CBOV | Colégio Brasileiro de Oftalmologistas Veterinários

XVIII CBOV

VILA GALÉ ECO RESORT DO CABO - 2023

Anais do XVIII Congresso Brasileiro de Oftalmologia Veterinária

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Vila Galé Eco Resort do Cabo de Santo Agostinho – PE
29 a 31 de março de 2023

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18º Congresso Brasileiro de Oftalmologia Veterinária (CBOV)

29, 30 e 31 de março de 2023

Vila Galé Eco Resort do Cabo de Santo Agostinho - PE

PROGRAMAÇÃO

29/03/2023

A partir das 12:00 - Entrega do material na Secretaria do Congresso

14:00 as 14:15 - Abertura: Situação atual da Oftalmologia Veterinária no Brasil: Pós-graduações e especialistas.
Dr. Fábio Brito, DVM, MSc, PhD, DCBOV, DCLOVE - Presidente do CBOV - Centro de Excelência em Oftalmologia Veterinária - Recife - PE/ Faculdade Qualittas

14:15 as 15:15 - Cataract surgery: principles and guidelines.
Dr. Ralph E Hamor DVM, MSc, DACVO – University of Florida

15:15 as 16:15 - Challenges in cataract surgery
Dr. Ralph E Hamor DVM, MSc, DACVO – University of Florida

16:15 as 16:30 Perguntas
16:30 as 17:00 Coffee break – Visita aos expositores

17h as 18h - Techniques and application of suture lens use in dogs: is it really worth it
Dr. Ralph E Hamor DVM, MSc, DACVO – University of Florida

18:15 as 19:15 - Mesa redonda - cirurgia de catarata – Palestrantes brasileiros (10 minutos cada)

1. Ruptura de cápsula posterior: O que devo fazer?
Dr. João Leandro Vera Chiurciu DVM, MSc, PhD, DCBOV, DCLOVE – PetVision -São Paulo - SP/ Faculdade Qualittas

2. Técnicas de fratura: Qual devo utilizar?
Dr. Tarcísio Perroni de Oliveira, DVM, Esp. – Clinica Vida Animal - Olimpia-SP)

3. Cirurgia de Catarata em pacientes com diálise zonular: que cuidado devo ter?
Dr. João Alfredo Kleiner DVM, MSc, – VetWeb - Curitiba-PR

4. Complicações Intra-Operatórias: Manejo e Prevenção – Palestrante:
Dr. Fábio Luiz da Cunha Brito DVM, MSc, PhD, DCBOV, DCLOVE – Centro de Excelência em Oftalmologia Veterinária - Recife - PE/ Faculdade Qualittas)

5. Complicações Pós-Operatórias: Manejo e Prevenção - Palestrante:
Dra. Angélica de Mendonça Vaz Safatle DVM, MSc, PhD, DCBOV – VetMasters - São Paulo - SP.

19:15 as 19:50 - Perguntas

20:00 - Abertura Oficial do XVIII Congresso Brasileiro de Oftalmologia Veterinária
20:30 - Coquetel de Abertura

30/03/2023
Manhã

09:00 as 12:00 - Apresentação oral de trabalhos (15 minutos cada)
Moderadoras: Dra. Daniela N. Cremonini e Dra. Ana Letícia G. Souza

9:00-9:15h - Fractal Dimension in the Evaluation of Palpebral Conjunctiva after Treatment with Topical Mesenchymal Stem Cells in Dogs with Keratoconjunctivitis Sicca
Profa. Dra. Silvia Franco Andrade, DVM, MSc, PhD

9:15-9:30h - Comparative Study between Osa-Vet® and Strip Tests in Brachycephalic Healthy Dogs and With Keratoconjunctivitis Sicca
Jéssica Naiara Voitena, DVM

9:30-9:45h - Development and Evaluation of the Use of an Ocular Image Analyzer Application in the Quantification of Ocular Surface Lesions: A Pilot Study
Tatiane O. Campagnoli Marinho, DVM

9:45-10:00h - New Surgical Approach for the Treatment of the Third Eyelid Gland Prolapse in Dogs
Luiz Fernando Lucas Ferreira, DVM, MSc, PhD

10:00h - 10:30h - Visita aos expositores

10:30-10:45h - Surgeon's Perception of a New Intraocular Lens Model for Dogs: A Multicenter Study
Prof. Dr. Fábio Luiz da Cunha Brito, DVM, MSc, PhD, DCBOV, DCLOVE – Centro de Excelência em Oftalmologia Veterinária - Recife - PE/ Faculdade Qualittas)

10:45-11:00h - Expression Of mRNAs and miRNAs in Dog Lenses with Immature and Mature Cataracts
Prof. Dr. Alexandre Lima de Andrade , DVM, MSc, PhD, DCBOV - UNESP-Araçatuba/SP

11:00-11:15h - Canine Vogt-Koyanagi-Harada-Like Syndrome in Two Cavalier King Charles Spaniel Dogs
Profa. Dra. Angélica de Mendonça Vaz Safatle, DVM, MSc, PhD, DCBOV – VetMasters - São Paulo - SP

11:15-11:30h - Seasonality of the Conjunctival Microbiota of Bovines from a Microregion in Midwestern Brazil
Nathalie Moro Bassil Dower, DVM, MSc, PhD

11:30-11:45h - Ophthalmic Findings in *Atelerix albiventris*
Manuella Oliveira Borges de Sampaio, DVM, MSc

11:45-12:00h - Development of an Ex Vivo Experimental Model for Equine Fungal Keratitis
Maíra Haase Pacheco, DVM

12:00 as 14:00 - Almoço

13:00 as 14:00 - Apresentação de Pôsteres dos Trabalhos científicos

30/03/2023
Tarde

14:00 as 15:00 - The role of the tear film in corneal repair.
Dr. Brian C Leonard, DVM, PhD, DACVO – UC Davis

15:00 as 16:00 - Tissue and cellular biomechanics during corneal wound injury and repair.
Dr. Brian C Leonard, DVM, PhD, DACVO – UC Davis

16:00 as 16:20 - Perguntas

16:20 as 17:00 - Coffee break – Visita aos expositores

17:00 as 17:30 - Apresentação do resultado do I Consenso - Uso da antibioticoterapia nas úlceras de córnea em cães.
Dr. Alexandre Lima de Andrade, DVM. MSc. PhD, DCBOV - UNESP-Araçatuba

17:30 as 19:30 - II Consenso: Manejo cirúrgico das úlceras: quando indicar e qual técnica utilizar.
17:30-17:45 - Úlcera indolente: ceratotomia em grade e broca de diamante: pros e contra
Palestrante: Dra. Daniela N. Cremonini, DVM, MSc, Dr., DCBOV, DCLOVE – PetVision / Faculdade Qualittas

17:45-18:00 - Vetrix: Utilização e resultados
Palestrante: Dra. Ana Carolina da Veiga Rodarte de Almeida, DVM, Dr., DCBOV – ACR Oftalmologia Veterinária

18:00-18:15 - Córnea congelada: utilização e resultados
Palestrante: Dra. Andrea Kuner, DVM, Dr., DCLOVE – RadioVet / Faculdade Qualittas

18:15-18:30 - Membrana amniótica liofilizada: utilização e resultados
Palestrante: Dr. Fábio Luiz da Cunha Brito DVM, PhD, DCBOV, DCLOVE – Centro de Excelência em Oftalmologia Veterinária/ Faculdade Qualittas

18:30-18:45 - Transposição corneoconjuntival: padrão ouro da cirurgia corneana?
Palestrante:Dra. Maria Guadalupe Sereno DVM, MSc, Dr., DCBOV, DCLOVE – PetVision / Faculdade Qualittas

18:45 as 19:45h: Perguntas
Moderador: Dra. Angélica de Mendonça Vaz Safatle DVM, PhD, DCBOV – VetMasters

31/03/2023
Tarde / Noite

13:00 as 14:00 - Apresentação de Pôsteres dos Trabalhos científicos

14:00 as 15:00 - X-HA: O Passado e o futuro do ácido hialurônico reticulado e suas vantagens na oftalmologia
Dr. DJ Hauessler Jr, DVM, MSc, DACVO

15:00 as 15:15 - Perguntas

15:15 as 16:15 - Surgical approaches to the anterior segment in dogs and cats: part I.
Dr. Enry Garcia da Silva DVM, MSc, DACVO

16:15 as 16:30 - Perguntas

16:30 as 17:15 - Coffee break – Visita aos expositores

17:15 as 18:15 - Surgical approaches to the anterior segment in dogs and cats: part II.
Dr. Enry Garcia da Silva DVM, MSc, DACVO

18:15 as 18:30 - Perguntas

18:30 as 19:30 - Future perspectives for corneal ulcer repair.
Dr. Brian C Leonard, DVM, PhD, DACVO – UC Davis

19:30 as 19:40 - Perguntas

19:40 as 20:00 - Homenagem aos Membros Eméritos
Encerramento do Congresso (Premiação dos 3 melhores trabalhos científicos)

20:30 - Festa de Encerramento

SUMÁRIO

AMYLOIDOSIS IN THE THIRD EYELID OF A YACARE CAIMAN (CAIMAN YACARE) - CASE REPORT.

Karine K. Rezende[1]
Ana Carolina V. Rodarte-Almeida[2]*
Fernanda V. Mergulhão[3]
Juliana Werner [4]
Adriana Ventura[5]

ABSTRACT

Purpose: Amyloidosis is a disease caused by the accumulation of fibrous protein (amyloid) that is rigid with unbranched fibrils. The condition may be chronic and associated with complications secondary to infections. Amyloidosis has not been previously reported in the alligator. This study aims to report a case of ocular amyloidosis in a yacare caiman Case report: An adult, male yacare caiman raised in captivity at the Brasília Zoo, was examined having reddened masses in both eyes as the chief complaint. After a manual contention, the eye exam was performed, antibiogram end culture test, and an incisional biopsy was made. Results: The Schirmer tear test values were 15 mm/min OD and 12 mm/min OS. The IOP was measured via rebound tonometry (Tonovet Plus ®, Icare), were 16 mmHg in OD, 13 mmHg in the OS, fluorescein stain retention was negative. Slit-lamp biomicroscopy (PSL Classic® Portable Slit Lamp, Keeler Company,) revealed a circular reddish masses in the palpebral conjunctiva of the third eyelid, in both eyes and no anterior segment abnormalities OU. After topical anesthesia an incisional biopsy was performed, revealing the presence of deposition of amorphous, homogeneous and eosinophilic material, compatible with a diagnosis of amyloidosis. Special staining for amyloid (crystal violet) was made, which resulted partially positive in the eosinophilic material described. Conjunctiva exhibiting, diffused deposition of material morphologically compatible with amyloid. The culture revealed pseudomonas contamination. Conclusion: This is the first report in the literature of amyloidosis in the conjunctiva of the third eyelid in the yacare caiman (Caiman yacare). After performing the biopsy, there was no recurrence of the condition.

Keywords: Alligator, eye, chronic inflammation.

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ANTERIOR UVEITIS BY *Toxoplasma gondii* IN A DOMESTIC CAT – CASE REPORT

Carolina B. Barbosa[1]*
Antônio F. F. Wouk[2]

ABSTRACT

PURPOSE: Uveitis is the main ocular condition in felines, and may have numerous etiologies, such as infectious, non-infectious and idiopathic. Domestic cats are definitive hosts of *Toxoplasma gondii* and rarely develop clinical disease when compared to the infection rate. Immunosuppressed cats and those with concomitant viral diseases usually suffer from the disease. Clinical signs are variable, from anorexia to neurological signs. In the eyes, anterior, posterior, or panuveitis may occur. CASE REPORT: Domestic cat, 1 year old, mixed breed, neutered but with aggressive behavior and marking territory, with a complete vaccination schedule and dewormed. History of unilateral corneal opacity, presenting keratic precipitates, rubeosis iridis, miosis and unilateral tearing. Treatment with topical anti-inflammatory and mydriatic was instituted. Complementary blood tests and PCR for toxoplasmosis, feline viral leukemia, feline viral immunodeficiency and coronavirus were required. Abdominal and ocular ultrasound were performed to complement the diagnosis. RESULTS: PCR for toxoplasmosis was positive, and viral diseases, urinary tract infection and mycoplasmosis were ruled out. With the diagnosis of toxoplasmosis, the patient received clindamycin 5mg/kg/VO/BID/30 days, with complete cure of uveitis. As a sequel, a cataract secondary to uveitis was diagnosed. CONCLUSION: Uveitis is a condition that, due to its diversity of etiologies, requires further investigation through complementary exams. Toxoplasmosis should be investigated, even in young patients who are healthy, since they can be carriers and present episodes of transient immunosuppression, which triggers the reactivation of the protozoan. Clindamycin remains an effective therapy for toxoplasmosis in cats.
Keywords: uveitis, *Toxoplasma gondii*, domestic cats

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ASYMMETRIC BILATERAL MANIFESTATION OF PRESUMPTIVE OCULAR GRANULOMATOUS MENINGOENCEPHALITIS IN A FRENCH BULLDOG: CASE REPORT.

