

**RESULTS FROM MONITORING HERD, WEANING PIGLETS,
OESTRUS AND PARTURITION SYNCHRONISATION OF SOWS
AND GILTS FROM S.C. NUTRIPIG S.R.L. FARM, SĂLACEA,
BIHOR COUNTY**

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Summary

The authors monitored on an interval of 11 months (June 2014-April 2015) the main reproduction indicators for 2973 pigs, of which 2810 females productive, weaning piglets, oestrus and parturition synchronization of sows and gilts from farm S.C. NUTRIPIG S.R.L. Sălăcea, Bihor County.

Farm S.C. NUTRIPIG S.R.L., Sălăcea is part of S.C. Nutrientul S.R.L., Palota, Bihor country has 2800 pigs and raise PIC Camborough Plus hybrid as female and PIC 410 as boars.

The average number of boars/month was 21.2, with variations of 20 in October 2014 and March and April 2015 and 24 November 2014. The average of pregnant or lactating female/month was 2816.48, with variations 2772.9 in February 2015 and 2877.1 in August 2014. The average cycle of females was 2.31/month, with variations of 2.1 in March and April 2015 and 2.6 in June 2014. Entries of gilts during period investigated was 1616, with a monthly average of 147 gilts. The number of females that died during studied period was 342 heads, with monthly average of 31.09. The average non-productive days/female/year was 56.16, varying from 44.2 in April 2015 and 65.7 in November 2014.

During the period studied were weaned 5857 sows and 61 299 piglets. The number of piglets weaned/sow on average was 10.47. The average age of piglets at weaning was 29.20 days, and average weaning weight was 7.31 kg. During this period 5895 piglets died, with a monthly average of 535.91 piglets. Number of live piglets farrowed/sow/year averaged 26.18, with variations of 22.9 in December 2014 to 29.6 in April, 2015.

For oestrus induction in gilts was used product Altresyn at a dose of 5 ml/gilts, one per day for 18 consecutive days.

In approximately three days from the last administration of Altresyn, 95% of the animals treated came into estrus compared to 94% of the control group. For the induction of parturition in this unit, inseminations are done on Monday, Tuesday and Wednesday, and parturition takes place Thursday and Friday.

Key words: sow, reproduction indices, weaning, estrus and parturition induction

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

LABORATORY RESEARCH IN METABOLIC ACIDOSIS AT RAMS

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Summary

Reticular rumen acid indigestion occur frequently at ruminants that consume large quantities of feed rich in carbohydrates. The disease is more common in females compared to males due to productive partition, low individual resistance and other causes.

In males the disease occurs rarely, being present, in particular, in use in the breeding males during the mount when they are fed concentrated feed in larger quantities.

The study that follows presents the results of laboratory tests of hematology and biochemistry blood from the rams clinically diagnosed with metabolic acidosis compared to clinically healthy males (rams).

The aim of the study was to assess the differences regarding the analyzed parameters in male patients compared with those clinically healthy.

Compared with healthy animals, the suffering rams showed significant differences in hemoglobin ($p < 0.001$), distinctly significant for HEM and VEM ($p < 0.01$) and insignificant for erythrocytes and CHEM ($p < 0.05$) values.

Key words: rams, acidosis, blood, biochemical

CEREBROVASCULAR EVENTS IN DOGS

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Summary

Cerebrovascular diseases are very frequent in humans, representing a third cause that determines death inside industrialized countries.

In Veterinary Medicine, cerebrovascular diseases are described more rarely, although their incidence is not well known at this moment. Until recently, cerebrovascular diseases in animals could be diagnosed only post-mortem, and due to development of imaging techniques, the ability of tracing these diseases is now possible for live animals as well.

Cerebrovascular diseases are ischemia, heart attacks, hemorrhages and aneurisms (3). Vascular disruptions to the Central Nervous System (CNS) can be due to a loss in blood supplies (ischemia/heart attacks) or hemorrhages in the nerve tissue. In most cases, the initial process is focal, although it is possible that disrupting a systemic perfusion might cause multifocal processes or diffusion in the brain.

Vascular injuries in the CNS can have different causes, such as infections, aneurisms, neoplasia, atherosclerosis, arterial and venous malformations, embolism, vasospasms, hyper-viscosity syndrome, hypertension, coagulopathy, immune deficiencies, disseminated intravascular coagulation (DIC), septicemia.

