

REGISTERED CONSTANTS OF MOBILITY PARAMETERS AFTER THAWING OF CRYOPRESERVED SEMEN IN HOLSTEIN FRIESIAN BULLS

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Summary

72 straw belonging to 6 Holstein bulls were examined in order to establish constants of mobility parameters.

Total mobility, progressive mobility, rapid sperm cells, velocity and viability were analyzed by CASA (Computer Assisted Semen Analysis).

Mobility average values of fresh semen was 68.33±1.55% in bull B and 72.50±0.75% in bull A. Mobility average values of cryopreserved sperm after thawing in all 6 bulls that were taken into study was 48.23±3.20%.

Progressive mobility was between 11.25±1.48% in bull F and 24.75±1.85% in bull D. Subpopulation of rapid sperm cells vary from 34.17±4.58% (the highest values) to 10.33±6.88% (the lowest values).

Velocity, which expressed the percentage of sperm cells with average path velocity (VAP) was a parameter which don't fluctuate so much in values (between 71.03±2.13% in bull F and 95.52±4.26% in bull C). Average values of sperm cells velocity registered following thawing in all 6 bulls was 81.07±8.94 μm/s.

Viability in all bulls has an average values of 52.09±3.55%.

Regarding the morphology of sperm cells after thawing using Diff-Quick method, we noticed that the highest average values of normal sperm cells was 81.45±1.82 % in D bull, and the lowest was 71.55±4.61% in bull E.

Key words: sperm cells, progressive mobility, velocity, viability, morphology.

**INFLUENCE OF AGE ON THE MAIN REPRODUCTIVE
PARAMETERS IN HOLSTEIN FRIESIAN BULLS FROM SEMTEST
TÂRGU-MURES BVN**

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Summary

The authors studied a total of 15 Holstein Friesian bulls from the age of 3 to 8 years. These bulls were grouped into six groups of age, respectively 3, 4, 5, 6, 7 and 8 years. The following sperm parameters were monitored: the average volume of ejaculate (ml/month/year), sperm concentration (number of spermatozoa x 10⁹/month/year) and average doses (average doses/ejaculate/month/year). It was taken into consideration also the season in which bulls were collected (winter, spring, summer and autumn).

At the bulls of 3 years of age the ejaculate volume didn't show any significant difference compared with that of bulls of 4, 5, 7 and 8 years of age, regardless of the collection month. The only significant difference was found at the volume ejaculate of bulls at 6 years of age in October month.

Sperm concentration in all groups of age was not influenced by the season, so the sperm concentration in all the bulls in winter, spring and summer was an average of 1.33 x 10⁹ sperm/ml, and in autumn the average concentration was 1.37 x 10⁹ sperm/ml.

Regarding the number of doses obtained, the bulls age (3, 4, 5, 6, 7 and 8 years) and the harvest months (January – December) didn't influence this parameter.

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

**CONTRIBUTION TO KNOWLEDGE OF ESOPHAGOGASTRIC
ULCER OF SWINE IN SERBIA (CASE REPORT)**

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Summary

Eesophagogastric ulcer appears as a separate disease usually affects swine. Etiological factors that contribute to the disease can be classified into several groups, some of which stand out as a most important factors diet and polyvalent stress. Changes in pars proventricularis cuteanea mucosa and stomach can be divided into three groups, acute erosion, subacute ulcer and chronic ulcer. The main characteristic morphological changes of the mucosa in the region esophagogasatsric ulcer develop necrosis of all parts of the mucosa in whose vicinity expressed reactive inflammation. Most of the symptoms is not typical, so it is difficult to make accurate diagnosis in peracute cases, without the appearance of clinical symptoms of the disease, the animals die suddenly due bleeding. The aim of our study was to diagnose the occurrence esophagogastric ulcers in swine at slaughterhouse

