РЕЗЮМЕТА НА ПРЕДСТАВЕНИТЕ НАУЧНИ ТРУДОВЕ

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СЛЕД ЗАЩИТА НА ДОКТОРСКА ДИСЕРТАЦИЯ

1. Симеонов, Р. Цитологична диагностика на кожните заболявания при дребните животни. Монография, рецензент доц. д-р Димитър Стойков, ISBN 978-9549383-35-5, Стара Загора 2007.

Резюме:

Монографията е разделена на обща и специална част. В общата част са разгледани историческото развитие на клиничната цитология, начина на получаване, фиксиране и оцветяване на материала за цитологично изследване. Обърнато е внимание на възможните грешки при интерпретацията на находката. Разгледани са основните принципи при микроскопиране, класификацията на находката в зависимост от преобладаващият клетъчен състав и цитологичните критерии на злокачественост при туморите. В специалната част подробно са интерпретирани и онагледени цитологичните находки при най-често срещаните патологични процеси, засягащи кожата и подкожната тъкан при дребните животни, като същевременно е направена и диференциална диагноза със сходни кожни заболявания.

2. Simeonov, R. and G. Simeonova. Computerized Cytomorphometric Analysis of Nuclear Area, Nuclear Perimeter and Mean Nuclear Diameter in Spontaneous Canine Mammary Gland Tumours. Vet Res Commun, 31, 553-558, 2007.

Summary:

Fifty-two spontaneous canine mammary gland tumours (fibroadenomas (n = 8), tubulopapillary carcinomas (n = 9), solid carcinomas (n = 6), anaplastic carcinomas (n = 7), fibrosarcomas (n = 9), liposarcomas (n = 9) and osteosarcomas (n = 4) were analysed by computer-assisted nuclear morphometry in Hemacolor stained cytological specimens. Computerized cytomorphometry was performed and the nuclear area, nuclear perimeter and mean nuclear diameter of investigated tumours were assessed. A minimum of 100 nuclei per

lesion were examined. The statistical analysis revealed statistically significant differences between benign and malignant neoplasms. The results indicated that computer-assisted nuclear morphometry could be used as an additional method for differentiation of benign from malignant canine mammary gland tumours in cytological specimens.

3. Hristov, T., Lazarov, L., **Simeonov, R.** and Nikolov, Y. Haemangiosarcoma in a dog. Trakia Journal of Sciences, vol.5, Number 3-4, pp. 60-64, 2007.

Summary:

A clinical case of haemangiosarcoma of the spleen and liver in a male mixed breed dog, of age 10 years and 8 months, weighing 8 kg, is presented. The clinical signs were general and noncharacteristic. Initially, the disease was diagnosed by ultrasonography and blood laboratory investigations. Ultimately, the type of the growth was determined by a histological examination of a spleen specimen. The liver metastases were evidenced by ultrasound-guided fine-needle aspiration biopsy. The prognosis was poor.

4. Simeonov R. Computer-assisted fractal analysis of spontaneous canine mammary gland tumours on cytologic smears. Trakia Journal of Sciences, vol.5, Number 1, pp. 65-68, 2007.

Summary:

Fifty-two spontaneous canine mammary gland tumours (fibroadenomas, tubulopapillary carcinomas, solid carcinomas, anaplastic carcinomas, fibrosarcomas, liposarcomas and osteosarcomas) were selected and analysed by computer-assisted nuclear fractal analysis on Hemacolor stained cytologic specimens. Computerized cytomorphometry was performed and the fractal dimension of the studied nuclear surfaces was assessed. A minimum of hundred nuclei per lesion was examined. The statistical analysis revealed significant differences between benign and malignant neoplasms, but not between different types of malignant canine mammary gland neoplasms. The results indicated that computer-assisted fractal

analysis could be used as an additional method for differentiating between benign and malignant canine mammary gland tumours on cytologic specimens.

Key words: cytology, computer-assisted fractal analysis, canine mammary gland tumours

5. Simeonova, G., **Simeonov, R**. and Roussenov, A. Uncommon cause of acute abdomen in a dog: torsion of the spleen – case report and review. Trakia Journal of Sciences, vol.5, Number 3-4, pp. 64-67, 2007.

