

RESULTS OBTAINED IN TREATMENT OF COWS WITH CHRONIC PUERPERAL ENDOMETRITIS

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Summary

The authors studied 59 cows from Romanian Spotted, Flechwieh, Bruna de Maramureș, Brown Red Holstein breeds and their crossbreed, diagnosed with chronic puerperal endometritis, which were divided into three experimental groups and one control group.

The females from experimental groups were treated according to three therapeutic protocols as follows:

Group 1, consisting of 17 females was subjected to the following therapeutic protocol: Betadine, sol. 3%, 50 ml for each uterine horn, two administration every 48 hours and 25 ml, from the same solution/uterine horn for third administration. At 48 hours after the last administration of Betadine, 6 pessaries with oxytetracycline hydrochloride and Neomycin were administered.

Group 2, consisting of 18 females has been treated with Metrosept 50 ml/female, intrauterine, 4 consecutive administration, at 24 hours interval.

Group 3, consisting of 14 females has been treated with Germisan, 30 ml/uterus, 3-4 administration, at 48 hours interval and group 4, consisting of 10 cows, control group, was subject of no treatment.

From 17 cows treated in accordance with first protocol, 70.59% were considered clinically healed, 47.06% were inseminated and 41.18% became pregnant.

In group 2, from 18 cows treated, 88.89% were considered clinically healed, 77.78% were inseminated and 47.06% became pregnant.

In group 3, from 14 cows, a percent of 92.86 were considered clinically healed, 85.72% were inseminated and 78.58% became pregnant.

In cows from control group, formed by 10 cows, 10% were considered clinically cured, 10% have been inseminated, but none became pregnant (0.00% clinically unhealed).

Key words: cow, puerperium, chronic endometritis, treatment

**THE INFLUENCE OF SOME CLIMATIC FACTORS ON
REPRODUCTIVE PERFORMANCE OF HOLSTEIN FRIESIAN
BULLS FROM SEMTEST BVN TÂRGU MUREȘ**

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Summary

The authors studied a number of 900 ejaculates from 15 Holstein Friesian bulls, with age ranging between 3 and 8 years. The study covered a period of nine years.

Climatic factors taken into consideration and recorded by the Meteorological Centre from Târgu Mureș were: temperature, humidity and atmospheric pressure, from which was established the daily and monthly average.

The average monthly air temperature values during the period of observations ranged from -2.73°C in January and 20.81°C in July. Minimum average values were recorded only in the months of January, February and December (-2.73°C, -0.72°C and -1.81°C).

Atmospheric humidity monthly average values for the period considered in the study ranged from 70.52% in June and 94.00% in January. Humidity averages over 80.00% were registered in period October-February.

The mean monthly air pressure have varied in very low limits during the period of observation 1013.87-1020.90 (hPa).

Average volume of ejaculates varied little throughout the year, with limits between 7.96 ml in March and 9.32 ml in October.

The average sperm concentration/month varied also in low limits of 1.22-1.36x 10⁹/ml spermatozoa.

Average number of doses/ejaculate/month ranged between 399 in February and 485 in December.

All three sperm parameters varied to some extent, depending on month, year and individual.

Key words: Holstein Friesian bull, sperm, average volume, concentration, dose, climatic factors.

COMPARISON BETWEEN DIFFERENT IMAGISTIC TECHNIQUES IN THE DIAGNOSIS OF CONGENITAL HYDROCEPHALUS IN DOG

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Summary

Hydrocephalus can be defined as an active distension of the ventricular system of the brain related to inadequate passage of cerebrospinal fluid from point of production to its point of absorption. Clinically, hydrocephalus can be classified as congenital or acquired. Congenital hydrocephalus is apparent at birth and is caused by stenosis of the mesencephalic aqueduct associated with fusion of the *rostral colluliculi*, genetic factors and *in utero* exposure to infectious agents and teratogenic chemicals.

The aim of the study is to compare different imagistic methods used in the diagnosis of congenital hydrocephalus in dogs.

This study used 7 dogs with congenital hydrocephalus (1 with incipient form and 6 with advanced stage) which have performed ultrasonography (6 dogs), CT (3 patients) and MRI (4 subjects). CT and MRI were performed after general anesthesia (medetomidine 0.03 ml/kg, ketamine 0.1ml/kg), images being captured before and after iv contrast substance administration (1ml/kg -Iopamiro 370 mg/ml-for CT examination and 1 mg/ml Multihance[®] 529 mg gadobenate dimeglumine/ml for MRI)

In incipient stage of hydrocephalus ultrasonography and CT exams showed the dilation of the lateral and the third ventricles without signs of compression of thalamus. In CT images at the level of the interthalamic adhesion, the lateral ventricular height was 0.6 cm for left ventricle and 0.4 cm for right one, the ratio between the height of the lateral ventricle and the width of the cerebral hemisphere were 0.31 (left ventricle) and 0.21 (right ventricle) and the ratio between lateral ventricular height to the dorsoventral height of the cerebral hemisphere were 0.23 (left ventricle), 0.15 (right ventricle).

In advanced form, all imagistic techniques showed a very evident dilatation of ventricular system with dorsoventral compression of the cerebral parenchyma and diencephalon. Also, in 3 dogs, CT and MRI showed periventricular cerebral edema, characteristic in acute stadium of congenital hydrocephalus.