Key words: swine, esophagoastric ulcer, slaughter house

CONTRIBUTION TO KNOWLEDGE OF DAIRY COWS LAMINITIS IN SERBIA

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Summary

Due intensification of farming laminitis is increasingly appears, especially in beef cattle and cows in early lactation. Some high producing dairy cows farms have a great presence of this disease which mainly occurs after sudden changes in food and has an acute, sub acute and chronic form. Both front, both hind of hooves of all four legs could become ill. Significance in the etiology of this disease occurrence have some toxic compounds of as a result of the digestion of concentrated easily digestible food after long period giving. Therapy is effective in case is done on time, which means at the earliest stage of the disease. In addition to combat acidosis, antihistamine preparations should be parenterally administered to animals. In all cases when endotoxemia is suspected the resorption of toxins from digestive tract should be prevented. It is also important to support the effective circulation of acropodium by administration of vasodilators, anticoagulants, vitamin K, calcium preparations, corticosteroids, and non steroidal anti inflammatory drugs. The use of mineral compounds with buffer characteristics in the cattle diet during the first 100 days of lactations have favorable effects in preventing disorders in feed digestion and rumen acidosis and consequently, in the incidence of other health problem, primarily laminitis. In this paper we gave the most important aspects of laminitis in a dairy cows as well as situation at farms in Serbia.

Key words : dairy cows, laminitis, tie breeding system, mineral compounds

CLINICAL RESEARCH ON RIGHT HEART DISEASE IN ADULT DOG

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Summary

Right - side heart failure is caused by right heart disease. The symptoms are obvious at the splanchnic level: hepatomegaly, hepatic sensitiveness, ascites, jugular ectasia and only rarely, pleurisy. Causes of right heart disease are heartworms, tricuspid valvular disease, right intracardial or extracardial tumors, thrombi, right dilatative cardiomyopathy. Diagnosis of right heart disease is performed by clinical examination and is confirmed by paraclinical methods: X-rays, electrocardiography and echocardiography. Paraclinical examination plays an important role in establishing the diagnosis and in evaluating the prognosis.

This research emphasizes the characteristics of clinical and paraclinical diagnosis of right-side heart disease.

Key-words: right –side heart failure, heartworms, cardiac tumors, right dilatative cardiomyopathy.

**RESEARCHES REGARDING SOME ECHOGRAPHIC ASPECTS IN
DOGS PANCREATIC DISEASES**

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Summary

Five dogs have been studied and ultrasound examined which from a clinical point of view, they showed various digestive disorders (vomiting, appetite disturbance, diarrhea alternating with constipation, weight loss). All cases were subjected to abdominal ultrasound. After the abdominal ultrasonography were diagnosed as morbid entities: acute pancreatitis, chronic pancreatitis, cystic tumors, pancreatic tumors, and pancreatic metastases.

Key words: pancreas, dog, abdominal, ultrasound

**SPONDYLOSIS DEFORMANS AND DIFFUSE IDIOPATHIC
SKELETAL HYPEROSTOSIS (DISH) IN DOGS: A RADIOGRAPHIC
STUDY**

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Summary

Spondylosis deformans and diffuse idiopathic skeletal hyperostosis (DISH) are usually incidental findings and in most dogs are either asymptomatic or associated with mild clinical signs. The aim of the study was to evaluate the differences between spondylosis deformans and DISH disorders from radiographic point of view. In this study were included thirty-six dogs, presented with spondylosis deformans of various degrees of osteophyte development and DISH. Radiography was used to investigate and to compare the differences between these two diseases. Spondylosis deformans and DISH were found alone and in association in dogs at the radiological study.

Key words: spondylosis deformans, diffuse idiopathic skeletal hyperostosis, dog

CONTRIBUTION OF THE COMPUTED TOMOGRAPHY TO THE IMAGING DIAGNOSIS OF THE INTERVETEBRAL DISK DISEASE IN DOGS

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Summary

In order to assess the most appropriate surgical approach to the spinal compression site, the imaging setting of the spinal compression and the displacement direction of the intervertebral disk (ventral displacement or lateralisation in right or left) are of particular importance.

In this study, we aimed to determine the accuracy of the identification of the spinal cord compression site secondary to the protrusion of the disk material and its direction of displacement by CT evaluation of 11 sites of spinal cord/root compression.

Identification of the active location of the medullary/root compression secondary to the degenerative intervertebral disk disease was achieved, in the present study, in 100% of the cases by conventional CT and only 64% of the cases using conventional radiography. The direction of the disk displacement related to the spinal cord identified by CT in the 11 sites analyzed was towards lateral in 36.36% of the cases and towards ventral in 63.64% of the cases. The extruded or just prolapsed disk material is identified on the CT images as a mass having variable position and homogeneity, depending on the age of the lesion and the greater opacity when compared with the spinal cord/spinal nerves.