Summary:

Splenic torsion is an extremely rare disease both in human and animals. This is an emergency condition whose clinical presentation could be referred to as acute abdomen. The definite diagnosis is difficult to make and requires current image techniques, such as Doppler ultrasound and Computed tomography scan. An early operation is strongly recommended to avoid complications. In the present study a case of splenic torsion in German shepherd male dog was described. The patient was presented with signs of fever, inapetance, depression and vomiting from time to time in the course of two days. On the basis of history, physical examination, radiography and ultrasound a primary diagnosis of generalized splenomegaly was made and splenic torsion was suspected. After splenectomy the animal recovered well without problems.

Key words: splenic torsion, infarction, abdominal pain, dog

6. Tsachev, T., **Simeonov, R.** and Petrov, V. Infection with Ehrlichia canis and Borrelia burgdofferi in a dog. Veterinarski Glasnik, 61, 3-4, 201-210, 2007.

Summary:

A crinical case of Ehrtichia canis and Borretia burgdorteri infections in a 5 years old German shepherdis described. Clinical, serologycal, necropsy and histopathological examinations supporting the diagnosis have been performed.

Key words: Ehrtichia canis, Borrelia burgdorferi, finding, dog, necropsy, histopathological findings

7. Антонов, А., Атанасов, А., Симеонов, Р, Георгиев, П. Случай на трансмисивен венерически тумор при кучка. Ветеринарна сбирка, 5-6; 7-8., стр. 29-33, 2008.

Резюме:

Направен е опит чрез клиничен случай да се популяризират познанията върху трансмисивния венеричен тумор при кучката.

8. Mihaylov, G., Petrov, V., Marutsov, P., **Simeonov, R**., Simeonova, G. A case os aspergillosis in a bearded vulture (Gypaetos Barbatus). Trakia Journal of Sciences, vol.6, Supplementum 1, pp. 144-147, 2008.

Summary:

A clinical case of aspergillosis in a bearded vulture (Gypaetos barbatus), reared in captivity, is presented. The clinical signs, radiological alterations and the gross pathological findings are described. Mycological examinations via native microscopy and cultivation on Sabouraud dextrose agar were performed. An Aspergillus fumigatus strain was isolated from the lungs and the air sacs of the bird.

Key words: aspergillosis, Gypaetos barbatus

9. Simeonov R. Nuclear morphometry as an additional method of diagnosis in spontaneous feline mammary gland adenomas and carcinomas. Trakia Journal of Sciences, vol.6, Number 2, pp. 21-27, 2008.

Summary:

Thirty-five spontaneous feline mammary gland tumours (4 adenomas, 11 tubulopapillary carcinomas, 13 solid carcinomas, and 7 cribriform carcinomas) were analysed by computer-assisted nuclear morphometry on Hemacolor® stained cytologic specimens. Computerized cytomorphometry was performed and the mean nuclear area (MNA), mean nuclear perimeter (MNP), mean nuclear diameter (MND) and nuclear roundness (NR) of studied tumours were assessed. A minimum of hundred nuclei per lesion was examined. The statistical analysis revealed significant differences between benign and malignant neoplasm. The results indicated that computer-assisted nuclear morphometry could be used as an additional method

for differentiation of benign from malignant feline mammary gland tumours on cytologic specimens.

10. Krastev, S., Simeonova, G., Urumova, V. and **R. Simeonov.** Vertebral osteomyelitis due to candida albicans in a dog. Trakia Journal of Sciences, vol.6, Number 2, pp. 66-71, 2008.

Summary:

Candida species uncommonly cause vertebral osteomyelitis both in animals and human. We present a case of lumbar vertebral osteomyelitis in a dog caused by Candida albicans. The dog was 3-year-old female kurtzhaar weighing 19kg. The patient had a history of loss of appetite and weight, and several fistulas on the left lumbar area for three months that appeared after injury. Clinical signs were related to neurological dysfunction but were observed later in the course of the disease. The diagnosis was made on the basis of history, clinical symptoms, x-ray examination, cytology and cultural conformation. The treatment was successful after surgical debridement and oral ketoconazole for 35 days.

11. Stefanov, I., **Simeonov, R**. Histochemical and morphometric studies of connective tissue fibres in canine paranasal sinus. Bulgarian Journal of Veterinary Medicine, 11, 3, 175-178, 2008.