Ultrasound assessed the size of the lateral ventricles and monitored changes over time only in patients with persistent fontanelles. CT and MRI allowed accurate assessment of ventricular size, extent of cortical atrophy, and the presence/absence of any focal lesions that may account for the hydrocephalus.

Keywords: congenital hydrocephalus, ultrasonography, CT, MRI, dog

EFFICACY OF PLASMA TRANSFUSION IN DIFFERENT TYPES OF PROTEIN LOSS IN DOGS

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Summary

Protein loss can occur as a result of pathological processes involving different organs and systems. In most cases, organs of the gastro-intestinal tract, more specifically the intestines and liver, or pancreas are responsible for the protein loss thru diarrhea, vomiting and even occult hemorrhages. Disease processes of the kidney or skin can be protein depleting as well. A more particular type of protein loss is encountered in the late stages of shock when during the disseminated intravascular coagulation cascade the body uses up most of its coagulation proteins. The quickest way to supplement the body with the much needed proteins is by plasma transfusion. In this study took part 7 dogs presented in the Small Animal Clinic of the Faculty of Veterinary Medicine from Giessen, Germany during a 6 months period (february-august, 2014) with different pathological processes that required plasma transfusion. All patients received plasma or fresh frozen plasma. From the patients taken in this study, 2 (28.57%) had to be euthanized because of the severity of their condition, the other 5 (71.42%) made a full recovery. Plasma administration had a positive effect on the patient's immune response, augmenting the total white blood cell count. Plasma transfusion also influenced the patient's hemodynamics, bringing the hematocrit to a normal level that remained stable throughout their hospital stay.

Key words: plasma transfusion, protein loss, fresh frozen plasma, dehydration

IMMUNE-MEDIATED HEMOLYTIC ANEMIA TREATMENTS IN CATS

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Summary

Immune-mediated hemolytic anemia is a rare disease in which the body's defense system attacks its own erythrocytes producing anemia. There are multiple forms of the disease as well as causes, such as vaccines, certain drugs, tumors, intracellular parasites, infections and allergens. Still, in most cases the etiological cause cannot be determined. Cats are less susceptible to this illness than dogs, but have a higher incidence of a type of the disease called pure red cell aplasia where the precursors of blood cells are destroyed at the bone marrow level. Treatment in any form of the illness consists of immunosuppressive medication and blood transfusions to improve the anemia. In this study took part 3 cats presented in the Small Animal Clinic of the Faculty of Veterinary Medicine from Giessen, Germany during a 6 months period (february-august, 2014) with immune-mediated hemolytic anemia. All three patients received immunosuppressive medication represented by prednisolone and cyclosporine as well as whole blood transfusion (15 -20 ml/kg). All three patients made a full recovery and received weekly check-ups to monitor the disease progress. After each visit the immune-suppressive treatment was adjusted according to the degree of anemia and regenerative response. Prednisolone dose has been lowered steadily by 25% if the patient's hematological results remained stable. Cats handle well severe chronic anemia even with a hematocrit of 10%. Prednisolone in immunosuppressive doses of over 2 mg/kg is well tolerated and rarely causes adverse effects in cats that could lead to the discontinuation of the medicine.

Key words: prednisolone, immune-mediated hemolytic anemia, cats, blood transfusion

**THE IMPACT OF ACIDIC FODDER ADMINISTRATION OVER
HAEMATOLOGICAL AND BIOCHEMICAL BLOOD PARAMETERS
IN COWS SUFFERING FROM METABOLIC RUMINAL ACIDOSIS**

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Summary

Beside ruminal and reticular indigestions that can occur in dairy cattle, ruminal acidosis is of particular importance, knowing the effects of acidolactic and histaminic ruminal toxemia. In the following study, we present the results of hematological and biochemical blood analysis in cattle suffering from ruminal metabolic acidosis. The study was conducted on healthy cattle and cattle that were fed with larger quantity of concentrated fodder and silage. The aim of the study was to assess the differences regarding the hematological and biochemical blood parameters between the groups. In comparison with the healthy cattle, the ones suffering from ruminal acidosis had significant differences for the hemoglobin count ($p < 0,001$), RBC and HEM ($p < 0,005$) and distinctly significant for CHEM. The cattle with acidosis compared with healthy cows registered inferior values for glucose, cholesterol and alkaline reserve, and significantly high blood urea nitrogen values.

Key words: cattle, ruminal, acidosis, blood, biochemical, hematological

**PRELIMINARY RESULTS IN OBTAINING BOVINE EMBRYOS
THROUGH *IN VITRO* FERTILIZATION**

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Summary

In vitro fertilization is a very well known reproductive biotechnology worldwide used with good results both in human and animal medicine. This study aimed to see the number of cell division reached by bovine embryos after *in vitro* fertilization using oocyte culture medium, sperm preparation medium, fertilization medium and embryos culture medium prepared in the laboratory. The total number of oocytes matured *in vitro* was 163 COC from 520 COC harvested from 74 ovaries taken from slaughterhouse. The results from 8 IVF sessions are 37 embryos (22.69%) with different number of blastomers: 16 had 2 cells, 12 with 4 cells, 5 with 8 cells and 4 had reached blastocyst stage in the seventh day after fertilization. These results underline the importance of COC quality used in IVF session, but also the medium composition.