The hyperattenuation degree increases with the rank of the mineralized disk. The results suggest that for both types of protrusion (I and II), the degenerated disk material structure differs from the nervous tissue (spinal cord/spinal nerves) ($p < 0.05$).

MPR and VRT CT images can improve diagnostic performance for dogs suspected of an intervertebral disk protrusion.

CT images allow imaging confirmation of the compression site and the displacement direction of the herniated disk which is of great importance in cases concerning the surgical approach of the site.

Computed tomography is a viable alternative to myelography in terms of identifying protruded mineralized disk in the spinal canal and a less invasive technique for those patients with spinal cord structures already traumatized.

Key words: computed tomography, intervertebral disk, degenerative disease, dog

ESTIMATION THE METABOLIC STATUS OF TRANSITIONAL DAIRY COWS ON THE BASIS CHANGES CHARACTERISTICAL BLOOD BIOCHEMICAL INDICATORS

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Summary

The objective of the present study was to estimate the metabolic status of transitional Simmental dairy cows on the basis changes characteristic blood biochemical indicators. Fifteen late pregnant cows and 15 early lactation cows were chosen for the analysis. Blood samples were collected to measure beta-hydroxybutyrate (BHB), non-esterified fatty acids (NEFA), triglycerides (TG), glucose, and the activity of aspartate transaminase (AST). Early lactation cows had significant higher ($P < 0.05$) values in serum BHB, NEFA and AST activities, and significant lower ($P < 0.05$) glucose and TG than late pregnant cows. High lipomobilization (NEFA > 0.4 mmol/l) was detected in 6 (40%) of early lactation and none late pregnant cows, while subclinical ketosis (BHB > 1.2 mmol/l) was detected in 14 (94.4%) of the early lactation and 4 (26.6%) late pregnant cows. AST activities above 100 IU/l were detected in 2 (13.3%) early lactation cows and none of the late pregnant cows. TG concentrations below 0.12 mmol/l were detected in 7 (44%) and glucose below 2.5 mmol/l in 10 (66.6%) early lactation cows and none of late pregnant cows. Blood values for glucose, TG, BHB, NEFA and AST showed that early lactation cows suffered from metabolic disturbances, which were associated with ketosis, and some degree of hepatic lesions, probably due to fat infiltration. These blood indicators may have a key role in estimating the metabolic status in dairy cows.

Key words: blood biochemical indicators, subclinical ketosis, hepatic lipidosis, dairy cows, transition period

**DYNAMICS OF FEMALE SEXUAL HORMONES CONSECUTIVE
CHRONIC EXPOSURE TO LEAD ACETATE**

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Summary

The study carried out on 28 white Wistar adult female rats, divided in three experimental group (E), chronic exposed to 50 ppb Pb (E₁), 100 ppb Pb (E₂), 150 ppb Pb (E₃) and one control (C) group which received tap water not containing lead pointed out: significant decrease, within physiological limits, of FSH, estradiol and progesterone serum level comparative to control group, inversely, significantly correlated with the exposure level, increase, within physiological limits, of LH and testosterone serum level comparative to C group, directly, significantly correlated with exposure level.

Key words: lead, hormones, rats, females

LAMINECTOMY - CASE REPORT

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Summary

In this paper we present the case of a Spitz dog breed, aged 13, reached the cabinet with paraplegia 24 hours. Investigations were found following: normotermie, heart rate and breathing is also normal, patellar reflex exacerbated, flexor reflex absent, absent tibial reflex, reflex panicular abolished the right L5-L6 vertebrae, anal reflex present, correctional negative reaction and full bladder. MRI revealed L6-L7 intervertebral disc protrusion, placing the diagnosis of herniated disc ventro-lateral right.

Key words: laminectomy, dog.

**RESEARCHES REGARDING THE CORRELATIONS BETWEEN
THE MOTILITY PARAMETERS AND THE SUBPOPULATIONS OF
SPERMATOZOA FROM THE BOAR SEMEN, USING CASA**

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Summary

Analysing the seminal material using CASA System is a step forward in determining sperm fertility. The CASA System offers, the most accurate results nowadays, and it's the most advanced diagnosis method of male infertility for all species.