Summary:

The aim of the present investigation was to determine the localization, histochemical reactivity and the dimensions of connective tissue fibres in the wall of canine paranal sinus (PS) as well as to determine the dimensions of elastic and collagen fibres. The stroma was composed mainly by collagen fibres (CF). The thicker CF were situated in the subglandular connective tissue between the apocrine glands and sinus musculature (SGS) whereas those located in the connective tissue between the sinus epithelium and apocrine glands (SES) were statistically significantly thinner (P<0.01). CF with a various thickness were observed, that

decreased in the direction of the epimysium of the external anal sphincter (ES) to the endomysium. The reticular fibres (RF) were assembled immediately under the multilayer squamous sinus epithelium. They were located both around the apocrine tubules and among the tubules. RF embedded sebaceous glands, skeletal muscle cells and smooth muscle cells. Elastic fibres (=F) located in SGC and ICT were thicker and longer than those in SEC. The =F in SES were thinner and shorter compared to those in SGS. Histochemically, a various degree of reactivity of CF and EF in the wall of the paranal sinus, was observed.

Key words: connective tissue fibres, dog, perianal sinus

Summary:

The study was performed on thirty-one spontaneous feline mammary gland carcinomas. Neoplastic cells were preoperatively obtained by fine-needle aspiration biopsy, fixed immediately with Merckofix spray® (Merck, Darmstadt, Germany) and stained with Hemacolor® (Merck Darmstadt, Germany). After surgical removal, tumour diagnoses were histopathologically confirmed. The tumour diameters were determined as > 3 cm or < 3 cm after surgical removal of neoplastic formations. Postoperative follow-up information was available for 25 (80.64 %) cats. The material obtained for cytopathological processing was analysed with image analysis system. Computerized cytomorphometry was performed and the mean nuclear area (MNA), mean nuclear perimeter (MNP), mean nuclear diameter (MND) and nuclear roundness (NR) of investigated tumours were assessed. Data from nuclear morphometry were correlated with tumour diameters and survival using Pearson's correlation test (Statistica 6.0, StatSoft, Tulsa, OK, USA) at the level of significance $p < 0.05$. The results indicated that nuclear parameters MNA, MNP, MND and NR are not reliable prognostic indicators in feline mammary gland carcinomas based on the correlation analysis between them and tumour diameters and survival period.

Key words: nuclear morphometry, tumour diameter, survival, mammary tumours, cats

13. Динев, И., Никифоров, И., Стоев, С., Манов, В., Грозева, Н., **Симеонов, Р.,** Павлов, Д. и Р. Тодоров. Ветеринарномедицинска хистопатология. Ръководство за упражнения, рецензенти проф. двмн Любен Лозанов и доц. д-р Димитър Стойков, ISBN 978-934-9443-14-1, първо издание, Стара Загора, 2009.

Резюме:

Ръководството е съобразено с начина на подготовка на студентите по дисциплината Обща патология. Съдържанието на изданието е съобразено с плана на учебната програма на ВМФ, Стара Загора

14. Russenov, A., Nikolov, Y., **Simeonov, R**., Chaprazov, T., Todorova, I. and I. Borissov. A case of fibrous osteodystrophy in a dog with secondary renal hyperparathyroidis. Bulgarian Journal of Veterinary Medicine, 12(3), 212-218, 2009.

Summary:

A clinical case of fibrous osteodystrophy in a dog with secondary renal hyperparathyroidism is de-scribed. Considerable deviations in blood biochemistry, radiological, ultrasonographic and ECG find-ings, as well as in histological examination of kidneys were observed. All these changes are conside-red as relevant and in our view, could be utilized for the proper diagnostics of this pathological state.

Key words: chronic renal failure, dog, fibrous osteodystrophy, hyperparathyroidism, para-thyroid hormone

15. Lasarov, L., Georgieva T, Simeonova G., Zaprianova, D., Nicolov, J. and R. **Simeonov.** Markers of inflammation of experimentally induced pancreatitis of dogs (Part I): C reactive protein and blood cell counts. Review Med Vet, 162, 3: 118-122, 2011.