Eric O. B. Momesso[1]*
Cristiane M. Baruffaldi[1]

ABSTRACT

Purpose: Granulomatous Meningoencephalitis (GME) is an inflammatory and idiopathic disease of the central nervous system (CNS). GME occurs in three forms: Disseminated; Focal; and Ocular. The aim is to report a case of asymmetric bilateral manifestation of Ocular GME in a French bulldog. Case report: A 2 years and 10 months old, male French Bulldog was evalueted at the IBOEV Clinic. During the ophthalmic evaluation, the patient presented exophthalmos, intense chemosis, unresponsive mydriasis, menace response and negative dazzle reflex in OS and normal parameters in OD. Funduscopy of the OS revealed papilledema and optic neuritis also was suspected, which was confirmed by ocular ultrasound and did not respond to treatment. After 3 months, the patient returned with blindness in the OD, presenting the same ocular changes that the OS had presented. The patient was forwarded for magnetic resonance imaging (MRI), cerebrospinal fluid (CSF) collection and analysis. Results: CSF analysis revealed a sample composed of 80% of lymphocytes and 20% of typical neutrophils with absence of mitosis figures, phagocytic activity and bacteria, density of 1016 and protein value of 0.6g/L. Clinical signs associated with elevated CSF density and protein values, mixed pleocytosis, negative CSF qPCR tests for infectious neurological diseases, and unaltered skull MRI confirm a presumptive diagnosis of ocular GME. Conclusion: The ocular form of GME is an uncommon abnormality that affects the optic nerve of young dogs causing acute blindness. This is the first case report of an asymmetric bilateral manifestation of the disease.

Key-words: Optic neuritis, canine, blindness, idiopathic.

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BILATERAL AUTOIMMUNE BLEPHARITIS DIAGNOSED AS DISCOID LUPUS.

Elisabete L. Coppola[1]*
Kristher Robleto[1]
Renan Schiebel[1]

ABSTRACT

Purpose: to describe a case of bilateral autoimmune blepharitis diagnosed as discoid lupus. Case report: a ten-year-old cocker male dog was seen in a private clinic in the city of Rio de Janeiro presenting recurrent periocular dermatitis. An ophthalmologic examination was performed and revealed erythematous and ulcerative lesions. Skin scraping was performed and no infectious agents were observed in the sample. The animal was submitted to an anesthetic procedure and a skin fragment was removed from the nasal canthus and lateral canthus of the left eye with a 3.0mm dermatological punch. The sample was sent to histopathology. Result: In histopathological analysis the epithelium showed areas of hyperplasia, dermis with severe inflammatory infiltrate composed of banded lymphocytes and the presence of incontinentia pigmenti was noted. The histopathological findings were compatible with aseptic lymphocytic dermatitis, thus being able to consider discoid lupus. Topical treatment was instituted with cyclosporine 1% every twelve hours, and oral administration of prednisolone at a dose of 1mg/kg every twenty-four hours until the lesions closed. The dose was gradually reduced during three weeks, until total withdrawal of the medication. Conclusion: discoid lupus has a relatively low casuistry in the clinical routine, making it necessary to include it as a differential diagnosis in cases of blepharitis.

Key-words: blepharitis, autoimmune, dog, histopathology.

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BILATERAL KERATITIS IN LEOPARD GECKO (*Euriblepharis macularius*)

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Jeferson Pires[3]
Andrea Kuner[4]
Rafael F. Nudelman[5]
Isabela P. Bastos[6]

ABSTRACT

Purpose: To describe a case of bilateral keratitis in a leopard gecko secondary to skin retention in the molt due to mismanagement. Case report: A seven month old female gecko (Euriblepharis macularius) was adopted with dysecdysis, apathy, inappetence, dehydration and both eyes with blepharospasm, mucoid secretion and corneal opacity. Fluorescein test revealed bilateral corneal integrity and severe opacity prevented evaluation of other ophthalmic structures. Treatment with Tobramycin QID, Acetylcysteine QID, Sodium Hyaluronate 0.2% QID and immersion bath with warm water BID for 15 days was instituted. Results: After habitat optimization with heating of 70-90 degrees and humidity adjustment, the patient was already more active, eating and performing the complete skin change. Ocular irritation and discomfort was caused by the accumulation of keratin and stratified squamous epithelium in the conjunctival fornix and corneal surface secondary to dysecdysis. This adhered material was controlled using Acetylcysteine, Sodium Hyaluronate 0.2% and a warm immersion bath that helped soften and loosen this tissue. This retention can cause irritation and predispose to corneal lesions and bacterial infections, for this reason antibiotic treatment was instituted. Conclusion: Species within the Eublepharis family have eyelids and may have corneal and conjunctival irritation from keratin accumulation in these regions in cases of dysecdysis. If these animals do not have food, adequate facilities and correct management of temperature and humidity, they can present dysecdysis and ocular involvement that can progress to ulcerative keratitis and loss of vision.

Key-words: reptile, dysecdysis, management.

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CALCULATING THE DIOPTRIC POWER FOR ARTIFICAL INTRAOCULAR LENS IN MANED WOLVES

(*Chrisocyon brachyurus* – Illiger, 1815)

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Antonio C. L. Rodrigues[1]

ABSTRACT

Purpose: The aim of this study was to determine the dioptric power (D) of the intraocular lens (IOL) in maned wolves. To our knowledge, this is the first study described on the largest canid of South America, vulnerable to extinction. Thus, the importance of the vision for the survival of the species is highlighted. Methods: Thirteen healthy animals (26 eyes) were evaluated, free-living and captive, adults (1-8 years), four males, and seven females, with an average weight of 25kg. The wolves underwent dissociative anesthesia, associating ketamine (10mg/kg/IM) and midazolam (0,5mg/kg/IM). The following ophthalmological tests performed were: ultrasound mode A (Echoscan US-800 Nidek, USA), keratometry (Keratometer 500 Nidek, USA), and measurement of limbo-limbo distance, which allowed the calculation of the IOL dioptric power using the software Holladay IOL Consultant®, enabling a diopter value for an intraocular implant after a facectomy. The results were statistically evaluated by comparing the eyes laterality, sex, and the formulas used. Results: Values (mean and standard deviation) of the ophthalmological tests were obtained: limbo-limbo distance 18.08 ±1,32mm; axial length 21.04 ± 0,55mm and anterior chamber length 4.63±0.33mm. Ketarometry was 36.28 ± 1.51D on the flat axis, 38.03±1.37D on the curved axis, and 37.21±1.32D as general average. The formulas evaluated and their IOL power was: SRK/T 34.04±1.66D; Hoffer Q 36.31±1.83D; Holladay I 35.42±1.88D and Holladay II 35.00±1.65D. No differences were observed considering eye laterality, sex, and formulas (P>0.05). Conclusions: The study provided the dioptric power values of the intraocular lens in maned wolves, a specie vulnerable to extinction.

Key-words: biometry, cataract, IOL, canid.

Approval of the Ethics Committee for the Use of Animals in Research (CEUA): Protocol nº 150/2015/SISBIO (registration number 6412281; Number 55294-1).

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CANINE CORNEAL GRAFTING FOR THE TREATMENT OF FULL-THICKNESS CORNEAL DEFECT IN A CAT– CASE REPORT

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Ivan R. M. Pádua[1]
Paola C. Moraes[1]
José L. Laus[1]

ABSTRACT

PURPOSE: To describe the use of a dog corneal graft for repair of a feline corneal perforation. CASE REPORT: a nine-year-old female Persian cat was attended to with a poorly treated melting ulcer. Despite the contamination improvement, the presence of a fibrovascular ring with exposure of Descemet's membrane was noted, leading to subsequent ocular perforation. Therefore, a penetrating corneal transplant was performed. The canine eye with the donor cornea was kept in a humid chamber with gauze soaked in 0.3% tobramycin for 20 hours. During surgery, the perforated region and the area of fibrosis were removed. After measuring the corneal defect and considering the additive effect of debridement on size, a sterile skin biopsy punch was used to delineate the donor site. Subsequently, the graft was sutured into a previously debrided and measured ulcer bed with a simple interrupted suture pattern using a 9-0 nylon and the anterior chamber was stabilized with an viscosurgical device. Postoperatively the patient received topical and systemic antibiotics and anti-inflammatory drugs (dexamethasone 0.1%, neomycin 0.35% and polymyxin B sulfate 6000 IU and tobramycin 0.3%). Cyclosporine 0.2% was prescribed twice a day for 6 months. RESULTS: Thirty days after keratoplasty, the patient became visual and without signs of discomfort, however with a moderate degree of vascularization and corneal edema, which improved after one year of follow-up. CONCLUSION: Corneal grafts can be considered as a tectonic support in selected cases of perforated corneal ulcerations. In this case, the graft resulted in good corneal transparency.

Key-words: corneal transplantation, microsurgery, veterinary ophthalmology, xenograft

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CANINE VOGT-KOYANAGI-HARADA-LIKE SYNDROME IN TWO CAVALIER KING CHARLES SPANIEL DOGS

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Angélica M.V. Safatle[2]

ABSTRACT

Purpose: Uveodermatologic syndrome (UDS) is an autoimmune disease that attacks melanocytes. It involves various organs such as the skin, hair follicle, eyes, ears and meninges. This paper aims to report two cases of cavalier king charles spaniel dogs with UDS treated with or without systemic drugs, showing the effectiveness of oral corticosteroids and immunosuppressants compared to topical medications only. Case report: Two case studies of cavalier king charles spaniel companion dogs with UDS signs. A 4-year-old female with uveitis, low visual acuity and onset of lip depigmentation underwent oral immunosuppressive treatment in addition to topical and systemic corticosteroid therapy. A six-year-old male with uveitis and vision loss was treated only with topical medications, as the use of oral corticosteroids caused liver damage, making systemic treatment impossible. Results: Systemic corticosteroids and immunosuppressants treatment was successful in recovering vision and lip repigmentation within fifteen days. On the other hand, the patient whose treatment was exclusively topical had ocular atrophy and total depigmentation of the muzzle and all mucocutaneous junctions. The poliosis evolved months later to the entire head and most of the ears. Conclusion: General condition of the patient directly influences the progression of the disease, since systemic changes may contraindicate the use of essential drugs necessary for the remission of symptoms. In addition, this study reinforces that, although there are breeds more predisposed to UDS, any dog can develop the disease, so it should be considered as a differential of uveitis regardless of breed.

Key-words: vogt, uveitis, poliosis, depigmentation, cavalier

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CASE REPORT: MORGAGNIAN CATARACT ASSOCIATED WITH RETINAL DETTACHMENT IN A GIANT ANTEATER (MYRMECOPHAGA TRIDACTYLA)

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ABSTRACT

Purpose: All animals from the superorder Xenarthra are under legislative protection. It's mentioned in studies that among 200 diseases identified in 103 anteaters submitted to necropsy, only one had ocular involvement. The objective is to describe the macroscopic and ultrasonographic aspects of a case of hypermature resorption cataract (Morgagnian cataract) associated with retinal detachment in a Myrmecophaga tridactyla. Case Report: A two-year-old female giant anteater was admitted to the Veterinary Hospital of the Federal University of Paraná (HV-UFPR) for a therapeutic ovariohysterectomy surgical procedure. During general anesthesia both eyes were examined. Results: On complete ophthalmic examination, Morgagnian cataract was observed in the right eye (RE), characterized by irregular opacities with areas of resorption. Rebound tonometry (Tonovet) found in RE was 9 mmHg and 11 mmHg in contralateral eye (LE). The RE ultrasound showed posterior synechia, echogenicity increase in capsular and in the perinuclear region of the lens, with its volume reduced due to liquefaction and resorption of the cortex. In the posterior segment, total retinal detachment was observed. The LE showed no signs of ophthalmic changes. Conclusion: The presence of unilateral cataract associated with ipsilateral retinal detachment suggests traumatic etiology. Phacoemulsification is the gold standard surgery for cataract correction, and can be performed in wild animals in order to preserve the natural behavior of the species and avoid intraocular inflammatory disorders resulting from cataract. However, the retinal detachment observed in this report would make it impossible to recover vision with phacoemulsification.

Key-words: giant anteater, cataract, ocular ultrasound, wild animal ophthalmology.