In this study we have used CASA System because it provides the possibility of a correct analysis of the seminal material, reducing the number of variables from the manual analysis still used in many labs.

The CASA System offers also the possibility of studying various features of sperm mobility such as VAP (Path Velocity), VSL (Progressive Velocity), VCL(Track Velocity). Also i could correlate the sperm subpopulations, from boar semen, to the sperm cells mobility parameters, establishing the existence of a strong connection between this two variables.

Key words: boar, semen parameters, CASA

A RETROSPECTIVE STUDY OF 48 DOGS WITH PATELLA LUXATION

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Summary

Forty-eight cases with patellar luxation in dogs, in which a trochlear block recession and tibial tuberosity transposition were performed, were investigated and reviewed retrospectively. Medical records and stifle radiographs of 48 dogs were reviewed.

We report the signalment, bodyweight, breed, history, etiology, clinical features, unilateral or bilateral luxation, grade of luxation, direction of luxation and outcome for all cases. Outcome was graded as excellent, good, fair, or poor, according to the degree of lameness.

Most luxations were medial, bilateral, and interest the miniature breed dogs. Surgical correction of patella luxation grades 1, 2, or 3 results generally in a successful clinical outcome.

Key words: dog, patella luxation, trochlear block recession, tibial tuberosity transposition

**TPLO OR TTA, TREATMENT OPTIONS FOR CRANIAL
CRUCIATE LIGAMENT RUPTURE IN DOG – A LITERATURE
REVIEW**

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Summary

Cranial cruciate ligament (CrCL) rupture is the most common orthopedic condition of the stifle joint in dogs. The tibial plateau leveling osteotomy (TPLO) and tibial tuberosity advancement (TTA) are surgical osteotomy procedures which have recently become more popular in treatment of the cruciate-deficient stifle in dogs.

What is the surgery procedure that increases the joint stability and should minimize the progression of degenerative joint disease? The problem with comparing the different procedures is a variable reported data of controlled clinical trials.

The aim of this report was to critically review by analyzing the scientific literature reports of TPLO and TTA.

Key words: dog, TPLO, TTA

METABOLIC SYNDROME IN HUMANS AND IN COWS: A REVIEW

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Summary

The prevalence of obesity in humans in the last decade has reached epidemic proportion and is being more and more presented like a public health issue by its contribution in a series of diseases. Similarly, overconditioned cows have greater risks of metabolic problems because of excessive mobilization of body reserve to meet the energy demands for the high milk production. Clinical identification of the metabolic syndrome is based on the evaluation of abdominal obesity. This can be done by a series of measurements like live weight, body condition score, and by assessment of NEFA release. In both humans and cows, the metabolic syndrome is associated with a proinflammatory status. Distribution of fat deposits and the metabolic profile are discussed relative to characteristics of adiposity, a series of secreted factors by adipocytes, lipolysis and lipogenesis, insulin resistance.

Key words: metabolic syndrome, humans, bovine

CLINICAL AND PARACLINICAL ASPECTS OF LIVER DISEASE IN DAIRY COWS

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Summary

The aim of this paper is to present the results of clinical and paraclinical exams in some liver disease in dairy cows. The study material has been represented by 19 dairy cows, Holstein Friesian breed, average age 5, 31±2.23 years, average weight 538±68,93 kg.

General and special examination of the animals revealed frequently: depression, hipotermia, hepatomegaly, ketonuria, reduced or loss of appetite, reduced milk production.

The biochemical profile revealed increased serum activity of the hepatic enzymes (AST 256.99 ±168.27 IU/L, ALT 28, 42±9.81 IU/L, GGT 69.08±59.82 IU/L, GLDH 76.76±75.49 IU/L, LDH 2630.84± 811.89 IU/L. The average blood concentration of BHB was 2, 37±2, 34mmol/L. Ketonuria was evidenced in nine cows.

Key words: general examination, paraclinical exams, dairy cows.