Summary:

Experimental pancreatitis was induced in 6 dogs by ligation of the pancreatic ducts. The pancreatitis induction was confirmed by conventional histology on the 5th day after surgery. Plasma CRP (C-reactive protein) concentrations and WBC (White Blood Cells) counts were

determined 72 hours and immediately before (hour 0) the surgical intervention and 3, 6, 24, 48, 72 and 96 hours after. Both parameters significantly increased compared to basal values since the 3rd hour for CRP concentrations and the 6th hour for WBC counts, reached maximal values at the 24th hours and remained dramatically elevated until the 96th hour and were highly and positively correlated (r =0.84, P < 0.01). These results showed that the haematological and the biochemical parameters both evidenced the occurrence of an inflammatory response but that plasma CRP was an earlier marker than WBC count.

Keywords: Acute pancreatitis, dog, CRP, WBC, correlation

16. Христов, Ц., Бинев, Р., Лазаров, Л. и **Р. Симеонов.** Плазмени концентрации на VEGF при лимфом при кучета. В Сборник: Юбилейна национална научна конференция с международно участие "Човекът и вселената", 5-9 октомври, 2011, Смолян, България, стр. 585-590, 2011.

Summary:

Vascular endothelial growth factor (VEGF) is an essential cytokine in the regulation of angiogenesis. VEGF is a dimeric polypeptide with potent angiogenic and mitogenic properties, specific for endothelial cells and increases vascular permeability. This growth factor seems to play a major role in tumor growth, and plasma concentrations correlate with tumor burden, response to therapy, and disease progression. This study compared plasma VEGF concentrations in healthy dogs (n = 7) to dogs with lymphoma (n=6).

Key words: vascular endothelial growth factor, lymphoma, dogs

17. Лазаров, Л., Вълчев, И., **Симеонов, Р.**, Вачкова, К., Христов, Ц., Тенева, Д. и М. Вълкова. Интоксикация с охратоксин А и Зеаренон при прасета – клиничен случай. Journal of Mountain Agriculture on the Balkans, vol. 15, 6, 1299-1312, 2012.

Summary:

A spontaneous case of mixed intoxication with ochratoxin A and zearalenone in pigs is presented. The intoxication was observed at a farm with 6000 pigs near Stara Zagora, with 400 pigs weighing over 20 kg exhibiting clinical signs. The intoxication had occurred as

aresult of feeding with corn and soybean meal, kept in an environment with high humidity. The concentration of ochratoxin A in the corn was 21.47 µg/kg, and 18.81 µg/kg in the compound feed. The predominant clinical signs were catarrhal and haemorrhagic enteritis, convulsion, and impaired coordination. An increase in the blood level of liver transaminases (ASAT and ALAT) was observed in the sick as well as the clinically healthy pigs. The observed mortality rate was about 10% of the affected pigs. There were also considerable losses due to casualty slaughtering and increased feed consumption per unit of weight gain.

Key words: ochratoxin A, zearalenone, pigs

18. Simeonov, R. A retrospective study of canine mammary gland tumours. Science & Technologies, Volume IV, Number 5, 6-12, 2014.

Summary:

A pathohistological analysis of 456 specimens of spontaneous canine mammary gland tumours in the period 2000-2010, was performed at the Department of General and Clinical Pathology, Faculty of Veterinary Medicine, Trakia University, Bulgaria. The tumours were classified according to the WHO Histological Classification of Mammary Tumors of the Dog and Cat. The ratio of benign to malignant neoplasm was 44 to 56. The most frequently diagnosed epithelial tumours were tubulopapillar carcinomas (26.31 %), cystadenomas (13.15 %) and complex adenomas (4.82 %). The most frequently diagnosed mesenchymal tumours were fibromyxomas (2.85 %), fibrosarcomas (2.61 %) and osteochondromas (2.41 %).

Key words: bitch, mammary tumours, incidence.

19. Krastev, S., **Simeonov, R**. and N. Goranov. Craniomandibular osteopathy in a Bulgarian shepherd dog – a case report. Trakia Journal of Sciences, vol 13., supl. 2, 292-295, 2015.

Summary:
A 8-month-old male Bulgarian Shepherd dog was presented with bilateral hot and painful swelling of the mandible and progressively decreased joint mobility. The dog could not open its mouth, and had a one-month history of permanent salivation and difficulty to eat. The

applied treatment with corticosteroids for about 3 weeks did not improve the patient's condition. Craniomandibular osteopathy was diagnosed based on skull radiographs and histological findings from bone samples after necropsy.

Key words: Craniomandibular Osteopathy, Bulgarian Shepherd Dog, Dog.