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CATARACT SURGERY IN A CURURU TOAD (*Rhinela icterica*) – CASE REPORT

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ABSTRACT

Purpose: To describe surgical technique, postoperative complications, and visual outcome in a cururu toad (Rhinela icterica) submitted to cataract surgery. Case report: An adult, male cururu toad was captured after a car runover with spinal complications and pulmonary hemorrhage. On admission an immature cataract in the right eye was observed along with difficulty in seizing food. After a period of four months necessary for systemic condition stabilization, the patient underwent a new ophthalmic evaluation and cataract evolution was noted along with signs of intense uveitis. Cataract surgery without an IOL placement was planned. After general anesthesia and surgical field preparation a clear cornea tunneled incision in two planes with a 2.8mm scalpel blade was performed. Maintenance of the anterior chamber was achieved with methylcellulose 2%. The extensive fibrin was manually removed with the aid of Vannas scissors. Continuous circular capsulorrexis and unimanual phacoemulsification for 2 minutes at 70% power, followed by irrigation and aspiration were as usual. TPA 25 mcg intracameral was placed at the end of the procedure. Corneal suture with 10-0 nylon was in two simple stitches. Results: Due to the presence of uveitis and the difficulty in removing the preexisting fibrin, the patient presented marked myosis and some areas of posterior sinechia in the postoperative period, delaying immediate visual recovery. A topical longterm corticosteroid has been included for best results. Conclusion: Phacoemulsification can be an effective method for correction of cataracts in cururu toad. Despite the inflammatory complications the surgical and anesthethic protocols were considered successful.
Key-words: phacoemulsification, lenticular opacity, amphibians.

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CATARACT SURGERY IN TWO PENGUINS (*Spheniscus magellanicus*) – CASE REPORT

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ABSTRACT

Purpose: To describe surgical technique, postoperative complications, and visual outcome in two Magellanic penguins (Spheniscus magellanicus) after phacoemulsification surgery. Case Report: Two juvenile individuals rescued by the Beach Monitoring Program of Santos Basin of Ipec and Gremar were submitted to a complete ophthalmologic exam and diagnosed with cortical cataract in one eye. For visual rehabilitation, cataract surgery was planned and phacoemulsification through a clear cornea incision was performed. During the procedure, a fibrotic and wrinkled lens capsule was observed and a planned posterior capsulotomy performed to allow a clear visual axis after cataract removal. No IOL was placed. Postoperative treatment consisted of systemic antibiotic for 7 days, non-steroidal anti-inflammatory for 5 days and topical gatifloxacin + prednisolone QID for 21 days. The animals were kept in a dry cage for 15 days. Results: Because cortical material was relatively soft, phacoemulsification time was relatively short (about 90 seconds) in both cases, which contributed to a reduced postoperative period and minimal intraocular inflammation. Signs of vision were present 7 days after the procedure (improvement in tracking and feeding behavior). Release into nature was possible 23 days after the surgical procedure. Conclusions: Since the release of rescued animals with vision loss decreases its chances of survival, even in cases of unilateral vision loss, euthanasia or placement in permanent confinement is a common, but not ideal, outcome for these animals. With phacoemulsification surgery, the patient presented visual improvement and was able to be released.

Key-words: phacoemulsification, birds, lenticular opacity.

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CATARACT SURGERY USING A NEW INTRAOCULAR LENS FOR DOGS MADE IN BRAZIL, RETROSPECTIVE REPORT.

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ABSTRACT

Purpose: Cataracts are the main cause of vision loss in dogs and the only treatment is surgery. The replacement of the lens with an artificial lens is recommended for a better vision recovery. A new lens made by VIZoo, Brazil, IOVET, was tested in 50 completely blind dogs, 10 schnauzer (age of 7y and 9y) 20 mongrel dogs (age of 4y – 7y – 10y – 11y), 10 lhasa-apso (age of 4y and 6y) and 10 maltese (age of 9y and 10y). All dogs presented mature bilateral cataract, the mean pre surgical IOP were 15 mm/Hg resulting in 100 surgeries. Methods: IOVET is a one piece, four haptics, foldable, +41 D lens developed for dogs. Patients were subjected to bilateral surgery after approval in total eye and pre surgical exams. Phacoemulsification was performed and IOVET was placed in the capsular bag, through a clear cornea 2,4 mm incision, sutureless. Post-surgical medication were eye drops (VIGAMOX) TID during 10 days, (CETROLAC and PREDFORT), TID, BID and SID in a ten days scale Results: The average phaco ultrasound time was 2.27 minutes. Lens folding and injection went smoothly. On the third day follow up exam, 80% of the patients presented slight uveitis. On the tenth day, all eyes were clear and functional, and medium IOP was 19 mm/Hg. After 30 days, all dogs lived regular lives, playing, eating better and no obstacle bumping. Conclusions: Cataract surgery using IOVET promoted vison recovery in all dogs resulting in better quality of life.

Key-words: cataract, surgery, dog, intraocular lens

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CHONDROBLASTIC OSTEOSARCOMA PROPTOSIS IN A CAT

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ABSTRACT

PURPOSE: Ocular proptosis is one of the most common clinical manifestations of orbital disease and usually results from an inflammatory or neoplastic process that occupies the orbital space and narrows the orbital cavity. Mandibular tumors can cause proptosis and primary bone tumors are uncommon in cats, but osteosarcoma is the most prevalent. The objective of this paper is to report a case of a cat with proptosis caused by chondroblastic osteosarcoma. CASE REPORT: A 12-year-old, domestic short-haired neutered female cat, was examined with unilateral ocular proptosis. Ocular ultrasound, tomography and skull radiography were performed. The animal was euthanized, due to the worsening of the general condition and economic limitations to follow the treatment. Subsequently, necropsy and histopathology were performed. RESULTS: The necropsy revealed a lobulated mass adhered to the vertical branch of the left mandible, pressing the eyeball, and the histopathology revealed proliferation of cells arranged in disorganized bundles, permeated by multiple foci of chondroid tissue and bone beams, characterizing chondroblastic osteosarcoma. CONCLUSION: Although osteosarcoma is the most common primary bone neoplasm in cats, these tumors still account for only 1% of the malignant processes that affect felines, and should be considered as a differential diagnosis in cases of ocular proptosis in this species.
KEY WORDS: proptosis, feline, chondroblastic osteosarcoma

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CLINICAL ASSESSMENT OF HIDRODISSECTION TECHNIQUE FOR CREATING CONJUNCTIVAL GRAFTS

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ABSTRACT

PURPOSE: Conjunctival hydrodissection is a minimally invasive procedure consisting of injecting a liquid in an anatomical space to help the dissection process during surgery. The objective of the present work was to evaluate the efficiency of the hydrodissection during the confection of conjunctival grafts in dogs. METHODS: 20 eyes of 10 healthy dogs were studied and divided into two groups. In group 1 the conjunctival flap was made using the traditional technique of divulsion and in group 2 the flap was produced by the hydrodissection technique which consisted in the subconjunctival injection of 0,7 ml of 0,9% sodium chloride before surgical divulsion. The surgical time, degree of hemorrhage, ease of handling, the occurrence of blepharospasm, hyperemia, conjunctival edema and the healing aspect of the conjunctiva were assessed. Fragments of conjunctiva were collected in searching of the tenon capsule. RESULTS: The use of hydrodissection technique facilitated the conjunctiva divulsion. No statistical differences were observed between the groups in the parameters used. The tenon capsule were not identified in the samples. CONCLUSION: The hydrodissection technique is an easy way to execute the surgical technique and optimizes conjunctival grafting. The use of hydrodissection was as effective as the traditional technique in creating conjunctival grafts, being easier to use especially by new ophthalmologists. Further studies are needed to complement this study.
Key words: conjunctival flaps, corneal ulcers, Tenon capsule

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COMPARATIVE STUDY BETWEEN OSA-VET® AND STRIP TESTS IN BRACHYCEPHALIC HEALTHY DOGS AND WITH KERATOCONJUNCTIVITIS SICCA

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ABSTRACT

Purpose: Keratoconjunctivitis sicca has been one of the most common diseases in brachycephalic breeds. Several tests are performed in these patients in order to evaluate the quantity and quality of the tear film. The purpose was to compare the correlation of the OSA-Vet® device with conventional strip tests in the evaluation of patients with and without keratoconjunctivitis sicca. Methods: Forty-five brachycephalic dogs divided into 4 groups: G1: dogs with STT 0-5 mm/min; G2: STT 6 - 10 mm/min; G3: STT 11 - 14 mm/min; G4: STT 15 to 25 mm/min were evaluated. All patients underwent ophthalmologic evaluation in this order: evaluation with OSA-Vet® (non-invasive tear film breakup time (NIBUT) and meniscometry), meniscometry (I-tear® test), Schirmer Tear Test-1 (STT-1), ophthalmologic evaluation with slit-lamp biomicroscope and fluorescein tear film breakup time (BUT). Statistical analyses on quantitative data using ANOVA and Pearson Correlation were performed. Results: The correlation of conventional tests compared to OSA-Vet® was shown to be poor, except between NIBUT with MAS in G2, with strong correlation (r=0.925). In the comparison between NIBUT with BUT in G3 the correlation was moderate (r=0.547) as well as STT-1 with I-tear in G2 (r=0.416) but the regression coefficient was low in both, 29.9% and 17.3% respectively. Conclusion: The study showed that it is necessary to obtain standard values for the OSA-Vet, since there is no correlation with conventional tests already standardized.

Key-words: Meniscometry, Schirmer Tear Test, Breakup time

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CONGENITAL ORBITAL CYST IN A COCKER SPANIEL DOG

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ABSTRACT

Purpose: Congenital anomalies are developmental disorders detected in birth. Congenital orbital cyst is a rare condition and with non-determined etiology that leads to failure in the ocular globe development, turning the orbit devoid of globe and filled with cystic fluid, while others ocular adnexal structures are normally developed. Case report: A 4-years-old Cocker Spaniel dog was attended presenting an orbital mass in right side of the face, present since birth. Results: Ocular ultrasonography, cranial radiography and cytology of the orbital content were performed. Ultrasonography revealed the presence of cystic cavity filled with anechoic content, with no evidence of any globe structure. Radiography revealed increased radiopacity and volume in soft tissues of the right orbit; cytology of the orbital content revealed moderate cellularity with numerous epithelial cells immersed in a mucous like secretion with presence of cholesterol crystals, suggesting a benign cystic formation. The Results allowed the characterization of the lesion as a congenital orbital cyst. Conclusion: Complementary exams are essential to achieve the characterization and accurate diagnosis of lesions, so the right treatment can be indicated. In the case reported, surgery to the cyst excision was declined by the owner, once its presence did not interfere in that individual welfare.
Key-words: Ocular embryology, congenital malformation, ocular ultrasonography.

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CONJUNCTIVAL BACTERIAL PROFILE AND ANTIBIOTIC SENSITIVITY IN INDOOR OR OUTDOOR HOUSED HORSES IN MIDWESTERN BRAZIL: PILOT STUDY

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ABSTRACT

PURPOSE. This study aimed to assess the main bacteria present in the conjunctival fornix, and its antibiotic sensitivity in horses, housed indoor or outdoor, in midwestern Brazil. METHODS. The conjunctival fornix of 12 horses, (5 indoor, and 8 outdoor) were sampled. Bacterial strains were isolated by routine bacteriological methods, and antibiotic susceptibility was determined by diffusion disc test. RESULTS. A total of 9 bacterial genera were identified. Escherichia coli was the most prevalent agent in horses housed indoor and outdoor. In indoor housed horses, gram-negative (E. coli and Acinetobacter spp.) and gram-positive bacteria (Staphylococcus aureus and Enterococcus spp.) were equally isolated. However, despite the presence of S. aureus in one horse, the remaining isolated bacteria in outdoor housed horses consisted in gram-negative agents such as E. coli, Acinetobacter spp., Citrobacter spp., Klebsiela spp., Pseudomonas spp., Acinetobacter spp., Stenotrophomons spp., and Burkholderia cepacia. S. aureus was susceptible to sulfamethoxazole (Sulfa), chloramphenicol (Clo), ciprofloxacin (Cip), tobramycin (Tob), gentamicin (Gent), and penicillin (Pen). Enterococcus spp. presented sensitivity for Cip. E. coli and Klebisiella spp. showed antimicrobial sensivity to Sulfa, Clo, Cip, Tob, Gent, and resistance to penicillin (Pen). Citrobacter ssp. presented similar sensitivity to E. coli and Klebsiella spp., however, it was resistant to Cip and Pen. Acinetobacter spp presented sensitivity to Sulfa, Tob, and Gent, and resistance to Cip. Stenophomons spp., and Burkholderia cepacia were susceptible to Sulfa. CONCLUSION. E. coli was the most prevalent agent in horses housed indoor or outdoor, and among the tested antibiotics, showed resistance to penicillin.