Vascular events have to be diagnosed as soon as possible after they occur, which depends on the moment the patient arrives at the doctor's office.

I have investigated in this study a number of 18 patients, dogs, belonging to different breeds and genders, with ages over 10 years old.

All patients have been investigated after a protocol:

- Anamnesis;
- Clinical exam;
- Neurological exam;
- Cardiologic exam;
- Ophthalmologic exam;
- Additional exams (MRI).

Vascular events occur more frequently in animals over middle age and even more frequent in seniors (over 10 years old).

From all vascular events taken into study, the results from the anamnesis showed sudden occurrence and super-acute evolution.

The neurological signs were characteristic to the affected cerebral area (cerebral hemispheres, vestibular apparatus, cerebellum, brainstems).

The treatment was rapidly established and consisted in anti-inflammatories, Actovegin and osmotic anti-diuretics.

Key words: cerebral, diuretic, Nuclear Magnetic Resonance, vascular events

IDIOPATHIC EPILEPSY IN DOGS

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Summary

Epilepsy is a functional neurological disorder, characterized by generalized or localized tonic-clonic seizures, with sudden and recurrent character. Also, it can be primary and secondary.

Primary epilepsy (or idiopathic epilepsy) has unknown causes, and secondary epilepsy can be determined from intracranial and extracranial causes (toxic or metabolic).

Idiopathic epilepsy can be diagnosed apart from the secondary epilepsy only by exclusion.

For suspicions of this condition, we will take into consideration:

- Breed (genetic determinism in Labradors, Golden Retriever, Beagle etc.)
- The age when the first seizure occurred (usually, between the age of 6 months and 5 years old)
- Higher frequency in males (2:1 ratio)
- Characterized by generalized seizures
- Frequency between seizures may vary

The study has been done on a number of twenty-two, which were present at the FMVB Medical Clinic, for an eighteen months period. The dogs belonged to multiple breeds, both males and females, with ages varying between one and five years old.

For the final diagnostic, we turned to specific investigations, such as: electroencephalograms (EEG) and nuclear magnetic resonance (cerebral MRI).

The prescription has been administrated after the patient has had its second epileptic seizure, and it has been adjusted according to its evolution, from case to case.

Key words: idiopathic epilepsy, seizures, electroencephalogram, nuclear magnetic resonance.

**MORPHOLOGICAL ASPECTS AND NUCLEAR MATURATION IN
BOVINE OOCYTES CULTURED IN MEDIUM WITH/WITHOUT
SHEEP FSH**

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Summary

In vitro maturation of oocyte is one of the critical steps for in vitro production of bovine embryos. Our study was designed to compare morphological aspects of bovine COCs and nuclear maturation status based on Hoechst staining between two oocytes culture groups, with or without FSH. COC's quality had a positive effect on cumulus expansion rate based on morphological aspects observed after maturation as follows: 83.01% from COCs I class (CI) had cumulus expansion ($p < 0.56$), in class II (CII), 67.85% ($p < 0.31$) and in class III (CIII), 22.85% ($p < 0.04$) similar results were observed in oocyte cultured without FSH: in class CI, 78.43% ($p < 0.24$), in class CII, 52.45% ($p < 0.15$) and in class CIII, 16.52% ($p < 0.12$). FSH supplementation did not influenced bovine COC maturation as it was revealed only through evaluation of morphological aspects and nuclear maturation marker identified subsequent to Hoechst staining.

Key words: bovine oocyte maturation, FSH, Hoechst

**CONTRIBUTION OF TRAUMATIC FACTORS TO
ETIOLOGY OF INFLAMMATION AND HYPERTROPHY
WITH THE NICTITANT GLAND'S PROLAPSE**

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Summary

In this study, we aimed to investigate the contribution of traumatic factors to etiology of inflammation and hypertrophy with the gland's prolapse, also monitoring how it affects tear production.

The biological materials used consisted of five neutered mongrel dogs, clinical healthy, with a medium weight of 20 kgs, and age between four and six years, without any history of nictitans gland affections. The study consisted of 10 experiments in which we acted with different traumatic factors upon the nictitans gland, in order to induce inflammation. We kept a minimum 10 days rest period between each experiment, in order to allow subjected glands to recover its normal functions.