TRANSIENT DIABETES MELLITUS IN A CAT: CASE REPORT

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Summary

This paper presents a case of transient diabetes mellitus in a 8-years-old castrated male cat. The history included polyuria, polydipsia and polyphagia of one month duration. Diagnostic evaluation revealed hyperglycemia (420 mg/dl; reference range 60 – 120 mg/dl), hypertriglyceridemia (856 mg/dl; reference range 10 – 114 mg/dl), and glycosuria without ketonuria. The treatment consisted of glipizide administration, in dose of 2.5 mg/kg bid, for two weeks, after which the dose was increased to 5 mg/kg, bid for another two weeks. Four weeks after the initiation of treatment symptoms of polydipsia and polyuria were resolved, the blood glucose concentration returned in normal ranges and therefore glipizide treatment was discontinued. The cat was normoglycemic at 1, 6 and 12 months after the discontinuation the glipizide administration.

Key words: cat, hiperglicemia, glipizide

**ELECTROCARDIOGRAM IN ROMANIAN SPORT HORSE,
BEFORE AND AFTER EXERCISE**

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Summary

Research was conducted in SDE Timisoara, on two Romanian Sport Horses: one female, age 17 years, weight 495 kg, and one male, un-neutered, age 12 years, weight 525 kg. Both horses were housed in stalls. The surface of the stalls was between 10-11 sqm, concrete floors and straw bedding. Electrocardiographic recordings were performed using a Delta 1 digital 12-lead model CARDIOLINE electrocardiograph, equipped with a high-resolution thermal printer that uses a 60 mm paper role. The ECG values of the mare at rest revealed the existence of a sinus tachycardia, and a 90° vertical heart (QRS DI<QRS aVF). The ECG values of the stallion revealed an increased P-R interval with 0.02 sec, representing the presence of grade 1 atrio-ventricular block (BAV 1). Ventricular systolic indicator (ISv) was 18.6% and atrial systolic index (ISa) was 11.6%, while diastolo-systolic ratio was 3.87, which demonstrates the presence of a short diastole. After warm-up, the ECG indices of the mare were: ISv – 31.57%; ISa – 23.68% and CDS value – 2.16 (higher than 1), which indicates a shortening in the systolic period. After completion of the course, the mare's heart rate was 78 beats/minute, representing an aspect of sinus tachycardia and the stallion's heart rate was 50 beats/minute. After completion of the course, all derivatives of the stallion revealed the presence of two P waves not followed by QRS ventricular complex, which means possible existence of atrial flutter.

Key words: horses, electrocardiographic indices

**CARDIAC OUTPUT IN COMPANION ANIMALS – FROM
RESEARCH AND EXPERIMENTAL EVALUATION TO ROUTINE
CLINICAL USE: A REVIEW**

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Summary

Intermittent and continuous cardiac output (CO) monitoring has been intensively studied, and, regardless of the method's invasiveness, CO remains a challenging parameter which is still in debate when it comes to routine veterinary clinical use. Among all animal species, both research and clinical studies targeting CO assessment have been performed mostly in dogs and horses, and only a few studies were done in cats. On the other hand, in experimental hemodynamic analysis, other commonly used animal models are pigs and rats. The aim of the current review was to analyze the available literature in correlation with the clinical context, focusing on the species (horse, dog and cat), clinical application and accounting for author's observations and conclusions.

Keywords: cardiac output, hemodynamic monitoring, companion animals

THE INFLUENCE OF EFFORT ON SOME BIOCHEMICAL SANGVINE PARAMETERS IN JUMPING ROMANIAN SPORT HORSES IN VARIOUS STAGE OF TRAINING

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Summary

The study was conducted in training circumstances on a total number of 16 Romanian Sport Horses trained for jumping competitions, distributed in two groups (RSH₁, RSH₂), based on the degree of physical training (beginners, n=8 and advanced, n=8). These two groups of horses were evaluated in three stage of exercise (T₁ - preexercise, T₂ - after ending exercise, T₃ - 90 minutes after ending exercise). The blood concentrations of creatinine (Cr), uric acid (UA), glucose and triglycerides were analyzed. Muscular effort involved by the exercise induced a significant increasing (p<0.05) of the glucose blood concentration in both groups so that at 90 minutes after exercise (T₂) was found a decrease glucose concentrations near the resting value (T₁). There were showed statistical significant differences (p<0.05) between groups, post-exercise (T₂) and during recovery (T₃), the group of debutant horses recorded higher values than the advanced group (p<0.05). Post-exercise (T₂) in both groups, triglycerides showed an insignificant increasing (p>0.05). Between the groups there were no significant differences (p>0.05) in the evaluated stages regarding the triglycerides blood levels. UA concentrations increased after exercise (T₂) and at 90 minutes post-exercise a slight downward trend is observed for both groups. At rest (T₁) the group of debutant horses (RSH₁) showed significantly higher values to those in the advanced group (RSH₂) regarding UA blood levels. The effort sustained in the jumping exercise induced insignificant increase (p>0.05) in both groups of Cr concentrations with obvious decrease during the recovery period (T₃). There were no significant differences showed (p>0.05) regarding Cr blood concentrations between the groups of jumping horses (RSH₁, RSH₂).