Key-words: microbiota, equine infections, eye, environment

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CONJUNCTIVAL PAPILLOMA IN DOG

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ABSTRACT

Purpose: Characterized as proliferative lesions, conjunctival papillomas, uncommon in dogs, can be of viral or squamous origin, being diagnosed based on clinical findings and confirmed using histopathology, being squamous cell carcinoma as its main differential diagnosis. The objective of this work is to report the formation of papilloma in the bulbar conjunctiva in a dog. Case report: A nine-year-old female, canine, Shih Tzu, with a history of blepharospasm, was referred to our service. Ophthalmological examination revealed conjunctival hyperemia in the left eye and a small formation in the bulbar conjunctiva, with a "cauliflower" appearance, dark brown color and irregular edges, suggestive of neoplasia. The other ophthalmological parameters were within the normal range. Thus, a surgical procedure was recommended to resolve the alteration. Results: The neoformation was removed, an irregular fragment measuring 0.4x0.3x0.2cm, being sent for histopathological evaluation and identified as a benign neoplasm, caused by Pappilomavirus, which has tropism for submucosal membranes and skin, with transmission by direct or indirect contact. Surgical removal is the treatment of choice, however it is necessary to monitor the patients, observing if there will be a relaps. Conclusion: It is concluded, therefore, that the therapeutic and surgical measures adopted for the patient resulted in her clinical improvement, keeping her without recurrences, even five months after the procedure.

Key-words: dog, conjunctiva, neoplasm, surgery.

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CONJUNCTIVITIS BY *SPOROTHRIX* SP. IN A MALE CAT

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ABSTRACT

Purpose: Sporotrichosis is an endemic disease, mainly affecting cats and humans, being Brazil the country with the highest incidence. The most common clinical manifestations are cutaneous or systemic lesions, and ophthalmic presentations are less reported. This case report aimed to describe a case of sporotrichosis conjunctivitis in a male cat. Case report: Male cat, mixed breed, 13 years old, complaint of blepharospasm. During the ophthalmologic exam, it was observed granulomatous, ulcerated and vascularized tissue in the lower palpebral conjunctiva and intense chemosis that prevented the visualization of the cornea , anterior chamber and posterior pole of the eye. Conjunctival cytology, fungal culture and MIC evaluation were performed and itraconazole 1% ophthalmic ointment (q6h) was prescribed. After 2 weeks, a positive culture for *Sporothrix* sp., and the cytopathology resulting in the presence of pyogranulomatous inflammation with the presence of *Sporothrix* sp. confirmed the diagnosis. The treatment was itraconazole 5mg/Kg/q12h/PO, based on MIC results. Result: After two months of the association of systemic and topical itraconazole, there was total remission of the lesions. The use of only topical itraconazole was insufficient, however, it attenuated the clinical manifestation, allowing a better evaluation of the cornea and intraocular structures, supporting a better management. Cytology, culture and MIC assessment were essential for the diagnosis and positive outcome. Conclusion: This case report is a contribution with the scarce literature on veterinary ophthalmologic infection by *Sporothrix* sp., describing a successful therapeutic approach.

Keywords: fungus; endemic; ophthalmology; microbiology

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CORNEAL SPINOCELLULAR CARCINOMA TREATED WITH KERATECTOMY AND 5-FLUOROURACIL 1% EYE DROPS - CASE REPORT

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ABSTRACT

Purpose: To report a corneal squamous cell carcinoma in a canine patient, who was treated with keratectomy and 5-fluorouracil 1% eye drops (5-FU 1%). Case report: An 11-year-old female dog, mixed breed, undergoing treatment for leishmaniasis, was examined with red eyes and ocular discharge. The patient already had a diagnosis of keratoconjunctivitis sicca and was being treated with tacrolimus 0.03% eye drops. At the present time, in addition to ophthalmic conditions secondary to leishmaniasis, the patient had a pink central corneal lesion with an irregular surface, suggestive of granulation or neoformation in the left eye. The treatment of keratoconjunctivitis sicca was improved, and it was prescribed dexamethasone eye drops in the left eye. There was an improvement in the ophthalmic condition, but the neoformation in the left eye remained stable. Imprint cytology was performed, which resulted in normocellular epithelial tissue. The patient presented progressive worsening over 4 months, with increased neoformation, blepharospasm, photophobia and epiphora. An excisional biopsy was performed, through a keratectomy and covering with the third eyelid, which resulted in the diagnosis of squamous cell carcinoma, with compromised surgical margins. 5-FU 1% eye drops was prescribed for a total of 4 weeks, but with a 2-week rest period. Results: There was no recurrence of the carcinoma during the period followed up to the present report (two months). Conclusion: 5-FU 1% chemotherapy eye drops proved to be a good adjuvant therapeutic option in the treatment of corneal squamous cell carcinoma after keratectomy with compromised margins.

Key-words: Corneal neoplasm, 5-FU eye drops, chemotherapy eye drops.

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CORNEAL STROMAL SEQUESTRUM FORMATION AFTER A SCCED IN A DOG

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ABSTRACT

Purpose. Report a case of corneal sequestration in a 5-year-old Shih Tzu dog after treatment of corneal ulcer. Case Report. A Shih Tzu dog was diagnosed with a superficial ulcer with non-adhered epithelium characterizing a spontaneous chronic corneal epithelial defect (SCCED). The ulcer was treated with gatifloxacin-based eye drops, disodium EDTA 0,35% and sodium hyaluronate-based lubricant. Debridement was performed with a cotton swab and a therapeutic contact lens was placed on the cornea. After 40 days of treatment, the cornea was epithelialized, however a small central blackened area was observed on examination with a portable slit lamp. After three days, this area was larger and the animal had signs of pain and blepharospasm. No corneal vascularization or edema were observed. Results. The blackened material was removed with superficial keratectomy and sent for histopathological evaluation. A third eyelid flap was performed. Ofloxacin and sodium hyaluronate eye drops were maintained for 10 days. When the flap was removed, the cornea was completely healed. The owners have reported no recurrence. Histopathology revealed a superficial acellular stroma, and collagen lamellae appeared to have blended. Corneal epithelium over the acellular stroma was absent. The deeper stromal layers were infiltrated by inflammatory cells, predominated by neutrophils, as well as a normal keratocyte population. Evaluation of Von Kossa and PAS stains respectively revealed no evidence of fungal organisms or mineralization. Conclusion. Corneal sequestration is rare in dogs. In this report, it was possibly associated with inadequate corneal healing in a brachycephalic dog. None.

Key-words: ophthalmology, necrosis, corneal ulcer, keratectomy, canine

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CULTURE AND ANTIBIOGRAM – MAIN BACTERIA ISOLATED IN SAMPLES OF SICK EYES FROM DOGS AND CATS LIVING IN SÃO PAULO

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ABSTRACT

Purpose: This study aimed to evaluate the antimicrobial susceptibility in eyes of dogs and cats living in São Paulo - SP, when diagnosed with some secretion-producing ophthalmopathy. Methods: 22 samples were evaluated, 4 from feline and 18 from canine patients. The animals were selected according to the presence of ocular diseases, producing mucoid secretion, with or without previous antibiotic treatment. There was no age, sex or reproductive status restriction. Samples were collected from the lower conjunctival fornix with dry sterile swab, which were sent for bacterial culture. Results: Bacterial growth was positive in 77.27% of the 22 samples collected, with 17.64% being sensitive to all tested antibiotics and 82.35% showing resistance to one or more tested drugs. It was observed that 25% of the 44 antibiotics tested showed 100% sensitivity, and they were: Linezolid, Ketoxitin, Polymyxin B, Cephalothin, Cefepime, Neomycin, Minocycline, Vancomycin, Rifampicin, Ertapenem, Meropenem, Imipenem. Regarding this resistance, it was observed that 6,81% showed 100% resistance when tested, they were: Ampicillin + Sulbactam, Orbifloxacin, Ceftazidime. Conclusion: With this study it can be concluded that the more sensible antibiotics have little applicability for topical use, or are not commercially available for ophthalmic use. This could affect the effectiveness of the treatment since the availability of the systemic drug arrives in low doses in the form of ocular topical absorption. Because of the little applicability, they are presumed to appear more sensible.

Key-words: samples, drugs, bacterial, resistance, sensitivity

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DETERMINATION OF INTRAOCULAR PRESSURE AND TEAR PRODUCTION IN JURARÁ (*Kinosternon scorpioides*)

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ABSTRACT

Purpose: The aim of this work was to establish ophthalmic parameters in jurará. Methods: 20 animals took part of this study, of both sexes, between 5 to 9 years old, from Scientific Captive Breeding of *Kinosternon scorpioides* – UEMA, all animals were subjected to evaluate tear production tests by using Endodontic absorbent paper tear test (EAPPTT) and the measurement of Intraocular Pressure (IOP) by rebound tonometry (iCare – canine specie mode). Results: The standard ± deviation (SD) for IOP and EAPPTT were 15.87 ± 1.53mmHg and 10.00 ± 1.43 mm/min, respectively. To compare the eyes, according to laterality, there were not statistical differences for the tests performed, which IOP registered 15.5 ± 2.32 mmHg for the right eye (RE) and 16.15 ± 1.92 mmHg for the left eye (LE) (p=0.341338). The EAPPTT was 10.30 ± 1.61 mm/min (LE) and 9.71 ± 1.87 mm/min (LE) (p= 0.206539). Comparing the both sexes, no statistical difference was found for IOP (p = 0.770713), while for EAPPTT a statistical difference was shown related to the genders, which males recorded 10.80 ± 1.48 mm/min and females 9.20 ± 0.84 mm/min. Conclusion: The determination of parameters is an important contribution to the identification of eye injuries, favoring prevention, diagnosis and future interventions, and aid to the preservation of specie.

Key-words: Veterinary ophthalmology, tear production, rebound tonometry

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DEVELOPMENT AND EVALUATION OF THE USE OF AN OCULAR IMAGE ANALYZER APPLICATION IN THE QUANTIFICATION OF OCULAR SURFACE LESIONS: A PILOT STUDY

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ABSTRACT

Purpose: Manual methods for evaluating ocular lesions have been described in the literature to quantify the lesions, especially of the cornea. This study aims to develop and evaluate the use of a mobile application that can quantify corneal lesions in a practical and intuitive way. Methods: A mobile application called eye image analyzer was developed using the following technologies: Application: React Native, Backend: .net Core + C#, Relational Database: SQL Server, Non-Relational Database: MongoDB and Cloud: AWS or GCP. Azoulay's (2013) evaluation pattern was modified and used. The parameters evaluated by analyzing the photos were: vascularization, edema and corneal melanosis. Results: In the application the following functionalities were developed: perform the registration of the animal with its tutor; image query screen with date and percentage of the compromised areas with division of types of alteration (edema, vessels and pigments); image capture screen with option to import image from cell phone; image analysis screen with application of the method of division into quadrants and screen for issuing report in pdf. After selecting the image, it is possible to touch the areas with alterations and quantify them by sector; after selecting the areas, the percentage of the affected corneal area is automatically calculated. Conclusion: The mobile application named eye image analyzer presents itself as a new tool for quantifying corneal alterations in a practical and intuitive way.

Key-words: ocular surface, mobile application, eye image analyzer

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DEVELOPMENT OF AN *EX VIVO* EXPERIMENTAL MODEL FOR EQUINE FUNGAL KERATITIS

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ABSTRACT

Purpose: Fungal keratitis are among the leading causes of blindness and enucleation in horses. The increasing incidence, the severity and scarcity of therapeutic options make this disease a great challenge. *Ex vivo* studies are an alternative to in vivo scientific research. The aim of this study was to develop an *ex vivo* model of fungal keratitis in equine. Methods: Corneoscleral buttons (CEB) from equine, slaughtered for reasons unrelated to this study, were immediately examined, selected and stored at -20ºC. After disinfection, the inner part of the CEBs was filled with agar-agar, cornea facing up. The cornea were inoculated in triplicates with 40µL of a 106 CFU.mL-¹ inoculum solution of *Fusarium solani* (FS), *Candida albicans* (CA), *Candida glabrata* (CG), *Candida parapsilosis* (CP), *Candida tropicalis* (CT) and sterile water to negative control. After that, incubated at 35±2ºC. In addition, each strain was also evaluated for treatment with a 5% natamycin (100µL/8h/24h) eye drops, instilled after 24h of incubation. For evaluation, the CEBs were divided into groups (n = 3 for each strain): 24h growth, 48h growth and 24h treatment. Macroscopy of the infection, histology of the corneas and CFU/mL count were evaluated. Results: The average of each group: FS24h=5,16Log; FS48h=6,27Log; FSnata=3,86Log; CA24h=10,63Log, CA48h=10,85Log, CAnata=6,31Log, CG24h=10Log, CG48h=10Log, CGnata=6Log, CP24h=10,37Log, CP48h=10,78Log, CPnata=6Log, CT24h=10,82Log; CT48h=11,33Log, CTnata=5,6Log, negative controls (0 CFU). Conclusions: The proposed ex vivo method proved to be applicable for the study of infections and topical treatments for fungal keratitis caused by clinically important yeasts and filamentous.

Keywords: fung, blindness; oculomicosis, fusariosis, yeast.