We observed the tear production, by using the Schirmer test, and the morphological changes of the subjected glands and third eyelids (aspect, volume, shape, consistence, colour) discernible by clinical examination. Tear secretion of each subjected nictitans was compared with its counterpart.

Key words: prolapsed gland of the third eyelid, dog, Schirmer test

PERIPHERAL NERVE SHEATH TUMOURS OF THE BRACHIAL PLEXUS IN A DOG: A CASE REPORT

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Summary

Primary tumours of peripheral nerves are rarely reported in animals. This study describes a case of a five-year-old female German Sheppard dog that had a five months history of progressive left thoracic limb lameness. Palpation revealed muscle atrophy of the scapular and humeral area, painfulness in this region, and an axillary mass. We reported pre-operative diagnosing procedures based of X-ray exam and computer tomography imaging (CT) combined with fine-needle aspiration biopsy and rapid smear test Diff Quick, surgical procedures by remove and re-remove of axillary mass, post-operative confirmation by repeated histopathological analysis, and the results of chemoteraphy with cisplatin.

Key words: dog, peripheral nerve sheath tumour, brachial plexus

**AN ASSESSEMENT OF RAT SPERM MOTILITY,
CONCENTRATION AND MORPHOLOGY**

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Summary

Considering the importance of Wistar strain in the field of reproductive toxicology, the purpose of this study is to contribute to the database on several reproductive parameters of Wistar male rats, aged 7-8 weeks, by investigating body weight and main reproductive organs weight, sperm concentration, sperm motility and sperm morphology.

Key words: Wistar rat, sperm count, motility, morphology

CT-ANGIOGRAPHY OF THE THORAX AND ABDOMEN IN CAT

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Summary

The aim of the study was to highlight the role and importance of computed tomography using contrast substances to identify the main blood vessels in the thoracic and abdominal cavity of cat.

Evaluation of the blood vessel in animal prove to be rather difficult using other imaging methods (B mode US, Rx) because those methods offer information only about some vascular branches. Contrast radiography offer a static view of the blood flow and at a certain time instance. Using CT evaluation combined with contrast agent not only we are able to identify the blood vessels but also the vascularization of the organs.

For identifying the blood vessels of the thoracic and abdominal cavity Visipaque 320 was used as a contrast media. The study was done on a European breed cat, weighting 4 kg, the cat was subjected to CT examination due to a posttraumatic event. Contrast CT was required to investigate the organ perfusion. Before contrast CT the cat underwent neuroleptanalgesia, and the physiological constant were monitored.

Contrast CT (Angio-CT) is a useful method that help evaluate the organ perfusion and help identify the presence, size, and spatial location of different formation or modifications of vessels.

Key words: cat, Angio-CT, blood vessel, contrast agent, Visipaque 320

**THE DEVELOPMENT OF THE ELECTROCARDIOGRAPHIC AND
ECHOCARDIOGRAPHIC PARAMETERS IN CANINE
CARDIOMYOPATHY BEFORE AND AFTER PIMOBENDAN
ADMINISTRATION**

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Summary

The research was conducted on two dogs belonging to different races, aged 9/16 years old and weighing 13/10 kg.

The electrocardiographic and echocardiographic recordings were performed using a digital Delta 1 CARDIOLINE electrocardiograph with 12 derivations and a digital MINDRAY DP-2200 VET electrocardiograph.

Pimobendan administered in therapeutic doses causes an increase in the cardiac contractile force without negative effects on the electrocardiographic parameters and on the myocardial efficiency.

Pimobendan administered in therapeutic doses has positive effects on the myocardiocytes, thereby reducing the need of energy and oxygen. We have noticed an improved overall condition of the dogs that is why we recommend Pimobendan administration, especially during stressful and hot days.