Key words: embryos, *in vitro* fertilization, bovine

THE EFFECTIVENESS OF TWO DIFFERENT MEDIA USED FOR *IN-VITRO* MATURATION OF PIG OOCYTES

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Summary

The *in-vitro* fertilization in pigs continues to be a challenge within animal breeding biotechnologies. Its success depends on a number of factors, including the quality of the media used for the oocyte maturation.

This study aimed to compare the results of two different media for maturation, in order to provide information on the best alternative.

The analysis included the collection by puncture, *in-vitro* maturation, fixation, staining and microscopic examination of a total of 411 oocytes, grouped into 10 series. For the maturation, two different culture media were used: NCSU-37 medium supplemented with cysteine, β -mercaptoethanol, insulin, DbAMPc, porcine follicular fluid, PMSG and HCG and respectively, TCM-199 medium supplemented with fetal bovine serum, FSH and LH. All ovaries used in this study were collected from slaughtered sows.

Results showed a significant difference ($p < 0.05$) between the two media in terms of maturation rate. Oocytes have developed into M II stage in a higher proportion when using NCSU-37 (75.79%), compared to TCM-199 (23.18%). The maturation system based on TCM-199 showed a much higher percentage of oocytes that started the maturation process, but could not find proper conditions to complete it (42.03% compared to 3.65%).

This study suggests that, for *in-vitro* maturation of pig oocytes, NCSU-37 medium supplemented with cysteine, β -mercaptoethanol, insulin, DbAMPc, porcine follicular fluid, PMSG and HCG, offers better results than TCM-199 medium supplemented with fetal bovine serum, FSH and LH. Also, it has been demonstrated once again that scientific personnel must first ascertain the effectiveness of the media they use within experiments before starting the procedures.

Key words: oocyte, *in-vitro* maturation, medium

THE INFLUENCE OF SEASON ON KINETIC PARAMETERS OF BOAR EXTENDED SEMEN

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Summary

Seasonal variation of seminal parameters in boar is a much debated topic. Many authors claim that, given the conditions of a normal housing, the quality of boar semen is lower in hot season and higher in cold season.

This study aimed to observe the variation according to the season of the kinetic parameters in boar semen examined using computer-assisted instruments after three days of preservation in liquid state at 17°C.

The analysis included the examination of a total number of 4814 boar ejaculates, during two years, between 1st of March 2013 and 20th February 2015. The following parameters were determined: total motility, progressive motility, straight line velocity (VSL), average path velocity (VAP), curvilinear velocity (VCL), linearity (LIN), straightness (STR), wobble (WOB), amplitude of lateral head displacement (ALH), beat cross frequency (BCF). Semen was collected by manual method and by means of artificial vagina. The BTS[®] extender was used for dilution and the examination was performed using CASA system (SpermVision version 3.7).

The results showed an evident influence of the season on the kinetic parameters, after preservation. During winter were recorded the highest values for total motility (80.12%), progressive motility (75.22%), VAP (73.53 μm/s), VCL (143.40 μm/s), VSL (57.23 μm/s), ALH (3.32 μm) and BCF (37.27 Hz), during spring the highest values for WOB (0.53), while the summer offered the best values for STR (0.80) and LIN (0.43). Interestingly, the differences in terms of sperm motility were significant ($p < 0.01$) only when comparing the winter-spring season with the summer-autumn season, while the differences between summer and autumn and respectively between winter and spring were insignificant.

The best season in terms of number of motile sperm and their velocity was the winter, while summer showed better results for path regularity.

The results of this study suggest that the seasonality of the seminal parameters in boars housed in normal conditions is also reflected in the values determined after preservation.

Key words: boar, semen, kinetic parameters, influence

**BIOMECHANICAL TESTING TO FAILURE OF THE PELVIC
DIAPHRAGM IN DOG AFTER THREE TECHNIQUES OF
HERNIORRHAPHY**

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Summary

Perineal hernia is a common problem that most commonly affects middle-aged to older, intact male dogs. On eight cadavers of male dog mechanics strength of was determinate for intact pelvic diaphragm and after its restoration surgery by: muscle apposition sutures, internal obturator transposition, semitendinosus muscle flap.

This study based on modified method of Stoll et al. - 2002 made it possible to immediately observe and identify the weak point or failure site in the pelvic diaphragm.

Maximal pressure to failure (MPFmax) allowed identification of the pressure at which different techniques of perineal hernia repair failed, thus providing an evaluation of the strength of the repair tissue.

Key words: pelvic diaphragme, hernia, dog, mechanics strength

INTRAPELVIC URETHRAL ANASTOMOSIS IN DOG

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Summary

An eight years old 24 kg male German Sheppard was presented with urethral trauma due to a road traffic accident. The urethral rupture caused severe bruising; edema and swelling were located extensively at the inguinal, perineal and scrotal regions. In addition, severe inflammation was noted by elevated WBC count. Rupture of intrapelvic urethra was confirmed by positive contrast radiography. After prostatectomy and urethral rupture excisions a penile crural release and intrapelvic urethral anastomosis were realised by either suturing of the urethra over an indwelling catheter. Surgical techniques used are detailed and recorded clinical aspects to healing. The diagnosis and the location of urinary leakage of urinary tract trauma was based on history, physical examination, clinical pathological and laboratory findings, evaluation of peritoneal fluid, abdominal radiographs, and contrast studies. The technique of crural release, describe in cat male, allowed an intrapelvic urethral anastomosis untensioned. Urethral anastomosis over an indwelling catheter appeared to result in a lesser degree of stricture and micturition derangement.