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EFFECT OF SUBCONJUNCTIVAL INJECTION OF CYCLOSPORINE (SANDIMMUM) ON THE AQUEOUS TEAR FRACTION OF DOGS WITH KERATOCONJUNCTIVITIS SICCA

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ABSTRACT

Purpose: The purpose of this study was to evaluate the efficacy of subconjunctival cyclosporine on the production of the aqueous tear fraction as an alternative and/or adjuvant therapy in the treatment of dogs with keratoconjunctivitis sicca. Method: Fifteen dogs Shih-Tzu (5), Pug (3), Lhasa Apso (3), Yorkshire (2), German Spitz (1) and mongrel breed (1) were included in the study. All dogs were submitted to ophthalmic evaluation with a slit-lamp biomicroscope and Schirmer tear test (STT)-1 at all times. Dogs that had other concomitant ocular changes such as glaucoma, corneal ulcer, significant eyelid abnormalities and uveitis were excluded from this study. A volume of 0.3ml was applied by the subconjunctival route of cyclosporine at a concentration of 50mg/ml (Sandimmun®). Evaluations at the following moments were performed: before cyclosporine application (M0), 30 days (M1) and 90 days (M2) after application. For subconjunctival application, the dogs previously received instillation of 1 drop of anesthetic eye drops (Anestalcon®) in both eyes for desensitization of the ocular surface. ANOVA was used for data evaluation, followed by the T-Student test. Results: None of the animals required systemic sedation to proceed with the subconjunctival injection. The M2 STT (11.83±2.26 mm/min) was significative higher than M0 (6.86±3.00 mm/min) and MI (9.5±2.60 mm/min) ($p<0.001$). Conclusion: Despite the increase in values, they did not reach the minimum standard value; however, subconjunctival cyclosporine treatment may be an alternative in animals where the use of eye drops is not possible.
Key-words: Sandimmun, adjuvant therapy, cyclosporine, Schirmer tear test-1

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EFFECTS OF 2% DORZOLAMIDE ON EPITHELIZATION TIME AND THE EXPRESSION OF MATRIX METALLOPROTEINASE-9 IN CATS WITH EXPERIMENTALLY INDUCED CORNEAL ULCERS

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ABSTRACT

PURPOSE: to determine whether the instillation of 2% dorzolamide alters the corneal wound healing time, the clinical signs, and the levels of matrix metalloproteinase-9 (MMP-9) in the tears of cats with experimentally induced corneal ulcers.
METHODS: a total of 16 cats (8/group) were randomly assigned to receive 40 µL of 2% dorzolamide (TG) (Cloridrato de dorzolamida®, EMS, Brazil) or saline (CG), three times daily, until corneal re-epithelialization. Tears were collected at baseline, 24 and 48 h after keratectomy, and the total MMP-9 was quantified by ELISA. RESULTS: the average time to achieve corneal wound healing did not differ between groups (P=0.36) and was 65.50 ± 3.62 h in the CG and 71.00 ± 4.58 h in the TG. Twenty-four h after keratectomy the ulcerated area in CG was 3.34 mm2 larger than the one observed in the TG (P=0.04); the rest of dimensions did not differ at any time point between groups (P>0.05). Higher scores of blepharospasm were observed in TG (P=0.04). When compared with baseline (CG: 18.09±0.92; TG: 19.09±0.96 ng/mL), the levels of MMP-9 increased significantly at 24 (CG: 69.55±1.43; TG: 63.46 ± 6.20 ng/mL) and 48 h post-keratectomy (CG: 63.11±3.46; 65.26 ± 2.87 ng/mL) (P<0.001). However, differences between groups and time points were not observed, 24 and 48 h after keratectomies (P>0.05). CONCLUSIONS: this study showed that the instillation of 2% dorzolamide ophthalmic solution did not impair the corneal wound healing time and the early expression of MMP-9 in the tears of cats with experimentally induced corneal ulcers.
Key words: carbonic anhydrase inhibitor; benzalkonium chloride; ulcerative keratitis; corneal healing, glaucoma.

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ELECTROCHEMOTHERAPY IN THE TREATMENT OF PRIMARY CONJUNCTIVAL MAST CELL TUMOR IN A DOG

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ABSTRACT

PURPOSE: Mast cell tumors are poorly reported and studied in the conjunctival region. They are described in this region as benign neoplasms, without metastasis evidence and low local recurrence. The available treatment methods are numerous, being performed individually or adjuvantly. Therefore, the purpose is to report a case of primary conjunctival mast cell tumor in a dog and the isolated use of electrochemotherapy in its treatment. CASE REPORT: A 2 years old male dog, suffering from an increased conjunctival volume in the right eye, with a 1-year evolution. Ophthalmic examination showed an elongated mass, pink in color, vascularized and pigmented, in the right superior temporal bulbar conjunctiva. No changes in other ophthalmic exam parameters. Diagnosis included ocular ultrasonography and incisional biopsy. In the ocular ultrasound, a diffuse increase in retrobulbar echogenicity was observed, being the finding correlated to inflammatory or neoplastic infiltrate. Histological sections revealed, under microscopy, a malignant neoplasm invading the sampled tissue diffusely. The histopathological findings favored the diagnosis of extracutaneous mast cell tumor. As primary treatment, electrochemotherapy in the conjunctiva was instituted, performed under general anesthesia, with bleomycin being used as intravenous chemotherapy at a dose of 15UI/m2 with application of electrical pulses for 20 minutes. RESULTS: The patient was followed up for six months after the procedure, with total regression and no recurrence of the conjunctival mass. CONCLUSION: Electrochemotherapy is a highly effective local treatment of cutaneous and/or extracutaneous mast cell tumors, with antitumor efficacy comparable to standard surgical treatment.
Key-words: Mast cell tumor, conjunctiva, electrochemotherapy, dog.

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ENDOPHTHALMITIS BY Serratia sp. AFTER EXODONTICS IN A DOG, TREATED WITH INTRAVITREAL INJECTION OF ANTIBIOTIC ASSOCIATION - CASE REPORT

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ABSTRACT

PURPOSE: Bacterial endophthalmitis is a severe inflammatory process inside the eyeball, considered an ophthalmic emergency because the vision prognosis is directly related to the time between onset and treatment, often leading to blindness and enucleation. The infectious agent can affect the eye exogenously or endogenously, the latter being less frequent. *Serratia* sp. it's a bacteria that resides in the intestines, and in humans, it is highly involved in nosocomial infections. Early treatment with intravenous and intravitreal antibiotic therapy can make the visual prognosis poor. CASE REPORT: Spitz dog, 9 years old, submitted to tooth extraction, presented hypopyon, lacrimation and right uveitic glaucoma 48 hours after surgery. Topical antibiotic therapy was instituted with moxifloxacin (1drop/2h) and systemic with ceftriaxone (25mg/kg/BID/IV), analgesics, mydriatic and ocular hypotensive. With no satisfactory results within 24 hours, an intravitreal injection of vancomycin (0.2ml) associated with cephalotin (0.2ml) was performed for direct action on the focus of infection, and material was collected for culture and antibiogram. RESULTS: In the microbiological analysis, growth of bacteria *Serratia* sp., sensitive to both antibiotics used, was detected. Treatment was maintained, and the patient evolved well, with control of the infection and intraocular pressure, avoiding enucleation. CONCLUSION: The oral cavity harbors infectious agents very similar to those of the intestinal microbiota, which may explain endogenous endophthalmitis caused by Serratia sp. after dental intervention. The intravitreal injection of vancomycin associated with cephalotin is an effective rescue therapy for cases of endophthalmitis refractory to topical and systemic treatments, allowing maintenance of the ocular bulb.

Keywords: *Serratia* sp., endophthalmitis, extraction, dog, intravitreal antibiotics

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EPICORNEAL CONJUNCTIVAL MEMBRANE BILATERAL IN A RABBIT (LIONHEARD): CASE REPORT

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ABSTRACT

Purpose: Epicorneal conjunctival membrane is an exclusive affection of the rabbits, but it's not common. Known as pseudopterygium or aberrant conjunctival growth, this tissue is not adherent to the cornea, also not painful. However, its progressive centripetal growth results in corneal occlusion. The aim is to report this condition in a lion heard, and their respective surgical treatment. Case report: A six-month-old, female rabbit, lionhead dwarf breed was attended by ACR - Veterinary Ophthalmology service showing bilateral ocular opacity. The ophthalmic exam revealed whitish-pink vascular membrane, no adherent, and no painful, over 70% the cornea, covering 360° in diameter. The surgical procedure was divided into two moments. In the right eye was performed four equidistant radial incisions in the conjunctiva up to 5 mm from the limbus, then, the membrane was sutured to the bulbar conjunctiva with two simple lembert stitches (6-0 polyglactin 910) in each quadrant. The same technique was performed for the left eye, but with another suture thread (7-0 polydioxanone). Post-surgical treatment included topical administration of immunomodulatory (tacrolimus 0,03%), non-steroidal anti-inflammatory (ketorolac trometamol) and antibiotic therapy (tobramycin). Results: In the first surgery, the right eye had a corneal ulcer by trauma. Reintervention was performed, changing the suture to polydioxanone 7-0. Past fifteen days both eyes had excellent healing. After 120 days there was no recurrence. Conclusion: Pseudopterygium in rabbits is uncommon. The surgery proved to be efficient associated with topical medication. Thus, the best choice by suture thread was 7-0 polydioxanone with no recurrence after 120 days postoperatively.

Key-words: aberrant conjunctival growth, lagomorph, ophthalmology, pseudopterygium.

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EVALUATION OF INTRAOCULAR PRESSURE BEFORE AND DURING THE USE OF CHOKE COLLAR IN PITBULL DOGS

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ABSTRACT

Purpose: Ocular hypertension can occur secondary to many situations, and frequent elevations in intraocular pressure (IOP) can complicate preexistent ophthalmic conditions in which this elevation can be harmful. Use of a specific cervical collar known as "choke collar" is common in training and walking sessions of large breed dogs, where a big compression is done around the neck. This study aimed to evaluate the IOP in Pitbull dogs before and during the use of this collar. Methods: Thirteen adult healthy Pitbull dogs were evaluated. Complete ophthalmic examination and IOP measurement with rebound tonometry were performed. The dogs were maintained in standing position with a volunteer holding the leash coupled to the choke collar, and in the moment when the dog moved forward, tonometry was performed. Results: Average basal IOP for Pitbull dogs was 14.7mmHg. Average IOP using the choke collar was 28.6mmHg. Maximum increase was 28mmHg higher than the basal value. Percentage average of IOP increase using the collar was 93.8% higher than the basal value. The maximum IOP value obtained during the use of the collar was 51mmHg, meaning an increase in 215% in comparison to the basal IOP of this individual. Conclusion: According to the literature, transitory increases in IOP are able to bring negative repercussions to the ocular tissues. Based on the results, use of choke collar must be avoided in animals with history of glaucoma, after ocular or intraocular surgeries or other types of ophthalmic conditions in which transitory increase in IOP can be harmful.

Key-words: Tonometry, ocular hypertension, glaucoma

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EVERSION OF THE THIRD EYELID CARTILAGE IN A CAT: CASE REPORT

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ABSTRACT

Purpose: Eversion of the third eyelid cartilage is a rare congenital disease in cats. Usually, the cause of this condition is an abnormal curvature of its cartilage. Treatment includes the surgical resection of the everted cartilage portion. The main of this study is to report a case of eversion of third eyelid cartilage in a cat which is an unusual abnormality in this specie. This eye condition is an important differential diagnosis in the disturbance of the third eyelid. Case Report: A 2-year-old Persian cat presented conjunctival hyperemia, serous ocular discharge, and an increase in the third eyelid volume of the right eye. A thorough examination indicated a protruding volume of the everted third eyelid cartilage. The third eyelid was exteriorized and a parallel linear conjunctival incision was performed along the vertical aspect of the T-cartilage on its palpebral aspect. After blunt dissection, the abnormal cartilage segment was isolated and excised. The third eyelid was sutured with 6–0 polyglactin 910. The third eyelid returned to its correct position. The patient received topical eye drops of tobramycin, diclofenac sodium, and lubricant. Results: There was complete recovery of the third eyelid function, and the patient's eye health was preserved. Conclusion: Eversion of the third eyelid cartilage is an uncommon disease in cats, and the pathophysiology is still unknown. In this case, the patient had a complete recovery after the surgery.
Key-words: feline, nictitating membrane, congenital

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EXPRESSION OF *mRNAs* and *miRNAs* IN DOG LENSES WITH IMMATURE AND MATURE CATARACTS

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ABSTRACT

Purpose: To analyze global expression of mRNA and miRNAs in dog cataract lenses (immature and mature) compared to normal dog lenses. Methods: Fragments (5mm) of the anterior capsules (capsulorrhexis) were obtained by phacoemulsification surgery and were frozen at -80oC. Three groups were established: immature cataract, mature cataract and control lenses, each group containing 3 samples (each sample = pool of 5 lenses). Total RNA extraction was performed using the miRVANA miRNA Isolation kit (Life Tech®). Transcriptomic and microtranscriptomic analyses were performed using the Affymetrix® miRNA 4.1 Strip and the Affymetrix® Canine Gene 1.1 ST Array Strip, respectively. Results: Two canine miRNAs, cfa-miR-1307 and cfa-miR-450b, were reduced in immature cataract lenses when compared to control, however, none of their predicted mRNA targets were upregulated in the immature group, following transcriptomic analysis. No differential expression miRNAs were identified in the mature cataract lenses when compared to control. Notwithstanding, cfa-miR-212 was upregulated in mature cataract lenses in comparison to immature cataracts. Four mRNAs, predicted to be targets of the upregulated cfa-miR-212, were downregulated in immature cataracts when compared to immature cataracts. The mRNAs in mature cataracts, compared to control or to immature cataracts, enriched pathways primarily related to extracellular matrix (ECM) organization and cell adhesion. Conclusions: Progression of cataracts involve dysregulation of transcripts that mediate extracellular matrix organization and cell adhesion. Such alterations justify the inability of lens cells to perform their functions in maintaining the lens transparency, leading to their progressive opacification in the cataract in dogs.

