56 mg/dL at 48 h and 6.42 mg/dL in control. Mg values were measured as 3.80 mEq/L at 0 h, 3.59 mEq/L at 24 h, 3.55 mEq/L at 48 h and 2.74 mEq/L in control. In conclusion, high concentrations of Ca, P and Mg before treatment may be due to sepsis-induced metabolic acidosis and azotemia.

Keywords: Phosphorus, Calcium, Magnesium, Neonatal Calf, Sepsis

Prevalence of *Eimeria species* in sheep in eskişehir province

Mustafa Eser[a], Ahmet Göksu[b], Hatice Çiçek[c], Mahmut Sinan Erez[d], **Hasan Çiçek[e]**

[a]ANADOLU UNIVERSITY, FACULTY OF OPEN EDUCATION, HEALTH PROGRAMS, ESKISEHIR-TURKEY
[b]AFYON KOCATEPE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF PARASITOLOGY, AFYONKARAHISAR - TURKEY
[c]AFYON KOCATEPE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF PARASITOLOGY, AFYONKARAHISAR - TURKEY
[d]AFYON KOCATEPE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF PARASITOLOGY, AFYONKARAHISAR - TURKEY
[e]AFYON KOCATEPE UNIVERSITY, FACULTY OF VETERINARY MEDICINE, DEPARTMENT OF ANIMAL HEALTH ECONOMICS, AFYONKARAHISAR - TURKEY

hascicek@hotmail.com

Abstract:

The aim of this study was determined to prevalance of Eimeria species in sheep in Eskişehir province, in period of 1 year (June 2018 to June 2019). The 300 faecal samples were collected from the rectum of 300 sheep in 4 different (Seyitgazi, İnönü, Mihalgazi, Mahmudiye) towns and transferred to the parasitology laboratory. Oocysts in faecal samples were detected using a flotation technique. Eimeria species were detected in the faeces of 61 out of 300 sheep (20.33 %). The prevalance of coccidia was higher in Mahmudiye (36.00 %) and İnönü (26.67 %) than the others ($p<0.001$). Intensity of the infection was significantly higher in young sheep compared with older animals ($p<0.05$). Concurrent infection with two to five species was common. However, no clinical symptoms were observed in the examined sheep. Eimeria species were identified following sporulation of faeces in a thin layer of 2.5 % potassium dichromate. Nine species of Eimeria, including E. ovinoidalis, E. ahsata, E. bakuensis, E. parva, E. crandallis, E. granulosa, E. faurei, E. intricata and E. weybridgensis were identified in faecal samples by modified McMaster technique. The most frequent species was E. ovinoidalis. The high prevalence of pathogenic species shows that eimeriosis is a risk for animals raised in Eskişehir province.

Keywords: Coccidiosis, Eimeria, Sheep, Eskişehir

***Acknowledgements**: This research was supported by Afyon Kocatepe University, Scientific Research Coordination Unit (Project no: 17.KARİYER.145)*

DETERMINATION OF CHANGES IN SHELF LIFE OF HOT SMOKED RAINBOW TROUT (ONCORHYNCHUS MYKISS) AT +4 °C USING DIFFERENT SALTING METHODS AND USING OLIVES AND OAK SHAVINGS

Selin Kayalı[a], Aygul Küçükgülmez Yandım[a], **Ladine Baykal Çelik[b]**, Mehmet Çelik[a]

[a]ÇUKUROVA UNIVERSITY FISHERIES FACULTY DEPARTMENT OF FISH PROCESSING TECHNOLOGY, ADANA-TURKEY
[b]ÇUKUROVA UNIVERSITY AGRICULTURAL FACULTY DEPARTMENT OF ANIMAL SCIENCE, ADANA-TURKEY

mcelik@cu.edu.tr

Abstract:

In this study, different salting methods using olive and oak shavings by the method of processing with hot smokes at certain time intervals, measurement of shelf-life of rainbow trout (Oncorhynchus mykiss) is aimed to compare.

In the study, the fish were dry salted, 10% salt solution or 10% salt + 0.6% NaNO2 mixture solution waiting. With olives and oak sawdust and hot smoked fish were cooled and vacuum packaging process was carried out. TVB-N and TBA values were analyzed in refrigerator conditions at +4 °C until shelf life ended up to 49 days.

The TVB-N value was determined 18.66 mg N/100g on the first day of storage. During the storage period, the fastest TVB-N value increase was observed in dry salting and smoked with oak shavings. At day 42, it exceeded 35 mg N/100g, which is the non-consumable limit. In the NaNO2 supplemented group, both the TVB-N and TBA values did not reach the degradation limits even at 49 days. The peroxide values were low in the groups which were smoked with olive shavings. TBA values did not reach the limit of deterioration in olive shavings groups, however, it was found to be high. Depending on the high of the TBA value, the pH values were also high in the groups which were smoked with olive shavings.

As a result of the study, it was determined that shelf life of hot smoked rainbow trout were prolonged with smoked olive shavings and the treatment NaNO2 in refrigerator conditions at +4°C.