Key words: dog, urethral rupture, penile crural release, intrapelvic urethral anastomosis

INHIBITOR OF PROTEIN PHOSPHORYLATION USED IN CELL-CYCLE IN OOCYTES

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Summary

Phosphorylation plays a role in the control of the cell-cycle. The cell-cycle has four stages: G1 for "gap" before replication, S for DNA synthesis, G2 for "gap" before division and M for mitosis. Control cycle progression initiates a cascade of phosphorylation/dephosphorylation, where MPF (maturation promoting factor), composed from protein-kinase p34cdc2 and cyclin, is the key of the process. Pre-MPF is found in oocytes in inactive form, at the germinal vesicle stage. The DNA synthesis may be different, depending by the cell-cycle stage where the inhibitor was applied. The differences between the stages may be interpreted by the activity level of protein-kinase – the MPF component.

Phosphorylation inhibitors – the 6-dimethylaminopurine (6-DMAP), can prevent entry into M-phase in bovine oocytes.

Key words: cell-cycle, oocyte, phosphorylation, 6-DMAP, MPF

PARTHENOGENETIC ACTIVATION OF BOVINE OOCYTES BY CHEMICAL AND ELECTRICAL STIMULANTS

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Summary

Parthenogenesis is the capacity of an oocyte to develop itself in the absence of fecundation. Some stimulants that induce the parthenogenesis are the calcium-chelating agents, and are characterized by the finalizing meiosis, emission of the cortical granules and the oocyte activation. Also, other agents such as puromicine and cycloheximide may induce the parthenogenetic activation.

The pronucleus-like structure becomes visible after 9 hours from the treatment of bovine oocytes with cycloheximide (evaluated by fluorescent microscopy), and shows an identical phosphorylation configuration with a true interphase. Parthenogenetic activation can be obtained by different chemical treatments used for cell cumulus removal, depending on the applied stage, and also by electrical activation.

The results showed that the parthenogenetic activation rate for both chemical and electrical stimulant is higher than 80%.

The changes produced during oocyte aging period in the parthenogenetic activation are suspected that might produce modifications in membrane properties.

Key words: parthenogenesis, oocytes, interphase, cycloheximide, electrical stimulus

**ASSESSMENT OF THE THERAPEUTICALLY EFFICIENCY OF
BENAZEPRIL-FUROSEMIDE BIMEDICATION FROM A CLINICAL
AND ECHOCARDIOGRAPHIC POINT OF VIEW IN DOGS WITH
MITRAL VALVE ENDOCARDIOSIS**

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Summary

Mitral valve endocardiosis or mitral valve disease is the most common cause of heart failure in geriatric dogs. Based on the physiopathology of the decompensated phase in heart failure the target of the medical treatment is to block the renin-angiotensin aldosterone system. The most used angiotensin converting enzyme inhibitor used in veterinary medicine is benazepril.

The aim of this study is to evaluate the efficiency on quality of life and echocardiographic parameters of the combination benazepril and furosemide.

Twenty one dogs diagnosed with mitral valve disease in stages C and D of the disease were included in the study. Dogs underwent clinical cardiologic examination, echocardiography and electrocardiography in three points: T0 first consultations, T1 after 15 day of treatment and T2 after 65 days of treatment. All data were included in data bases. The statistical analyses were made in IBM SPSS vs.21 software.

All clinical signs followed in the study were significantly improved after 15 day of treatment except cavity effusions, which were cleared after 65 days. No significant differences was observed in echocardiographic parameters of cardiac remodeling during the treatment. No increase in left atrium or in left ventricle was noticed after 65 day of treatment.

The combination of benazepril-furosemide proved to benefit significantly in the clinical status of all patients with naturally occurring mitral valve disease in short period of time and also slowed the evolution of the disease.

Key words: mitral valve disease, dog, heart failure, angiotensin –converting –enzyme inhibitor, benazepril.

CLINICAL AND EPIDEMIOLOGICAL STUDY IN CATS WITH IDIOPATHIC CYSTITIS

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Summary

Feline idiopathic cystitis (FIC) is the most frequent cause of feline lower urinary tract disease. The purpose of this retrospective study was to investigate the factors related to environmental changes and the clinical abnormalities in cats with idiopathic cystitis. In this study were included forty-five cats that were classified as having idiopathic cystitis after exclusion of other possible causes of lower urinary tract disease. Of seventy-one cats with signs of lower urinary tract disease, 63.3% (45) were diagnosed with FIC. The disease was diagnosed more frequently in cats aged less than 10 years (87%) and in those fed with dry food (62%) or a combination of dry and wet food (26%). The most common environmental changes associated with the occurrence of acute episodes of idiopathic cystitis were: departure or death of human family member (27%); new human or new pet in the household (36%); new house or rearranging of the house (26%). The obstructive form was seen in 22% of the cases with FIC. All obstructive forms of FIC were diagnosed in male cats. Haematuria, pollakiuria, and periuria were the most common clinical signs and have been seen in 93%, 91% and 84% of cases, respectively.