By echocardiography we have found that Pimobendan, as a positive inotropic agent, determined the decreased shortening fraction (FS) in a short period of time (about 2 weeks) without causing the deterioration of the cardiac performance

Key words: dog, Pimobendan, electrocardiographic, echocardiographic

**REPORT A DELAYED HAEMOLYTIC REACTIONS IN A DOG
WITH CHRONIC RENAL INSUFFICIENCY AFTER
A TRANSFUSION OF INTEGRAL BLOOD**

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Summary

During a large study focused on evaluating the effectiveness of transfusional therapy with integral blood (IB) on canines patients, we reported delayed manifestation of hemolytic reaction to a dog with chronic renal insufficiency. The patient was a six years old half breed female with obvious symptomatology of renal insufficiency (pollakiuria, haematuria, discomfort at miction, apathy, loss of appetite). During the observation period the patient was regularly evaluated and monitored clinically, hematologically (with an automatic analyzer) and biochemically (with a semi-automatic analyzer). The diagnostic of chronic renal insufficiency was outlined based on analyzes' results, among which relevant were BUN (71 mg/dL), creatinine (2.5 mg/dL) and ratio BUN/creatinine (28.4). The severity of unregenerate chronic anemia was established by the low values of RBC (1.46 T/L), HCT (6.3%), Hb (2.1 mg/dL) and VEM (42 mg/dL), correlated with the critical clinical state and also with unfavorable/reserved prognostic lead to the decision of performing blood transfusion (450mL IB bag). The blood was taken from a random dog (male, vaccinated, dewormed) through a close system, in a 450mL standard bag with CPDA1. Blood transfusion was emergency made without compatibility tests patient-donor because it was the first transfusion for this patient. According to the analysis after transfusion, in the second day RBC values rose only to 2.33 T/L and HCT to 13.5%, and the third day recorded a regression for RBC to 1.81 T/L and HCT to 10.2%. The evolution during the fourth-30th day interval has a slight increase (RBC 4.7 T/L and HCT 27.2%). After two months it was a significant decrease, when the state of health worsened considerably, having the values of RBC 1.55 T/L and of HCT 11.2%. Finally it was concluded that the investigated patients have developed a delayed hemolytic reaction because transfusion of IB was not rated in terms of compatibility, also they did not record a significant increase in parameters of packed red cells, indicating an eventual rejection of transfused red blood cells.

Key words: dog, anemia, transfusion, delayed hemolysis

CORRELATION BETWEEN CLINICAL AND CYTOLOGICAL ASPECTS OF ANAL SAC INFLAMMATION IN DOGS

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Summary

The aim of this study was to establish a correlation between the cytological aspects of aseptic samples tucked from the anal sacs and clinical manifestations of the patients. After collecting the sample, a Diff-Quick smear was done and Olympus microscope (100X magnification) was used for examination, the image was obtained with Olympus Soft Imaging Solutions, UC30. We evaluate the presence of epithelial cell with or without bacterial colonization, the presence of inflammatory cell (neutrophils, eosinophils, and macrophage) and the presence of free bacteria.

The main differences between the sample collected from healthy dogs and the dogs with clinical signs of perianal inflammation was the number of keratinized squamous epithelial cell, that was directly proportional with severity of the anal sac affection. The presence of inflammatory cell with normal or degenerated aspects was correlated with abscessed anal sac (different aspect previously recorded in literature). Degenerated neutrophils is one good indicator of chronic inflammation. Intracellular bacteria were found only in abscess of anal sac and *Malassezia* spp. was identified in only one case without any clinical manifestations.

Degenerated neutrophils found in anal sac abscess indicate inflammation correlates with the presence of old and gritty secretion of pus.

The presence of neutrophils and intracellular bacteria in correlation with clinical signs of anal sac inflammation represent one important criteria of infection (abscess of anal sac), and justified the decision of antibiotic administration in those patients.

Keyword: anal sac, dog, abscess, cytology

CORRELATIONS BETWEEN PHARYNGEAL AND ANAL SACS MICROBISM IN DOGS

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Summary

In this study 10 dogs from witch 3 were complete healthy (martor group) were clinically evaluated and samples from the pharynx and the anal sacs were collected in sterile containers. Following the bacteriological examination of the samples, the bacteria from the pharynx and anal sacs were identified and the correlation between the two was assessed, as well as the correlation between the macroscopic aspects of the anal sacs content and the pathology of the perianal area.

The aim of this study was to confirm or deny the presence of sacculitis-tonsillitis syndrome in dogs by demonstrating a positive or negative correlation between the bacterial flora found in the pharynx and the one found in the anal sacs.

Following the bacteriological examination of the samples and the statistical data analysis, there was no correlation between the pharyngeal and the anal sacs microbes in the evaluated patients. The only bacteria with a positive correlation, in 20% of the cases, was *Streptococcus non-haemolyticus*, causing local inflammatory signs and macroscopic alterations of the anal sacs content.