Keywords: Oncorhynchus Mykiss, Hot Smoking, Olive Shavings, Oak Shavings, Vacuum Packaging, +4 Oc, Shelf Life

***Acknowledgements**: This study is supported by Çukurova University Research Fund (SÜF2012-D6 and FBA2018-9768)*

Poisoning with photodynamic and haemolytic effective plants

Emre Yanar[a], **Mustafa Sinan Aktas[a]**

[a]Ataturk University, Faculty of Veterinary Medicine, Department of Internal Medicine, Erzurum, Turkey

emre.yanar@atauni.edu.tr

Abstract:

Plants that can cause hematological, biochemical and physiopathological changes in the body when consumed by animals are called poisonous plants. These toxic plants cause harmful effects to health by affecting both livestock and pet animals, especially in countries where plant diversity is abundant. Haemolytic plants and photodynamic agents play an important role in the occurrence of these harmful effects. Plants such as buckwheat, klamath weed and some alfalfa species cause photosensitization while plants such as onion, leek, garlic, cricket, turnip, black cabbage and rape cause hemolysis in animals. In this review, it is aimed to give information about poisoning with photodynamic and haemolytic effective plants in animals.

Keywords: Poisonous Plants; Hemolysis; Photosensitization

Coagulopathies

Omer Aydın[a], Kerim Emre Yanar[a], Mustafa Sinan Aktas[a]

[a]Ataturk University, Faculty of Veterinary Medicine, Department of Internal Medicine, Erzurum, Turkey

emre.yanar@atauni.edu.tr

Abstract:

Hemorrhagic diathesis caused by a disorder of coagulation factors are defined as coagulopathy. In the literature, coagulopathies of ruminants are divided into 3 groups as defect coagulopathies, coagulopathies of use and lost coagulopathies according to their etiology. Defect coagulopathies and coagulopathies of use are important in the field of Veterinary Medicine, whereas lost coagulopathies are not very important. It is aimed to give detailed information about coagulopathies in ruminants with the presented review.

Keywords: Coagulopathy, Ruminants

Sialadenitis of the mandibular and sublingual gland in a brown swiss bull

Sükrü Degirmençay[a], **Kerim Emre Yanar[a],** Ugur Ersöz[b]

[a] Department of Internal Medicine, Faculty of Veterinary Medicine, Ataturk University, Erzurum-Turkey
[b] Department of Surgery, Faculty of Veterinary Medicine, Ataturk University, Erzurum-Turkey

emre.yanar@atauni.edu.tr

Abstract:

The material of this case was formed by a 2 year-old Brown Swiss Bull who had been complaining of decreased appetite, excessive saliva flow and weakening for 1 month. The clinical examination revealed that rectal temperature and the values of respiratory rate, heart rate and ruminal movements were within the normal range. Mild neutrophilia and lymphocytosis were detected in the hemogram findings. In the oral examination, it was determined that there was a longitudinal swelling under the tongue and a slight swelling in the submandibular region. Experimental puncture was performed on the swelling under the tongue, which had a soft consistency in palpation and on the swelling in the submandibular region, which had a harder consistency. The purulent and bloody content in the puncture was taken only from the swelling under the tongue. Existing content was discharged by applying pressure to the swelling in the submandibular region and it was understood that the case was sialadenitis. In the treatment, benzylpenicillin procaine-dihydrostreptomycin sulphate (10.000 IU/kg/day and 10 mg/kg/day respectively) and flunixin meglumin (2.2 mg/kg/day) were administered intramuscularly for 3 days. Oral spray with chlorhexidine gluconate was applied 3 times a day for 3 days. After the swelling under the tongue was drained, it was informed that the animal had a rapid recovery in appetite and no complaints remained with the treatment. In conclusion, it was inferred that the loss of appetite, excessive saliva flow and weakening may also be caused by a simple sialadenitis, and detailed oral examinations should be performed in every patient.

Keywords: Sialadenitis, Bull, Mandibular Gland, Sublingual Gland

Purulent meningoencephalitis and acute coenurosis in a Morkaraman lamb

Sukru Degirmencay[a], **Omer Aydın[a]**, Serkan Yıldırım[b], M. Cemal Adıguzel[c], Emre Eren[a], Ismail Bolat[b]

[a] Department of Internal Medicine, Faculty of Veterinary Medicine, Ataturk University, Erzurum-Turkey
[b]Department of Pathology, Faculty of Veterinary Medicine, Ataturk University, Erzurum-Turkey
[c]Department of Microbiology, Faculty of Veterinary Medicine, Ataturk University, Erzurum-Turkey

aydinomer@atauni.edu.tr

Abstract:

The material of this case is a 4-month, female, Morkaraman lamb having the complaints of turning around itself, falling back the flock, inability to stand and weakness. In the physical examination of the lamb, high fever, conjunctivitis, eyedrop discharge, turning around itself, leaning its head to the side, struggling moves when it falls and weakness were detected. In the hematologic examination, leukocytosis, lymphocytosis, and mild neutrophilia were found. Necropsy was performed to the lamb for diagnosis and tissue samples were taken for histopathological and microbiological analyses. In necropsy, a low level of interstitial pneumonia, mild enteritis in the intestines, purulent meningoencephalitis in the brain and the microcytes in pons and cerebrum were detected. Histopathologic findings yield that there were perivascular cell infiltrations, microcysts in the parenchyma, foreign body giant cells and mononuclear cell infiltrations around the cysts in the brain. In the PAS staining, the laminar layer on the wall of the cyst was clearly observed. As a result of bacteriologic culture, *Escherichia coli* was isolated in the liver and brain tissue and additionally *Streptococcus spp*.was isolated in the brain tissue. The result of the antibiogram showed that the factors were sensitive to ceftiofur and ampicillin-sulbactam. In conclusion, it should be taken into consideration that purulent meningoencephalitis and coenurosis cerebralis can be present concurrently in the lambs which show neurologic symptoms.

Keywords: Lamb, purulent meningoencephalitis, acute coenurosis

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