Key words: cats, idiopathic cystitis

THE EFFECT OF STRESS ON ELECTROCARDIOGRAM AND BLOOD BIOCHEMICAL PARAMETERS (CORTISOL, INSULIN) IN UTILITARIAN DOGS BEFORE AND AFTER EFFORT

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Summary

The research was conducted at a training base of rescue TM ASV taking into account the specific rescue training of different breeds and constitutional types of dogs (German Shepherd, American Staffordshire Terrier, German Brac).

The calculated electrocardiographic indices based on electrocardiographic parameters obtained before and after training, provide useful information regarding the cardiovascular adaptability to the level of effort.

Serum cortisol as an indicator of the state of stress due to exercise, showed an average value increased after the specific mission.

The average insulin blood develops inversely proportional to that of cortisol levels, due to the opposing action of the two hormones in the utilitarian dogs belonging to the rescue voluntary service.

Key words: electrocardiogram, cortisol, insulin, utilitarian dogs

PULMONARY RADIOLOGICAL EXAMINATION IN CATS

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Summary

Pulmonary changes in cats can be a challenge in the diagnosis and its management, because the diagnosis in cats is difficult to diagnose because the pulmonary pattern in comparison with dogs. Lung diseases can have localization in: parenchymal tissue, bronchial area, interstitial space and vascular tract. Here were presented a retrospective study on lung radiographic assessment in cats.

A total of 40 cats, 29 females and 11 males, with different lung changes were evaluated by radiological examination to determinate the lesion type. The animals were aged between 6 months and 13 years. Were obtained two incidences (latero-lateral and dorsal-ventral) for each animal.

Pulmonary radiological changes were represented by: alveolar pattern - 21 cases, broncho-alveolar pattern - 3 cases, vascular pattern - 4 cases, interstitial pattern - 12 cases. Interstitial pattern was divided into structured - 8 cases and unstructured - 4 cases. A total of 8 cases evaluated showed combinations of pattern, but were assignment to the dominant pattern.

Radiological examination is a useful method in recording and monitoring the lung diseases in cats. Complementary methods are required for the establishment of a diagnosis.

Key words: cat, lung diseases, pattern, pulmonary changes.

RESEARCH REGARDING THE BACTERIAL FLORA AT THE CERVICAL LEVEL OF THE COW

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Summary

The bacterial infections of the different sections of the genital apparatus are ones of the most frequent problems in the veterinary practice. The evolution of these infections vary very much and it is dependent of many internal and/or external factors. The diagnosis of the bacterial flora of the uterine secretions is implied in the general rules for establishing a bacteriological diagnosis.

The research has been made on a number of 10 cows with cervical issues, that involved secretions having different characteristics, from which they prevailed specimens. In the cervix there have been isolated a total number of 10 types of microagents. The bacterial species isolated in mixt cultures from uterine secretions were: *Staphylococcus spp.*, *Streptococcus spp.*, *Lactobacillus spp.*, *Fusobacterium necrophorum*, *Arcanobacterium pyogenes*, *Bacillus cereus*, *Escherichia coli*, *Proteus spp.*, *Neisseria spp.* and *Pasteurella multocida*.

The cervical isolated bacterial genre with the biggest frequency was *Staphylococcus*. The cervical isolated bacterial genre with the biggest frequency was *Staphylococcus spp.* with 90.1%, followed by *Streptococcus spp.* with 80.2%, *Escherichia Escherichia spp.*, 70.1 %, *Arcanobacterium spp.* 69.8%, and *Bacillus spp.*, with 55.1 %. The *Proteus spp.* was isolated in 50.1% of cases, and *Fusobacterium necrophorum*, 36.7%, *Neisseria spp.* 8.0% and *Pasteurella multocida* 7.2% were identified with a lower frequency. The Gram positive bacterial flora was found 52.4% and the Gram negative one, lower than 47.6%.

Key words: cow, bacterial flora, cervix.

RESEARCH REGARDING THE IMMUNOLOGICAL PROFILE OF COWS WITH CHRONIC ENDOMETRITIS

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Summary

The investigations were carried out on a total of 20 dairy cows in a loose housing farm in the north.

The performed immunological investigations have shown various modifications of cellular and humoral immune components in cows studied. Chronic endometritis in cows taken under observation important changes were observed of the state of imunostasy.

In cows, chronic inflammation caused increased use of complement serum immunoglobulin membrane receptors and cellular factors released from immunocompetent cells, as evidenced in various changes in immunological parameters.

In cows in the experimental groups the component analysis cell of the immune profile indicated increases in the number of leukocytes in experimental cows, these findings were more evident in cows in group E1, compared with cows in the control group (M), the differences being statistically significant ($p < 0.05$).

Neutrophils of cows in the experimental groups showed significant increases ($p < 0.05$) compared with group M, which confirmed the existence of the inflammatory process in the uterus. Serum globulin fractions involved in the humoral immune response in cattle showed significant increases in the experimental values ranging from 61.0 to 61.5%, compared with healthy cows without genital infections (60.0%) in group M. Fractions globulin α_1 , α_2 and β had not registered significant differences between experimental groups compared with group M.

Key words: cow, immunologic profile, chronic endometritis.