Keywords: miRNA, mRNA cataract, dog.

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EXTRAMEDULLARY PLASMACYTOMA OF THE THIRD EYELID IN A FELINE

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ABSTRACT

Purpose: Non-cutaneous extramedullary plasmacytoma is a benign neoplasm of plasma cells, rare in cats. This study presents a case of extramedullary plasmacytoma in the third eyelid of a feline, diagnosed by histopathology and immunohistochemistry. Methods: A six-year-old male feline patient was admitted with a complaint of swelling in the third eyelid of the left eye for 10 days. In an ophthalmological examination, an increase in sessile volume, 1 centimeter, at the base of the third eyelid, conjunctival erythema, without further clinical alterations, was identified. An incisional biopsy was requested, followed by surgical excision of the third eyelid. Results: Histopathological examination indicated round cell neoplasm. Immunohistochemical study diagnosed extramedullary plasmacytoma. The patient was submitted to a surgical excision of the left third eyelid. Discussion: The most common neoplasms found in the third eyelid in cats are squamous cell carcinomas and mast cell tumors. Two previous reports of plasmacytoma were identified in the consulted literature. The diagnosis of plasmacytoma is made by histopathological and immunohistochemistry. Surgical excision of the formation with safety margins is the treatment of choice, considered effective. The present case presented a good evolution and no signs of recurrence of the formation or metastasis, in 6 months of observation. Conclusions: Plasmacytoma is a rare neoplasm in cats, and the third eyelid is the third most affected region of the eye by primary tumors in this species. Although described as rare, non-cutaneous extramedullary plasmacytoma should be considered as a differential diagnosis of round cell neoplasms, as well as of third eyelid neoplasms in cats.

Key words: plasmacytoma, third eyelid, cat, neoplasm.

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FELINE RESTRICTIVE ORBITAL MYOFIBROBLASTIC SARCOMA (FROMS) CASE REPORT

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ABSTRACT

Purpose: To describe a case of Feline Restrictive Orbital Myofibroblastic Sarcoma (FROMS). Case Report: A 9 year old neutered male cat was evaluated for lagophthalmos and chronic exposure keratitis in the left eye. Ophthalmic examination revealed upper negative retropulsion, restricted eye movement, marked episcleral congestion, and severe exposure keratitis. The cat was treated with topically administered Moxyfloxacin, Tobramycin and Sodium Hyaluronate OU and orally administered fanciclovir. US scan revealed no abnormalities. The owner refused the indication for OCT-scan and did not come back for follow up. Six months later the patient returned with the same clinical presentation on the right eye. The same topical treatment for exposure keratitis was instituted on both eyes and a conjuntival biopsy was obtained. Results: Histopathological findings revealed proliferation of mesenchymal cells, suggestive of low-grade orbital myofibroblastic sarcoma. Little improvement on the exposure keratitis was noted after 2 weeks. The case was referred to an oncologist but the owner refused the clinical options offered. Conclusions: Feline restrictive orbital myofibroblastic sarcoma (FROMS) is a progressive and malignant pathology which may affect the ocular orbital, periorbital, oral or cranial structures in cats. The diagnosis of FROMS is a combination of clinical findings, soft tissue imaging and histopathology which is necessary for definitive diagnosis. Despite treatment options prognosis is poor.
Key-words: Froms, orbital neoplasm, histopathology.

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FIRST REPORT OF CORNEAL CO-INFECTION OF *Leishmania* spp. AND MICROFILARIAE IN DOG – CASE REPORT

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ABSTRACT

Introdution: Canine visceral leishmaniasis is a parasitic zoonosis presented as an etiological agent the protozoan Leishmania spp. responsible for causing pathologic eye alterations such as blepharitis, keratoconjunctivitis sicca, conjunctivitis and keratouveitis in dogs. Microfilariae was reported as causing parasitic corneal keratitis. The present report describes a case of keratitis caused by Leishmania spp and microfilaria infection. Case report: A 9-year-old male Yorkshire dog presented blindness, blepharitis, and diffuse ocular opacity with no signs of discomfort. Intense corneal opacity did not allow intraocular examination and Schirmer tear test and intraocular pressure were within normal limits Fluorescein test was negative. Haematological exam showed no alterations and serology (ELISA) for Leishmania chagasi was negative. Ocular ultrasound examination revealed no ocular alterations. Ultrasound biomicroscopy (UBM) revealed corneal thickening and increased echogenicity of the stroma. Treatment included topical Tobramycin (3%) and Dexamethasone four times a day, but no improvement was noted. Corneal biopsy by keratectomy was performed. Result: Histopathological exam confirming granulomatous inflammation with the presence of Leishmania spp. confirmed by immunohistochemistry and microfilariae in corneal stroma causing destruction of collagen fibers. Tutors decided not carrying on with treatment. Conclusion: This is the first report of corneal co-infection of Leishmania spp. and microfilariae in a dog which triggered serious eye alterations and it emphasizes the importance of performing histopathological examinations to identify occult agents.

Key-words: Dog, Yorkshire, co-infection, microfilariae, Leishmania spp.

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FRACTAL DIMENSION IN THE EVALUATION OF PALPEBRAL CONJUNCTIVA AFTER TREATMENT WITH TOPICAL MESENCHYMAL STEM CELLS IN DOGS WITH KERATOCONJUNCTIVITIS SICCA

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ABSTRACT

Purpose: Fractal dimension (FD) analysis has been utilized in several areas of medicine as an additional mathematical and quantitative method for an image evaluation of complex and irregular structures. Keratoconjunctivitis sicca (KCS) is an immunomediated disease that affects the ocular surface. The aim of this study was to compare the FD analysis of palpebral conjunctiva biopsy in healthy dogs and those with KCS treated with topical mesenchymal stem cells (MSC). Methods: Eighty-four histological slides of the palpebral conjunctiva of normal and KCS dogs before and after topical MSC were evaluated using FD analysis calculation performed with ImageJ software and box-counting method, divided into three groups: normal control group (n = 28), MSC-0 group of treatment with MSC at the time of diagnosis of KCS (n = 28), and MSC-6 after 6 months of treatment with MSC (n = 28). Results: There was a statistically significant difference ($p < 0.05$) when the MSC-0 group (1.71 ± 0.15) was compared with the normal group (1.78 ± 0.03). The MSC-6 group (post-treatment) presented FD values like those of the normal group, with no statistical difference ($p = 0.2$). Conclusions: The FD analysis of palpebral conjunctival biopsies of the dogs treated after 6 months with topical MSCs showed values close to normal control group, suggesting a good performance of this treatment. Therefore, the fractal dimension method showed good applicability, providing an additional quantitative tool for analysis of conjunctival biopsy images of dogs with KCS.

Key-words: Fractal dimension, palpebral conjunctiva biopsy, mesenchymal stem cells, keratoconjunctivitis sicca, dogs.

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FRACTAL DIMENSION IN THE EVALUATION OF TREATMENT WITH TOPICAL TACROLIMUS ASSOCIATED OR NOT WITH ORAL SUPPLEMENTATION OF ORAL OMEGA 3 IN DIFFERENT PROPORTIONS OF EPA AND DHA IN DOGS WITH KERATOCONJUNCTIVITIS SICCA

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ABSTRACT

Purpose: Fractal dimension (FD) is a quantitative method to measure structural changes in different image types. The aim of this study was to compare the FD analysis of palpebral conjunctiva biopsy in healthy dogs and those with keratoconjunctivitis sicca (KCS) treated with topical tacrolimus (T) with or without oral omegas 3 (Ω) in different proportions of EPA and DHA. Methods: FD analysis calculation performed with ImageJ software and box-counting method of 210 histological slides of the palpebral conjunctiva of normal and KCS dogs, divided into control group (healthy eyes) and six treatment groups before (0) or after 6 months (6): Tacrolimus group (T0 and T6), Tacrolimus+ Ω (1.5 EPA: 1 DHA) (TΩA0 and TΩA6), and Tacrolimus+ Ω (1.0 EPA: 4.5 DHA) (TΩB0 and TΩB6). Results: The control group had a higher FD value than the other groups (1.84 ± 0.04), that is, a structural organization of the conjunctiva tissue, and the T0 group, the lowest value (1.66 ± 0.07). A significant difference was found between all groups ($p < 0.05$), except in the TΩA6 group (1.81 ± 0.06), that presented values closer to control group. Conclusions: The FD analysis of the palpebral conjunctiva biopsy revealed that treatment with topical tacrolimus associated with oral omega 3 supplementation showed values closer to those of healthy eyes. This suggests that this treatment was more effective to restructure the normal architecture of the palpebral conjunctiva. The FD method showed good applicability and our study confirmed that it is a useful quantitative tool for histological analysis.

Key-words: Fractal dimension, tacrolimus, omega 3, keratoconjunctivitis sicca, dogs

Approval of the Ethics Committee for the Use of Animals in Research (CEUA): Protocol nº 3901/UNOESTE.

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INCIDENCE OF SHORT-TERM INTRAOCULAR HYPERTENSION IN DOGS SUBMITTED TO PHACOEMULSIFICATION: PRELIMINARY RESULTS.

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ABSTRACT

Purpose: Cataract is a frequent disease that reduces the visual acuity in dogs, and the phacoemulsification surgery (FACO) is the treatment of choice. Postoperative success rate depends on the close follow up and the early identification of possible complications. One of them is intraocular hypertension, which can progress to glaucoma. Thus, we evaluated the incidence of this alteration in the immediate postoperative period in dogs undergoing phacoemulsification surgery. Methods: Thirty-five dogs (42 eyes) were submitted to FACO, with or without implantation of intraocular lens. Intraocular pressures (IOP) were evaluated before surgery and up to 72 hours after the FACO procedure, and IOP above 25mmHg were considered intraocular hypertension. Results: Of the 42 eyes, 6 had intraocular hypertension within 72 hours of postoperative assessment, representing 14,28%. During the 30 subsequent days, the IOPs remained within the controlled range between 3 and 20mmHg. After this period, they ranged from 5 to 14 mmHg, with continued topical therapy. No association was observed between the occurrence of intraocular hypertension and age (≥10 years) or FACO time (≥3min). Conclusion: The results presented show the importance of performing an adequate postoperative follow up with IOP measurement and establishing the appropriate treatment to control and reduce acute intraocular hypertension avoiding possible irreversible damage to vision.

Key-words: tonometry, cataract, glaucoma, cataract surgery, eyes.

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INFLUENCE OF MESALAZINE COLITIS TREATMENT ON TEAR PRODUCTION IN DOGS - REPORT OF 3 CASES

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ABSTRACT

Purpose**:** Mesalazine, a metabolite of sulphapyridine, is widely used in the treatment of colitis and has been shown to cause keratoconjunctivits sicca (KCS) in dogs. This summary aims to report 3 cases of canine KCS after the use of mesalazine for different times. Case report: The first patient (mixed breed, male, ten-years-old) had been using mesalazine for 12 months (KCS signs had started 3 months before), the second (Yorkshire, female, 1 year old) and third (Maltese, female, 15-years-old) patients used mesalazine for 3 and 1 months respectively. The first and second patients presented the Schirmer Tear Test (STT) = 0mm/min in both eyes, and STT values of the third patient were 8mm/min in the right eye (OD) and 9mm/min in the left eye (OS). The three patients showed typical signs and complications of KCS with no previous history of such disease before the use of mesalazine. Results: In all three patients, mesalazine was discontinued and they received artificial tears at least six times a day. After 120 days, the first patient's STT=0mm/min in the OD and 10mm/min in the OS. After 70 days, the second patient presented STT=9mm/min in the OD and STT=23mm/min in the OS and the third patient presented STT=17mm/min in the OD and STT=5mm/min in the OS. Conclusions: The administration of mesalazine to dogs can cause a decrease in tear production that may persist even after discontinuing its use. The importance of alerting the gastroenterologist to indicate ophthalmic follow-up for their patients is emphasized.
Key-words: 5-amninosalicylic acid, insufficient tear production, veterinary gastroenterologist, colitis, dogs.