Key words: sacculitis-tonsillitis syndrome, dog, anal sacs, pharynx

ULTRASOUND FINDINGS IN HIP JOINT IN DOGS WITH AVASCULAR NECROSIS OF THE FEMORAL HEAD

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Summary

A vascular necrosis of the femoral head (AVNFH) known as Legg-Calve-Perthes disease (LCP) is a disease that affects young individuals from small breeds, with an uncertain etiology. The affection is located in the hip joint and could be unilaterally or bilaterally.

Using B mode ultrasound for evaluation of changes in AVNFH affected hip.

A number of 10 dogs, of 8 month to 12 months old, small breed were brought for radiography examination presenting limping in the posterior legs. Radiographic exposures were done in dorso-ventral recumbency to examine the acetabulum and the femoral head. B mode ultrasonography was performed using a linear probe of 7-10 MHz. Doppler ultrasound procedure was used to assess the vascularization of the hip.

The diagnostic of avascular necrosis of the femoral head was put base on the radiographic exposure. The acetabular cavity was wider than normal and the femoral head have lost his normal round shape. Because of joint incongruence the joint subluxate easily. The B mode ultrasounds reveal an irregular contour of the femoral head and hyperechoic areas were visible on the femoral head surface, the joint capsule was thickened and periarticular tissues have an increased echogenicity with presence of small vessels.

B mode ultrasonography helps identifying the changes in the femoral head and also gives helpful information about the aspect and vascularisation of the adjacent tissues. Ultrasonography can be used as an alternative of radiography in assessing the changes of the hip joint.

Key words: avascular necrosis, dog, femoral head, ultrasonography

HISTORICAL AND CLINICAL EXAMINATION FINDINGS IN CATS WITH END-STAGE CHRONIC KIDNEY FAILURE

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Summary

Background: Chronic kidney disease (CKD) is one of the most common pathologies and leading cause of death in elderly cats. Clinical signs usually become multisystemic as the illness progresses.

Objective: The present retrospective study aims to analyze the major clinical findings and the possible contributing factors to the appearance and progression of renal disease.

Methods: The clinical records of all feline patients presented at the Faculty of Veterinary Medicine of Iasi were studied. The parameters taken into consideration were: vital signs, mentation, eating and digestive tract disorders, weight loss, type of food and urinary tract infections. All statistical analyses were performed with a statistical software package; using Mann Withney and Ttest paired samples tests, with a significance level at $p < 0.05$.

Results: From all patients diagnosed with kidney failure, 21 were included in this study. The inclusion criteria was based on complete clinical examination, blood and urine biochemical analyses, and abdominal ultrasound. In terms of severity of the illness 61.9 % of the patients were diagnosed with stage IV CKD. The majority of the cats (61.9%) were males, and 60 % of the felines from this group were older than 14 years.

Conclusion: Chronic kidney disease is a progressive and most of the time irreversibile illness, affecting almost one third of the cats over 14 years old. Prevention and early detection is difficult, but the best methods still remain regular physical examination, routine bloodwork and thorough history-taking.

Key words: chronic kidney failure; clinical findings; blood biochemistry, cats.

ISOFLURANE INHALATION ANESTHESIA DEEP MONITORING, IN PIGEONS

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Summary

The study was conducted on ten healthy domestic pigeons (*Columba livia var. Domestica*). In the first phase of the study isoflurane was supplied by endotracheal tube for 45 minutes. In the second phase, the following 45 minutes, anesthetic gas was provided through the cannulated left caudal thoracic air sac. There were used different concentrations of isoflurane and different oxygen flows in semi-open respiratory system. The deep of general anesthesia was assessed using a scale and MAC concentration was measured. Statistical analysis was performed with Student t-test and for correlations between nonparametric data were used Friedman and Wilcoxon tests. Assessment of CNS inhibition depth only by testing reflexes is limited, nonparametric tests reveal significant differences in individual response and also raise the issue of necessity to establish the relevance of each reflex in assessing the depth of narcosis. MAC values greater than or equal to 1%, signifying a medium to deep anesthetic plane, were obtained in 13% of determinations in the first stage of the experiment and in 21% in the second stage, these values being obtained when the vaporizer was set at 2%.