RESEARCH REGARDING PREGNANCY LOSS IN COWS

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Summary

The aim of this study was to carry out different types of successive diagnoses of pregnancy and conception rate calculation for each type of diagnosis determined, so that, through the difference, to identify pregnancy losses between two consecutive diagnoses. The female that were not in heat at the time of insemination have been removed from the interpretation of the results, based on the level of progesterone. More diagnoses of pregnancy have been carried out: the first was a qualitative test Dipstick Test ECFTM that determines the presence of a glycoprotein called the Early Conception Factor in serum or cow milk collected between the 6th and 20th day after insemination. For the second pregnancy diagnosis the blood samples were taken 19 days post insemination. The spectrophotometric method was used in order to determine the progesterone levels in serum. The last two diagnoses were made within 28 and 35 days following the fertilization and within 55 days post insemination the gestation diagnosis was established by a clinical trans rectal examination. The results were compared with the calves obtained. The share of the most important gestation loss through embryonic mortality (63, 15% of total losses of gestation) was recorded within the first 35 days after fertilization.

Key words: pregnancy diagnosis, pregnancy loss

A RETROSPECTIVE STUDY OF ANEMIA IN DOGS

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Summary

The aim of the study was to assess the causes and the type of anemia in dogs presented in our clinic with signs of anemia (apathy, pale or pale/icterus mucous, weight loss, tachycardia, tachypnea, etc.). The study was performed on 61 dogs with anemia aged between 6 months and 13 years old. From all the dogs examined blood samples were collected to assess complete blood count (CBC), blood smears and blood biochemical parameters. Based on clinical and laboratory examination, dogs with anemia included in the study were diagnosed with the following conditions: neoplastic disease (lymphoma, hemangiosarcoma, and carcinoma), chronic renal failure (CRF), liver diseases (cirrhosis, portosystemic shunts), hemorrhage (external), babesiosis (*Babesia canis*), ehrlichiosis (*Ehrlichia canis*), heartworm (*Dirofilaria immitis*) and immune-mediated hemolytic anemia (IMHA). During the evaluation period, most cases of anemia were produced by babesiosis and neoplastic diseases. The disease that had the lowest incidence was IMHA with a prevalence of 3%.

Key words: anemia, dog, babesiosis, neoplastic diseases

CASE REPORT: INTUSSUSCEPTION OR RECTAL PROLAPSE?

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Summary

Intussusception is the invagination of one portion of the gastrointestinal tract into the lumen of an adjoining segment and it can progress to a point at which the small intestine protrudes from the anus. This is differentiated from rectal prolapse by easy passage of a probe between the prolapsed segment and the rectum. This case presents our experience regarding intussusception versus rectal prolapse and the consequences of superficial clinical exam.

Key words: intussusception, rectal prolaps, young dog

CHRONIC KIDNEY DISEASE IN TYPE II FELINE DIABETES MELLITUS

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Summary

Background: The pathophysiology of feline diabetes mellitus is complex and in most cases, aside the metabolic function, it involves other main organ systems such as nervous system, cardiovascular and renal function.

Objective: This retrospective study quantifies the risk for chronic kidney disease in association with diabetes mellitus in cats.

Methods: Clinical records of all cats presented to the Faculty of Veterinary Medicine of Iasi, Romania were analyzed. The following parameters were assessed: signalment, weight, diabetes mellitus and chronic kidney disease. Patients were divided into two groups: DM-CKD diabetic with chronic kidney disease; nonDM-CKD non diabetic with chronic kidney disease. Period prevalence (PP) of chronic kidney disease in each group was calculated, as well as odds ratios (OR), including 95% confidence intervals (95% CI). DM risks were compared using Chi-square (significance level $p < 0.05$).

Results: A total of 83 cases (47 males; 36 females) were diagnosed with CKD. The group of DM-CKD included 18 cats (PP: 27.7%, 95%CI: 16.8-38.6%; OR: 21.6%; 95%CI: 16.3-53.7%, $p < 0.0001$) which were also diagnosed with diabetes mellitus. In this group, 12 cats (14.5%) were males (PP: 31.5%, 95%CI: 16.8-46.3%; OR: 36.6%; 95%CI: 17.1-78.3%; $p < 0.0001$) and 6 cats (7.3%) females (PP: 22.2%, 95%CI: 6.52-37.9%; OR: 21.6%; 95%CI: 8.15-57.5%; $p < 0.0001$). The nonDM-CKD group, with 65 CKD cases of 5045 is an important indicator of diabetes mellitus influence, with a PP: 1.3%, 95%CI: 1-1.61%; OR: 0.03%; 95%CI: 0.01-0.06%, significantly less than DM-CKD group ($p < 0.0001$).

Conclusion: Renal function impairment in insulin dependent diabetes mellitus is often associated with insulin resistance, fluctuating insulin requirements and unstable clinical state of the cats. As a consequence case monitoring of diabetic felines becomes more difficult as polyuria/polydipsia syndrome is aggravated by chronic kidney disease.

Key words: chronic kidney disease; diabetic nephropathy; feline diabetes mellitus; insulin resistance.