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IRIDECTOMY AS TREATMENT IN CANINE ACUTE GLAUCOMA

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ABSTRACT

Purpose: Canine acute glaucoma still remains a challenge in veterinary ophthalmology practice. There are described many options of surgery for intraocular pression (IOP) control in refractory dogs. This report aims to demonstrate the peripheral iridectomy as an useful surgical alternative for acute glaucoma treatment. **Case report**: Six dogs underwent unilateral peripheral iridectomy after presenting elevated IOP measured using rebound tonometer (Icare®), and unresponsive to drug treatment. The surgery consists in creating a new pathway to aqueous humor and the iris incision is located at 12h. Animals' age ranged between 3 and 15 years old. The causes of high IOP included primary glaucoma (n=1), secondary glaucoma due to uveodermatologic syndrome (n=1), phacoemulsification surgery (n=3) and lens-induced uveitis (n=1). The values of IOP measured before surgery were 30, 40, 62, 28, 60 and 32 mmHg, respectively. **Results**: After the intervention, the six dogs obtained IOP between 12 and 18 mmHg and five of them with vision preservation. In two dogs, the adequate control of IOP after surgery allowed us to discontinue topical therapy. **Conclusion**: Peripheral iridectomy surgery in refractory canine glaucoma appeared to keep acceptable values of IOP in short and medium term, decreased the amount and frequency of eye drops and offered ocular comfort.

Key-words: ocular hypertension, surgery, tonometry, dog

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LABIAL COMMISSURE TRANSPOSITION IN CAT

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ABSTRACT

Purpose: This paper aims to demonstrate the transposition of the labial commissure as an option to correct a surgical defect due to the removal of a cyst, which presented reactive conjunctival epithelium in the histopathology and mixed inflammatory infiltrate associated with cystic component in the cytological analysis. Case report: A 15-year-old female feline patient was treated for a cyst in the lower eyelid of the left eye, with involvement of more than 1/3 of the palpebral extension with bulging of the inner and outer palpebral face. Its total removal was performed, and the technique used to correct the defect was the transposition of the labial commissure, which consists of performing a rotation flap using the labial commissure at the end that slides to the defect to correct it. Results: The results were satisfying, considering that the functionality of the eyelid was preserved, with no harm to the ocular structures. After two months of weekly follow-ups, no complications, such as tissue necrosis or corneal discomfort, were observed. Conclusion: The technique used is of great value for reconstruction of extensive eyelid defects, with great advantages such as eliminating the risk of trichiasis while maintaining eyelid functionality. As a disadvantage, the differentiation of the coat of the donor flap was observed.
Keywords: labial commissure transposition, lip to lid, cat

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LEISHMANIASIS BLEPHAROCONJUNCTIVITIS IN A VACCINATED PATIENT

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ABSTRACT

Purpose**:** Report the occurrence of blepharoconjunctivitis secondary to leishmaniasis in a dog that received prophylaxis for leishmaniasis. Case report: A five-year-old female Rottweiler arrived for care with a report of blepharoconjunctivitis and periocular alopecia about a year ago, protocols with antibiotics, anti-inflammatory drugs and immunosuppressants had already been used, but without success. Serology was requested for leishmaniasis, even though the patient was vaccinated annually, a biopsy of the skin of the eyelid region and bulbar conjunctiva was also done. Results: Serology was negative. In the skin biopsy, no relevant data were found, while in the conjunctiva numerous amastigote forms of *Leishmania* sp were identified. On the slide there were lymphocytes, plasma cells and occasional diffuse neutrophils. The histological section was stained with Grocott's stain, revealing the absence of fungi. In view of the result, Domperidone SID, 2 months and Allopurinol BID, 8 months, was prescribed. In the 2nd month of treatment, the patient was reassessed and there was remission of symptoms, in the 6th month she was diagnosed with Malassezia sp, and remains without clinical signs after 10 months of treatment. Conclusion: In patients with ocular symptoms, even when vaccinated against leishmaniasis, we should not fail to carry out an investigation to establish a definitive diagnosis.

Key-words: Biopsy, Integument, Amastigotes, Eyelid.

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MACROSCOPIC AND HISTOPATHOLOGICAL ASPECTS OF PERIOCULAR LESIONS IN DOGS WITH VISCERAL LEISHMANIASIS.

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ABSTRACT

Purpose: Canine Visceral Leishmaniasis (CVL) is a chronic disease, despite the systemic signs, dermatological changes are the most described. The study aimed to analyze periocular changes, including the evaluation of macroscopic and microscopic changes in positive dogs to Canine Visceral Leishmaniasis. Methods: Twenty-one mongrel dogs from Coronel Fabriciano - Minas Gerais- Brazil were studied. A complete ophthalmic examination was performed on all the animals. The CVL diagnosis was performed based on the Reaction Immunofluorescence Indirect (RIFI) and Enzyme Linked Immunosorbent Assay (ELISA). Skin fragments from the eyelid region were collected. Results: Alopecia, hypotrichosis, erythema, edema, crusts, hyperkeratosis and hyperpigmentation were the most observed macroscopic changes, being hypotrichosis and crusts the most presents followed by alopecia. The slides using an optical microscope and classified according to inflammatory infiltrate were analyzed. In this study, ulceration was the most common non- inflammatory microscopic change. The linfoplasmohistiocytic and neutrophilic cell type were the most identified types in the inflammatory infiltrate. In two animals, the presence of amastigote form of *Leishmania* sp. inside macrophages were not observed, however it was present in 19/21 (90%) of the dogs. Conclusions: Visceral Leishmania should be included in blepharitis differential diagnosis, as it presents several periocular changes and biopsy showed be the effective in the detect amastigote form of *Leishmania* sp.

Key-words: Canine visceral leishmaniasis, Periocular lesions, Clinical manifestations.

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MALIGNANT EYELID MELANOMA IN A CAPTIVE FALLOW DEER (*DAMA DAMA*): CASE REPORT

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ABSTRACT

Purpose: Eyelid melanomas have been reported in domestic animals, some wild such as squirrels, rabbits and fallow deer. In the literature, there are few cases described about eyelid tumors in animals of the Cervidae family. We aim to report a case of malignant melanoma in the eyelid of fallow deer. Case report: An adult male fallow deer, raised in captivity at the Brasília Zoo, presented a black tumor mass in the right lower eyelid. The animal showed signs of blepharospasm, and light ocular discharge in the right eye. After anesthetic restraint, the eye exam and incisional biopsy were performed. Results: The Schirmer tear test values were 22 mm/min in the right eye and 24 mm/min in the left eye. The intraocular pressure was measured using a rebound tonometry (Tonovet Plus®, for horse calibration), the values were 20 mmHg and 14 mmHg in the right and left eyes, respectively. The eye exam revealed the presence of a circular blackened tumor mass in the nasal corner of the lower right eyelid, 0.7 cm x 0.5 cm (length and width). Slit-lamp biomicroscopy showed no anterior segment abnormalities in both eyes. Two fragments of the mass were collected. The histopathology exam revealed neoplastic cells presenting round nucleus and eosinophilic cytoplasm with melanin granules. Pleomorphism, atypia and atypical mitotic figures were observed. Six months later the neoplasm severely increased, the animal had pulmonary metastasis and opted for euthanized Conclusion: Eyelid melanomas are rarely diagnosed in fallow deer and appear to have an aggressive behavior.

Key-words: Cervidae, histopathology, eye, tumor mass.

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MICROPULSE TRANSSCLERAL CYCLOPHOTOCOAGULATION IN THE TREATMENT OF CANINE GLAUCOMA

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ABSTRACT

Purpose: To report the clinical application and effectiveness of micropulse transscleral diode cyclophotocoagulation (MP-TSCP) in dogs with glaucoma. Success was defined in cases with ≤ 25 mmHg intraocular pressure (IOP). Methods: Retrospective study of 18 uncontrolled IOP dogs, with primary (12 eyes) or secondary (9 eyes) glaucoma, 3-14 years old, were treated with Fox laser 810nm MP-TSCP (duty cycle: 33.3%; laser power: 2800 mW). The same surgeon performed all procedures. After short general anesthesia, laser probe was applied to each hemisphere in a "sweeping motion" for 180 seconds, sparing the 3 and 9 o'clock positions. Topical ciprofloxacin-dexamethasone drops and sodium hyalunorate ointment were used, besides the same previous anti-glaucoma medication. Results: IOP goal was reached in 12/21 eyes (57%) and remained controlled to the present day (29-456 days post-operative). MP-TSCP was repeated in four eyes with intraocular injection of 0.2 ml gentamicin (40 mg/ml) in two of them. Among these, only one achieved success (25%). Complications that occurred in 10/21 eyes (47.6%) were neurotrophic corneal ulcers (14.3%), *rubeosis iridis* (14.3%), burn at the application site (9.5%), hyphema (4.7%) and *Phthisis bulbi* (4.7%). Amongst the unsuccessful cases (> 25 mmHg), 3/21 eyes (14.3%) led to pharmacologic destruction. Conclusion**:** MP-TSCP can be a viable alternative treatment for managing canine refractory glaucoma. Parameters such as power, duty cycle and application time could be modified in order to increase the effectiveness of the laser. Further research should be done regarding the MP-TSCP procedure associated with additional treatment and the consequences for visual acuity.

Key-words: diode laser, intraocular pressure, glaucoma, dog.

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MULTIMODAL TREATMENT FOR RECURRENT CORNEOCONJUNCTIVAL HEMANGIOSARCOMA IN A DOG – CASE REPORT.

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ABSTRACT

Purpose: Hemangiosarcoma is a malignant neoplasm that originates from vascular endothelium cells, with an infiltrative aspect in the ocular tissue. The histopathological examination is important to determine the treatment and prognosis of the disease. Surgical excision is the most indicated therapy, but due to the high rate of local recurrence, multimodal therapies with cryosurgery and topical chemotherapy should be considered. The aim of this summary is to report a case of recurrent corneoconjunctival hemangiosarcoma in a dog, where multimodal treatments were associated to reduce local recurrence. Case Report: An 8-year-old female Pointer dog was treated with hemorrhagic nodules, affecting bulbar conjunctiva, limbus and cornea, with rapid and recurrent growth. The previous histopathology report confirmed hemangiosarcoma, therefore multimodal therapy was chosen as a way to avoid immediate enucleation, with lower chances of recurrence. Lamellar keratectomy and wide-margin partial conjunctivectomy were performed, followed by local cryotherapy and topical chemotherapy with mitomycin C 0.03%. Results: Ten days after surgery, the animal showed complete reepithelialization of the cornea, consequently, two chemotherapy cycles of 28 days were performed, with an interval of 7 days between them. The animal was followed up for 4 months and showed no local or systemic complications and no local recurrence. Tumor staging was suggested, but not performed. Conclusions: The combination of surgical, cryotherapy and topical chemotherapy therapeutic modalities were effective in the treatment of ocular hemangiosarcoma and control of tumor recurrence, being an option to enucleation.

Key-words: Neoplasm, hemangiosarcoma, chemotherapy, cryosurgery, dog.

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MYCOTIC KERATITIS IN A DALMATIAN - CASE REPORT

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ABSTRACT

Purpose: Mycotic keratitis in the canine has been increasingly reported and present as either ulcerative or nonulcerative lesions. *Candida albicans* and *Aspergillus* sp are most common isolates fungi. Clinical histories may include long term antibiotic or corticosteroid therapy or previous corneal trauma. Infections with *Aspergillus* spp. are usually ulcerative in nature with extensive stromal inflammation and melting. Case report: A 13-year-old dog, dalmatian, with history of use topical antibiotics and lubricant (tobramycin and hyaluronic acid) for more than 4 months without success and indication for microsurgery, presented in the clinical-ophthalmological examination: hyperemia, serous discharge, edema and neovascularization corneal, discomfort, pruritus, blepharitis, ulcerative keratitis with loose epithelium. There was not threat response. Microbiological culture of corneal material identified the microorganisms *Bacillus* sp, coagulase-negative *Staphylococcus* and also for the fungus *Aspergillus* sp. Results: after proper treatment with topical antibiotic and antifungal (sensitive to ciprofloxacin and fluconazole) and oral antibiotics, anti-inflammatory and analgesics (enrofloxacin, meloxicam and dipyrone), there was an initial improvement in the condition. After 30 days of treatment, the patient had no more discomfort, however, there was corneal opacity and, after 60 days of topical antifungal treatment, there was an improvement in corneal opacity at medical release. Conclusion: the initial nonspecific signs of inflammation and infection indicated the need for a differential diagnosis of ulcerative keratitis. Culture and antibiogram exams, although time consuming, are of fundamental importance for the correct diagnosis and resolution of the condition.

Key-words: Mycotic keratitis, *Aspergillus* sp, dog.