Key words: pigeons. isoflurane. reflexes. MAC.

CLINICAL, ELECTROCARDIOGRAPHIC AND ECHOGRAPHIC FEATURES IN HYPERTROPHIC CARDIOMYOPATHY IN CATS

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Summary

Hypertrophic cardiomyopathy represents the most frequent type of acquired heart pathology diagnosed in cats. This pathology is characterized by generalized or regional left posterior wall or interventricular septum enlargement. In this retrospective study we included sixty-five cats. Nine out of sixty-five cats were diagnosed with hypertrophic cardiomyopathy. The most frequent clinical signs diagnosed were: murmur, dyspnea, polypnea, posterior leg ataxia, weakness and weak pulse. Three out of nine cats were asymptomatic, HCM was diagnosed during a routine health checkup. On ECG we identified low R wave amplitude (in cats with pleural effusion), sinus tachycardia and ventricular tachycardia. Echographically we found global and regional left ventricular enlargement, left atrium dilation \pm thrombi, pleural effusion, SAM with concurrent mitral regurgitation. Echographically we found global and regional left ventricular enlargement, left atrium dilation \pm thrombi, pleural effusion and SAM with concurrent mitral regurgitation. The cats presented different types of diastolic dysfunction. Six out of nine presented grade 2 pattern (impaired relaxation), one presented pseudo-normal pattern and two out of nine restrictive pattern.

Key words: HCM, cat, SAM, echocardiography, ECG

LOW QRS VOLTAGE IN DOGS WITH *D. IMMITIS*

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Summary

The ECG is an insensitive investigation tool for diagnostic of *D. immitis*. Usually dogs with *D. immitis* infection have normal electrocardiographic features. In advanced cases, there is a shift of mean electric axis to the right due to right ventricle dilation. Our study was carried out on 15 dogs diagnosed with *D. immitis*. *D. immitis* diagnostic was done based on Knott test and PCR test results. None of the dogs presented adult worms within right atrium, right ventricle, main pulmonary artery or right and left lobar pulmonary arteries. Pulmonary hypertension was not present. For PHT we evaluated tricuspid regurgitation peak velocity and pulmonary artery flow pattern. ECG showed normal sinus rhythm in fourteen dogs, and one had lone atrial fibrillation. Two out of 15 dogs had 1st AV block. Six out of 15 dogs presented low QRS complex amplitude in the absence of pericardial or pleural effusion (0.75 ± 0.19 mV). In these dogs hypothyroidism, based on Idexx Snap test, was not confirmed. In 9 dogs we considered that R wave had normal morphology and amplitude (1.96 ± 0.31 mV).

Key words: ECG, echocardiography, PHT, *D. immitis*, dogs

TESTING AND USE OF BARBED SUTURES IN CLASSICAL VETERINARY MEDICINE – A BIBLIOGRAPHICAL REVIEW

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Summary

Modern surgery benefits from a multitude of options regarding suture materials, but not one of them, for the moment, meets, altogether, the physical, biological and chemical properties of the ideal suture material.

Barbed sutures were recently introduced in the great family of suture materials, and are fabricated from synthetic materials, both absorbable and nonabsorbable, having the advantage of some known properties, such as: tensile strength, absorption time, tissue reactions, maneuverability, etc.

Barbed sutures are basically monofilament fibres, in which barbes are created by micro-cutting the fibre at different angles, and in different patterns. Barbed sutures also come in two varieties: unidirectional and bidirectional.

Barbed sutures have proven, in many instances, to be superior to conventional sutures, in means of suturing time, aesthetic aspects of scars, maneuverability, tension distribution throughout the suture, whilst having similar tensile strength and complications incidence, with conventional suture materials.

There are few studies regarding the use of barbed sutures in veterinary medicine, most of them concerning orthopedics, obstetrics and gynecology, and gastroenterology.

Although many veterinary studies have proven barbed sutures to be superior to conventional sutures, there are some that do not recommend them in certain situations.

There is however, an aspect that many authors agree upon: more studies are further required, and on larger groups, to establish, as accurate as possible, the recommendations and contraindications of barbed sutures in veterinary medicine.