BODY TEMPERATURE DYNAMICS UNDER INHALATORY NARCOSYS IN PIGEONS

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Summary

Ten healthy domestic pigeons (*Columba livia var. Domestica*) were used for this study. They were held for 90 minutes under inhalation anesthesia with isoflurane. In the first phase of work 45 minutes the anesthetic gas was supplied by endotracheal tube. In the following 45 minutes, phase II, anesthetic gas was provided by way of an airsac tube placed in the left caudal thoracic airsac. Isoflurane was provided at different concentrations and different oxygen flows in semi-open respiratory system. Ambient temperature was kept constant with air conditioning unit, and as active measure to prevent hypothermia gloves filled with water was placed near the pigeon's body. Body temperature of birds has undergone significant changes. Compared to the first phase of the experiment in which average value of the body temperature was $38.7^{\circ}\text{C} \pm 0.9$, in the second phase were dropped to an average of $37.5^{\circ}\text{C} \pm 0.9$. Even out of the ten individuals only in seven of them the body temperature variation differences were significantly, on the whole group differences between the two experiment's phases were highly significant ($p = 7.19 \times 10^{-15}$). For long lasting inhalation narcosis hypothermia prevention measures taken in this study were proved ineffective.

Key words: pigeons, temperature, semiopen respiratory system.

OBSERVATIONS REGARDING PERIODONTAL DISEASE AND ITS LOCAL MAJOR CONSEQUENCES IN DOG

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Summary

Advanced stages (III and IV) of periodontal disease were diagnosed in 81% of cases, gingivitis (stage I) and early stage (II) was diagnosed in 2.7% and 16.2% of patients. Without exception all dogs with stage III or IV of periodontal disease have had pseudo-oligodontia, and at least two dental units missing. From entire number of animals at which periodontal disease was diagnosed 8 (21.6%) were adults and 29 (88.4%) by geriatric age. Dogs from toy breeds, small breeds and their crossed-breeds accounted 70% of patients. Starting from searching of local severe consequences, in advanced stages of periodontal disease was found that 4 animals (10.8%) have had oronasal fistulas or fistulisation into the external infraorbital soft tissue (Fig. 8), 11 (29.7%) have had periapical granulomas / abscesses (Fig. 9), and at 7 cases (18.9%) have found benign tumors. 35 (94.5%) of the 37 individuals included in the study have come for the first time in a specialized medical service in dentistry. None of the owners have applied home care procedures such as brushing or a special diet.

Key words: periodontal disease, granuloma, fistula, dog.

**THE EVOLUTION OF THE ELECTROCARDIOGRAPHICAL AND
BIOCHEMICAL BLOOD PARAMETERS IN DOGS WITH HEART
DISEASE AFTER ADMINISTERING L- CARNITINE**

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Summary

The research was conducted on dogs belonging to different constitutional types, races and genders, aged between 4-12 old years and weighting 5-12 kg.

The electrocardiographic recordings were performed using a digital Delta 1 CARDIOLINE electrocardiograph with 12 derivations.

Using therapeutic doses of L-carnitine in dogs with cardiac problems (heart failure NYHA II degree, systolic failure III / VI, sinoatrial block, subendocardial ischemia, biatrial dilatated cardiomyopathy I) increases cardiac performance by improving the values of the electrocardiographic indices and parameters.

If the dogs suffering from cardiomyopathy do not receive specific medication (cardiotonic treatment, β -blockers, vasodilators and / or diuretics), the administration of L-carnitine determines increased values of the glutamate-oxalacetic transaminase (GOT), of the creatine phosphokinase (CPK) and consequently, an increasing cellular metabolism and a myocardial cell degeneration.

The kalemia values do not change after the administration of L-carnitine.

Key words: dog, electrocardiogram, L-carnitine, GOT, CPK.

EFFECTS OF IDIOPATHIC EPILEPSY IN DOG ON BRAINSTEM AUDITORY EVOKED RESPONSES

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Summary

The goal of this study is to evaluate the clinical usefulness of the brainstem auditory evoked responses (BAERs) in dogs with idiopathic epilepsy recorded with surface electrodes.

Material and methods: the BAERs were recorded in 10 normal control subjects and 13 dogs with idiopathic epilepsy free of anticonvulsant medication. All epileptic dogs showed specific interictal epileptic discharge on EEG recording. The electrophysiological evaluation was carried out with the Neupack S, MEB 9400K electrodiagnostic system (Nihon Kohden) in the auditory brainstem response program (ABR). Examination was made under general anaesthesia with medetomidine hydrochloride 30µg/kg, inj. i.m.

Results: The differences between idiopathic epilepsy and healthy dogs were rare and did not reach statistical significance criterion ($P > 0.05$) relating to the I, II, III and V waves amplitudes and latencies or I-III, III-V and I-V intervals. Statistically significant differences between sex and laterality of ear stimulated were no found in both groups.

Conclusion: In dogs with idiopathic epilepsy BAERs appears to be normal even the patients have electric abnormalities on EEG traces. A pathologic BAERs in a dog with epilepsy must be considered as a sign of concurrent symptomatic epilepsy or as a severe complication of convulsive episodes in idiopathic epilepsy when the brainstem may be secondary involved.

Key words: brainstem auditory evoked responses, dog, idiopathic epilepsy

DIAGNOSIS AND TREATMENT OF CANCER IN DOGS CECUM

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Summary

In this paper are described the clinical and laboratory examinations in subjects canine digestive symptoms that responded inconsistently to usual treatments and relapses were common and immediately after stopping. We suspected a condition in the intestinal lumen with denudation of the mucous membrane syndrome manifests with melena posterior. Ultrasound examination highlighted an aspect tumor formation without a precise location. Exploratory laparotomy revealed the formation of intraluminal tumor localized in the cecum. The cytological examination and histopathology confirmed the diagnosis of intestinal lymphoma in dogs

Key words: melena, cecum, lymphoma, dogs

**SWINE LAPAROSCOPIC CHOLECYSTECTOMY- TRAINING
MODEL FOR HUMAN MEDICINE**

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Summary

Cholecystectomy is a surgical procedure that involves removing the gallbladder. The laparoscopic approach makes it postoperative hospitalization time to be minimized.