Key words: effort, horse, biochemical, sanguine, jumping

**THE DIFFERENCES OF ENZYMATIC ACTIVITY OF LACTATE
DEHYDROGENASE AND ALKALINE PHOSPHATASE IN
JUMPING ROMANIAN SPORT HORSES
IN VARIOUS STAGE OF TRAINING**

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Summary

This research evaluates the differences regarding plasmatic activity of LDH and ALP in two horse groups (Romanian Sport Horses) with different degree of physical training, beginners (n=8) and well trained (n=8) for show jumping contests. These two horse groups (RSH₁, RSH₂) were evaluated in three exercise stages (T₁ - preexercise, T₂ - after ending exercise, T₃ - 90 minutes after ending exercise). LDH serum activity is characterized in both horse groups by significant post-exercise increases, followed at 90 minutes after exercise by a decreased activity, but without returning to resting values (T₁). The level of physical training led to significant differences in the LDH activity in T₁, T₂ and T₃ when the debutant horses (RSH₁) recorded higher values compared to well train group (RSH₂). In both groups of horses trained for jumping competitions, ALP has an upward trend and registers the maximum value at 90 minutes after the end of training (T₃). The RSH₁ group has recorded in all stages evaluated, ALP concentrations higher compared to the well train group.

Key words: effort, horse, sanguine, LDH, ALP, jumping

MEDIAL MINIMALLY INVASIVE APPROACH TO THE SHAFT OF THE HUMERUS – DESCRIPTIVE CADAVERIC STUDY

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Summary

The present paper has resulted from a cadaveric study showing a corridor for plates insertion on the shaft of the humerus in dogs, on the medial side of the limb through a minimally invasive technique.

As in any surgical approach, either classic or minimally invasive, the bone must be presented in a manner to maintain anatomical and physiological features of the area, but also to be able to manipulate, reduce and fixate fragments.

Minimally invasive medial approach to humerus requires a thorough understanding of neurovascular details of the region, especially for distal incision, this region representing an area of increased risk of injuring structures with origin in the brachial plexus and brachial artery.

In terms of anatomical and surgical approach, the distal incision and bone access are achieved without complications, but due to the abundance and muscle positioning, the plate fixation is done with a certain degree of difficulty, depending on the skill of the surgeon and surgical technique principalities.

The minimally invasive approach and the correct positioning of the plate were screened by classic radiographic exam and then opening the plate insertion path.

Key words: MIPO, medial approach, humerus, dog

**DIAGNOSIS PROTOCOL BY 17-HYDROXYPROGESTERONE
DETERMINATION FOR HYPERADRENOCORTICISM AND
SECONDARY DIABETES MELLITUS IN A MINIATURE PINSCHER**

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Summary

A 12-year-old unneutered, male, miniature pincher dog was referred at the internal medicine clinic of the Faculty of Veterinary Medicine from Iasi, Romania, with a four month history of marked polyuria, polydipsia and polyphagia associated with weight loss. Physical examination revealed bilateral symmetric alopecia that started 12 months previous to consultation, abdominal ptosis and bilateral cataracts. Skin examination also revealed comedones on the abdomen and pyodermatitis on the hind limbs.

Biochemical profile revealed persistent hyperglycemia, increased alkaline phosphatase, hypercholesterolemia and normal liver enzymes. Hormonal dosages revealed normal FT4 1.32 ng/dl (0.77-3.49 ng/dl), high cortisol with a median of 620 (80-250 nmol/L). Additionally, in this case, 17-hydroxyprogesterone was determined, and results revealed a high concentration, with a median of 9.09 ng/ml or 27.54 nmol/L (<1.32 ng/ml or <4 nmol/L). The abdominal ultrasound examination revealed enlarged adrenal glands confirming our presumptive diagnosis.