Key words: barbed suture, knotless suture, veterinary studies, knotless vs. conventional sutures

HEMODIALYSIS – THERAPEUTIC MANAGEMENT IN A DOG WITH EHRLICHIOSIS - CASE REPORT

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Summary

A 7 years old Rottweiler dog, 37 kg, intact male, was presented without appetite, with vomitus, decreased effort resistance, anorexia, rectal temperature 39.70°C, severe dehydration (5-6 seconds delay in skin return). The dog was treated for 5 days in a private practice for enteritis. First venous blood work showed mild acidosis (pH 7.30, RR: 7.31-7.42, pCO₂ 31.0 - RR: 32-49 mmHg, HCO₃ 14.1 - RR: 20-29 mmol/L, AnGap 23 mmol/L, tCO₂ 15.0 - RR: 21-31 mmol/L, Na 141.0 - RR: 144-160 mmol/L, K 3.7 - RR: 3.5-5.8 mmol/L, Cl 108.0 - RR: 109-122 mmol/L). Biochemistry revealed elevated BUN 117.0 mg/dl (RR: 7-27 mg/dl), CREA 11.4 mg/dl (RR: 0.5-1.8 mg/dl). Complete blood count showed anemia with reticulocytosis and leukocytosis. The patient was positive for Ehrlichia canis at 4DX test.

Etiological therapy was applied (Doxiciclin 10 mg/kg once a day PO) along with fluid therapy (balanced electrolyte solution of NaCl 0.9%), metil-prednisolone 1 mg/kg two times per day for autoimmune anemia 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 in bolus. Hemodialysis was performed five times with an A/V set for Dialog and a low 18 LOPS dialyzer, with 150 ml/minute hemodialysis flux in a period of five consecutive days.

For this case hemodialysis along with the sustaining therapy represented the key for positive prognosis since we manage to reduce the renal acute injury from BUN 117.0 mg/dl and CREA 11.4 mg/dl to BUN 26 mg/dl, CREA 2.3 mg/dl after hemodialysis in order to maintain a positive evolution for this patient. The BUN reached normal values at the last hemodialysis, the patient being submitted to enteric dialysis, oral treatment with phosphorus chelation and renal diet and creatinine normalized after another 7 days.

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

**A COMPARATIVE ANALYSIS OF THE
ELECTROCARDIOGRAPHIC PARAMETERS IN THE CARDIAC
DOGS ACCORDING TO THEIR CONSTITUTIONAL TYPE**

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Summary

The investigations were carried out on 84 dogs diagnosed with heart disease divided according to their constitutional type into two categories: 23 bulging chested dogs and 61 flat chested dogs.

The heart rate of the flat chested dogs recorded superior values to those with bulging chest.

The flat chested dogs with symptomatic heart failure showed left axis deviation (LAD) in a higher percentage than the bulging chested dogs, while the latest recorded higher values of the P wave duration compared to the literature and to the flat chested dogs.

The cardiac bulging chested dogs indicated average values above the maximum physiological PR interval (0.13 s), compared to flat chested dogs because they presented a higher percentage of sinoatrial disorder.

The average ventricular QRS complex of the bulging chested dogs (cardiomegaly with bundle branch block) was superior to those of the flat chested dogs, while the increased average values of the amplitude of the left ventricular QRS complex occurred in flat chested dogs that are more likely to present cardiac hypertrophy.

The cardiac flat chested dogs exhibited greater average QT interval-rate compared to the other category, and the average amplitude of the ST segment was between 0.05-0.06 s for both categories of dogs. Those limits remained steady for every dog investigated in the study.

Key words: dog, P wave, PR interval, QRS complex, QT interval

ARTERIAL BLOOD PRESSURE IN CATS WITH POLYCYSTIC KIDNEY DISEASE

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Summary

This study was conducted to evaluate arterial blood pressure in azotemic and non-azotemic cats with polycystic kidney disease. Six non-azotemic cats and seven azotemic cats diagnosed with polycystic kidney disease were included in this study. Systolic blood pressure (SBP), diastolic blood pressure (DBP), mean blood pressure (MBP) and pulse rate were recorded by use of a noninvasive oscillometric technique.

The mean values of SBP, DBP and MBP were significantly higher ($p < 0.05$) in azotemic cats than in non-azotemic cats with PKD. Arterial hypertension of mild or moderate degree was found only in azotemic cats with polycystic kidney disease.

Key words: cats, blood pressure, polycystic kidney disease