Long surgical instruments are inserted through small incisions in the abdominal cavity. The entire operation is done while the surgeon viewing the magnified image of the internal organs through a camera and a screen.

The gallbladder is detached from surrounding tissue and cystic duct which attaches gallbladder will be sectioned and caught with metal clips

In this paper we describes how the gallbladder laparoscopic surgical approach in swine. Anatomical topography of the gallbladder in this species is similar to that of humans. This aspect has led to imagining and establishing cholecystectomy techniques in pigs that were subsequently applied to humans.

Key words: human, cholecystectomy, swine

HEMODIALYSIS - KEY TREATMENT IN A DOG WITH BABESIOSIS - CASE REPORT

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Summary

A 10 years old, 25 kg, female, intact Husky dog was presented recumbent, panting with no appetite, vomitus, decreased effort resistance, tachycardia, rectal temperature 38.20°C, mild dehydration (6%-8% delay in return of skin), slight increase in CRT and dry yellow mucous membranes. First venous blood work showed for gas analysis mild alkalosis (pH 7.48, RR: 7.31-7.42, pCO₂ 37 - RR: 32-49 mmHg, HCO₃ 25.7 - RR: 20-29 mmol/L, AnGap 19 mmol/L, tCO₂ 26.9 - RR: 21-31 mmol/L, Na 156 - RR: 144-160 mmol/L, K 4.4 - RR: 3.5-5.8 mmol/L, Cl 115 - RR: 109-122 mmol/L). Biochemistry revealed elevated T-BIL 9.8 (RR: 0.1-0.9 mg/dl), BUN 92.2 (RR: 7-27 mg/dl), CREA 5.1 (RR: 0.5-1.8 mg/dl), ALKPH 612 (RR: 10.6-150 u/L). Complete blood count showed anemia with reticulocytosis and leukocytosis. A massive infestation with Babesia Canis and Babesia Gibsoni was confirmed using microscopy.

Upon presentation, etiological therapy was applied (Imizol-imidocarb dipropionate) along with fluid therapy (balanced electrolyte solution of Ringer Lactate) and general support. Hemodialysis was decided for sustaining renal function. A central venous double lumen catheter was placed under a short anesthesia with butorphanol 0.2 mg/kg, IV and propofol 5 mg/kg, IV. Hemodialysis was performed with an A/V set for Dialog-low flux dialyzer, volume 142 ml for six times in a period of 17 days.

For this case hemodialysis along with the sustaining therapy represented the key for a good prognosis since we manage to reduce the renal acute injury from BUN 92.2 mg/dl, CREA 5.1 mg/dl to BUN 29 mg/dl, CREA 3.3 mg/dl after hemodialysis and T-BIL values from 28.7 mg/dl to 0.5 mg/dl in order to maintain a positive evolution for this patient. The BUN and creatinine reached normal values 18 days after hemodialysis, the patient being submitted to enteric dialysis and oral treatment with phosphorus chelation.

Key words: hemodialysis, dog, babesiosis, BUN, creatinine

HEPATIC AND SPLENIC TUMORAL FORMATIONS IN DOGS, DIAGNOSED THROUGH IMAGING AND PATHOLOGIC ANATOMY

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Summary

As a digestive organ (frequently thought of as being the main laboratory of the body), the liver is often times exposed to primary neoplastic modifications and even more so to metastatic cancers, particularly in the case of older dogs. Primary liver tumors of dogs are somewhat rare. Yet, even considering their frequency, the importance of the carcinoma should undoubtedly be underlined (11). The liver is the main organ of the development of metastatic processes for numerous types of tumors whose inceptions occurred in other organs and tissues. The presence of a multi-centric liver tumor suggests a metastatic process which eventually reached the liver.

Dogs may suffer from various formations (in the spleen) caused by hyperplasia phenomena, out of which 2/3 are of a malignant nature. The hemangiosarcoma is the most recurrent one, with a high tendency towards malignancy. The imaging examination is primordial in setting a diagnosis, but the defining one is the one involving pathological anatomy. The authors set a diagnosis using imaging methods on the spleen and on various metastatic processes; the etiology was established using a pathological anatomy examination. The clinical and para-clinical diagnosis has led to the following distribution in liver: 8 cases of liver carcinoma, a single case of a cholangiocarcinoma, 5 cases of adenocarcinomas and 2 lymphosarcomas; in spleen: 5 cases of hemangiosarcoma; 3 cases of hemangioma, 2 cases of lymphosarcoma; 1 case of lymphoma and 1 case of leiomyosarcoma. Considering the results, it is recommended that an imaging examination is performed twice per year, especially in medium and large sized dogs, beginning with the age of 6. By applying this recommendation, the diagnosis would be precocious and the rate of success in the case of specific surgical interventions would be more increased.

Key words: imagistic, histopathology, liver, spleen, tumor