In this paper we present the relevance of high concentrations of 17-hydroxyprogesterone as an indicator for hyperadrenocorticism diagnosis in a miniature pincher with concomitant diabetes mellitus.

Key words: hyperadrenocorticism, dog, pituitary adenoma, 17-hydroxy progesterone, diabetes mellitus

MORPHOLOGY AND MORPHOMETRY OF BRUNNER GLAND IN THE COW

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Summary

The Brunner gland in the cow is starting immediately after the junction of the pylors - duodenal junction and extended to the 65 cm of the length of the duodenum. The cranial region contains large number of the secretory units compared with the second region, but the cavity of the secretory units and the length of the duct in the second region are largest than in cranial region.

Key word: Brunner gland, cow, duodenum

**ELECTROCARDIOPHIC INVESTIGATIONS IN SPRANGUE
DAWLEY RATS, BEFORE AND AFTER AMIODARONE
TREATMENT**

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Summary

Electrocardiographic investigations were conducted in UMP Timisoara's Physiopathology Laboratory, on 4 Sprague Dawley rats. As group III antiarrhythmic has been used amiodarone solution for injection at a concentration of 50 mg/ml. The rats were anesthetized before i.v. administration. Induction was performed by administering 5% halothane in oxygen environment and its maintenance was performed with halothane, in concentrations of 1.5%. Needle electrodes were used to pick chest level biopotentials in DI or DII derivations. The ECG signal was amplified by an instrumentation amplifier, which is then converted into a digital signal with an analog numeric converter. Electrocardiographic route is acquired and stored on a PC type computer system with an AXON type device. Throughout the experiment, for the rat that did not receive amiodarone, electrocardiographic heart rate recorded values went for the upper limit of the species (350-400 beats/minute) and the QRS complex amplitude was between 0.7-1.1 mV. At the beginning of the experiment, after amiodarone administration, ECG found reduced heart rates, to 140, or 130 beats/minute respectively, when awakening from anesthesia. In the second day of the experiment, they showed signs of sinus bradycardia and increased ventricular complex amplitude, from 0.6 mV to 0.8 mV. In the third day of the experiment, at an amiodarone dose of 1.5 mg (same as in first two days), the ECG revealed signs of sinus bradycardia (from 160 to 140 beats/minute) and decreased ventricular complex amplitude, due to decrease myocardial retraction force, from 0.53 mV to 0.33 mV.

Key words: electrocardiographic, rats, amiodarone

EPIDURAL ANESTHESIA IN RABBITS. A REVIEW

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Summary

Epidural anesthesia is a routine technique of regional anesthesia in human medicine and in small animal clinic and it should be also frequently used in exotic mammals such as rabbits. Few studies were done regarding this subject but still with promising results. Epidural block is rarely used in small mammals because of anatomical differences and size. Local anesthetics and general analgesic drugs, such as opioids and alpha-2 agonists, can be successfully used for epidural analgesia. There is a high individual variation regarding the number of lumbar vertebrae in rabbits. Caudal end of spinal cord is at the level of sacrum making this technique even more difficult in rabbits. Epidural block has the advantage of reducing anesthetic doses and drug side effects, and also will prolong analgesia and reduce anesthetic costs. By studying modern literature regarding this subject we could conclude that even this technique has many advantages, regarding good analgesia with low side effects, more studies still need to be done to test anesthetic drugs, side effects and to ameliorate inoculation technique.

Key words: epidural, analgesia, local anesthetics, opioid, rabbit

**STUDY ON RELATIONS OF SERUM TSH, TRIIODOTHYRONINE
AND THYROXINE LEVELS AND AGE IN CANINE POPULATION
FROM MUSCEL AREA**

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Summary

The main goal of this study was to investigate the possible correlations between TSH serum level and the total thyroxine and triiodothyronine serum levels in dogs, according to age, in Muscel area.

The dogs studied were divided in four age-groups in order to attenuate the interferences caused by physiological and pathological disturbing factors.

In canine population from Muscel Area, the average TSH concentration, as well as the average of total thyroxin and triiodothyronine serum concentrations varies dependent of the dogs' age, as an adaptation to different physiological needs of each age stage.

Key words: TSH, total triiodothyronine, total thyroxine, age, Muscel