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NEGATIVE PHOTOPIC RESPONSE (PhNR) IN DOGS.

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ABSTRACT

Purpose: The present work aimed to standardize a short protocol for negative photopic response (PhNR,) in dogs in the full-field electroretinogram. Methods: For this purpose, 20 eyes of 10 healthy Staffordshire Bull Terrier dogs, with an average age of one year and eight months, without consanguinity, without distinction of sex and age, were used. The exams were performed with BPM 300®, without the aid of sedatives or systemic anesthetics. During the examination, mydriatic agents (tropicamide 1%) were instilled after topical corneal anesthesia (proximetacaine 0.5%) and lubricant (methylcellulose 2%). Three monopolar electrodes were positioned, two subdermal (Ambu®, subdermal 12x0.40mm), one positioned half a centimeter from the temporal commissure (reference electrode) and the other in the interscapular region (ground electrode) and the other electrode (active) on the cornea (ERG-jet™) of the examined eye. In the PhNR assessment, a 10-minute adaptation was performed in an environment with blue light (460nm), later a single red LED light stimulus (650nm) was performed with a light intensity of 3cd.s/m^2 (Log+0.5) on a blue background.The waves were also evaluated scotopic, maximum scotopic, photopic and 30Hz flicker. Results: The average of the photopic "b / a" ratio was 6.42±1.73; the implicit times and amplitudes of the flicker (32.95±1.59 and 41.27±10.16), the "PhNR" (100.75±12.86) and the "b - PhNR" amplitudes (192.91±41.84), "Baseline - PhNR" (83.88±28.81). Conclusions: The protocol for PhNR favors a new methodology in dogs and can be used to aid the diagnosis of retinal alterations involving ganglion cells.

Key-words: electrophysiology, ganglion cells, photoreceptors, PhNR.

Approval of the Ethics Committee for the Use of Animals in Research (CEUA): Protocol nº 103/2019/UFRPE.

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NEURO-OPHTHALMIC MANIFESTATIONS OF CHONDROBLASTIC OSTEOSARCOMA IN THE SKULL OF A DOG: CASE REPORT.

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ABSTRACT

Purpose: Skull bone tumors may present with neuro-ophthalmic symptoms, depending on the topographical location. The aim is to report the neuro-ophthalmic manifestations of a dog with chondroblastic osteosarcoma in the skull. Case report: A 4 years and 5 months-old, mixed breed-male dog was seen at the IBOEV Clinic with acute blindness for 15 days. In the ophthalmic evaluation, the patient had normal IOP in both eyes, decreased direct and indirect pupillary light reflex in the OD and absent in the OS, menace response and absent dazzle reflex and normal funduscopy in both eyes. The complete blood count and biochemical profile were within the normal range for the species. The patient was referred for computed tomography (CT) of the skull due to neuro-ophthalmic clinical signs indicating pre-chiasm lesion mainly affecting OS. Results: Skull CT identified an expansive formation, hyperdense pre-contrast, defined limits, irregular shape, located in the region of the base of the skull causing bone lysis of the sphenoid, pre-sphenoid, basphenoid bone with infiltration into the air spaces, optic canal, optic chiasm and pre-sellar region. The largest volume of the formation was in the left orbit and to a lesser extent invaded the right orbit. The patient was referred to a veterinary oncologist for intranasal biopsy and a histopathological result of chondroblastic osteosarcoma in the skull was obtained. Conclusion: Specific neuro-ophthalmic manifestations are associated with different types of tumors, therefore it is important to include skull tumors as a differential diagnosis and their clinical presentations associated with neuro-ophthalmology.

Key-words: orbital neoplasm, bone, canine, blindness.

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NEW SURGICAL APPROACH FOR THE TREATMENT OF THE THIRD EYELID GLAND PROLAPSE IN DOGS

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ABSTRACT

Purpose: third eyelid gland prolapse is a common event in young dogs, its treatment is necessary to avoid dry eye and corneal injuries due to eye scratching. In this clinical study, twelve dogs aged between four and eight months (four lhasa apso, three beagles and five bulldogs) that presented unilateral prolapse of the third eyelid gland received surgical treatment in a new technical approach. Methods: the surgical treatment of the prolapse of the third eyelid gland was performed through an only incision, using a surgical laser (THERAVET – 9 MW – infrared diode laser) on the caudal side of the base of the third eyelid, a tunnel was created by divulsion the mucosa using a Halsted-Mosquito forceps, the prolapsed gland was replaced into the tunnel and closed by two Wolf's sutures with absorbable 4-0 (CARPROFYL) trespassing the third eyelid and its inner mucosa, eye drop, (VIGAMOX) was prescribed TID, for seven days. Results: This procedure enabled to retain the prolapsed gland inside the mucosa of the caudal face of the third eyelid. Because of the laser incision, the procedure went bloodless. All patients were evaluated after 7, 14 and 21 days post - surgery, and none of them presented recurrence of prolapse or even inflammation of the gland, conjunctiva or alteration in their lacrimal production. The Schirmer test was greater than 15 mm. Conclusions: the procedure using laser showed a bloodless surgery, the two sutures showed competency in treating the prolapse gland.

Key-words: gland, third eyelid, surgery, dog, laser

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OCULAR MELANOCYTOSIS AND GLAUCOMA IN A SHIH TZU DOG: CASE REPORT

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ABSTRACT

Purpose: Describe an uncommon clinical case of ocular melanocytosis in a dog and the consequences of pigment accumulation in the sclera and ciliary fissure. Case report: A 8-years-old Shih Tzu dog, with a history of progressive dark sclera for five years was referred to the ophthalmologic service. Results: In the right eye, diffuse pigmentation of the sclera was observed in almost 360 degrees around the limbus and the iris signs of advanced atrophy with tissue loss between nine and twelve hours. The ophthalmologic examination through slit-lamp biomicroscopy revealed the presence of large amounts of pigment deposits in the ventral region of the ciliary cleft, intraocular pressure (IOP) 14 mmHg, fundoscopy with no abnormal pigmentation, but attenuation of the retinal vessels and optic nerve head was observed. One month later, the right eye presented moderate buphthalmia and increased ocular melanosis, IOP 30 mmHg and ocular discomfort. Treatment for IOP was started and fifteen days after the IOP decreased, 18 mmHg. Ultrasound examination revealed an increase in anteroposterior axis and anterior chamber being expanded. Ultrasound biomicroscopy (UBM) revealed the presence of obstruction in the ciliary fissure and the presence of punctiform echoes between the ciliary fissure and the iris. Currently, the animal is visual in both eyes and with a stable condition in the progression of the disease. Conclusion: This report is the first case of melanocytosis in ShihTzu. This disease has been described in Cairn Terrier dogs, being characterized by infiltration and deposition of pigmented cells, which can generate secondary glaucoma.

Key Words: Pigment, infiltration, ciliary fissure, intraocular, pressure.

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OCULAR SURFACE EVALUATION USING OSA-VET® IN BRACHYCEPHALIC DOGS WITHOUT OCULAR INJURY

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ABSTRACT

Purpose: The tear film is responsible for maintaining homeostasis of the ocular surface and several tests are performed to verify the integrity of the film and ocular surface. The purpose of this study was to establish, in brachycephalic dogs with normal Schirmer Tear Test-1 (STT-1), reference values for meniscometry, interferometry and noninvasive tear film rupture time tests using the OSA-Vet® device. Methods: Twenty-eight brachycephalic dogs (45 eyes) with STT-1 within normal values were evaluated. All patients underwent ophthalmologic evaluation with the OSA-Vet® device for noninvasive tear film breakup time (NIBUT), meniscometry and interferometry, and after 10 minutes, STT-1. Statistical analyses were performed on quantitative data using ANOVA. Results: The exam is feasible to evaluate the ocular surface, in a non-invasive way. However, despite the easy execution, there is greater difficulty in more agitated animals. In addition, the completion of the report is manual, thus requiring more time for the total execution of the exam. There was no statistical difference between the right and left eyes ($p<0.005$). After the evaluation, the mean and standard deviation values were obtained for each test: meniscometry: 0.516±0.17mm; NIBUT: 3.88±4.24 seconds; interferometry: 1.08±0.82 (grade 1: 15-30 nm). Conclusion: The study demonstrated values that can be used as parameters for OSA-Vet® in healthy brachycephalic dogs with STT-1 normal.

Key-words: Meniscometry, STT1, BUT, Interferometry.

Approval of the Ethics Committee for the Use of Animals in Research (CEUA): Protocol nº 06/2021/UFPR.

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OPHTHALMIC FINDINGS IN *ATELERIX ALBIVENTRIS*

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ABSTRACT

Purpose: Report ophthalmic findings in available african-pigmy hedgehogs (*Atelerix albiventris*). Methods: Fifty-seven african-pigmy hedgehogs were apprehended by the Environmental Military Police Green Force and were taken to Federal University of Paraná (UFPR) to identify health conditions and perform veterinary assistance. Medicals records of this physical examination and complementary exams were reviewed to collect ophthalmic data. Thirty-four health hedgehogs were included in the study. Selected ophthalmic tests evaluated: blink frequency, endodontic absorbent paper point tear test (EAPPTT), swab conjunctival (microbiologic sample), palpebral fissure length (PFL), corneal diameter (CD), intraocular pressure with rebound tonometer advice using a "p" setting (IOP), B-mode ocular ultrasound, central corneal thickness (CCT), corneal esthesiometry (CE). EAPPTT, microbiological sample, PFL, CD, IOP, ocular biometry were performed under chemical restraint (3% isoflurane mask inhalant). Results: Parameters found were: 7 blinks/minute (range 2 blinks/min); EAPPTT: 6 mm/min (range 3mm/min); PFL: 6.8 (1.2) mm; CD: 5.48 (0.43) mm; IOP: 2(3) mmHg; CCT:166.1 ±23.24; CE: 2.5 (1) cm; anterior chamber depth: 0.55 (0.1) mm); lens thickness:1.6 (0.3) mm; vitreous chamber depth: 1.8 (0.2) mm and axial globe length: 5.25 (0.4) mm. Only in IOP parameter was found significantly difference between male and female median (male > female, P = 0.01). Gram-positive bacteria were isolated in all samples and the most frequent bacteria found was *Staphylococcus spp*., present alone in half of samples followed by *Streptococcus spp*. Conclusion: These results can serve as useful parameters for ophthalmologic evaluation of african-pygmy hedgehog.

Key-words: african-pygmy hedgehog, *Atelerix albiventris*, ophthalmic test.

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PHACOEMULSIFICATION IN A DOG WITH MICROPHTHALMIA AND BILATERAL POSTERIOR LENTICONUS: CASE REPORT

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ABSTRACT

Purpose: Posterior lenticonus usually occurs in association with other eye abnormalities, such as congenital cataracts and microphthalmia. The aim is to report a case of phacoemulsification in a dog with microphthalmia and bilateral posterior lenticonus. Case Report: A male mixed breed dog, 1 year and 7 months old, was referred for ocular evaluation at the IBOEV - Veterinary Ophthalmology clinic. In the anamnesis, the owner reported bilateral blindness and evolution of the eye condition since puppy. Ophthalmologic examination revealed bilateral hypermature cataract. Ocular ultrasound examination of both eyes revealed a conical posterior capsule with nuclear echogenicity of the lens, suggesting liquefaction. The anteroposterior length of the lens was 6.0mm (OD) and 5mm (OS) and the axial length of the OD was 16.8mm and the OS 16.6mm. Bilateral phacoemulsification was performed using the stop-and-chop technique. The OD had its lens capsule completely removed due to fibrosis and capsular malformation and the OS was submitted to posterior capsulotomy followed by intraocular lens implantation (IOL). Results: The eyes were diagnosed with posterior lenticonus, congenital cataract and bilateral microphthalmia. Postoperatively, the patient developed bilateral deep corneal edema and retinal detachment in the OD and remained visual from the OS during the 3-month follow-up. Conclusion: Phacoemulsification in congenital cataract is recommended when visual acuity is affected. In congenital intraocular anomalies such as posterior lenticonus and microphthalmia, the surgical technique requires adjustments and may include posterior capsulotomy or alteration of IOL size and design.

Key-words: Microsurgery, canine, congenital cataract.

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PHOTOPIC NEGATIVE RESPONSE IN BLUE-AND-YELOW MACAWS (ARA ARARAUNA)

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ABSTRACT

Purpose. The photopic negative response (PhNR) is a slow negative component of the full- field electroretinogram that has been shown to give specific information about retinal ganglion cells activity. The aim of this study is to evaluate the photopic negative response in adults blue-and-yelow macaws to establish normality parameters for this specie. Methods: Seven adult blue-and-yelow macaws *(Ara ararauna)*, without ophthalmic illness, were examined at the FMVZ Ophthalmology Laboratory, authorized by Ethics Committee. These animals were sedated with midazolam maleate (1mg/kg) and ketamine hydrochloride (15mg/kg). Mydriasis was reached by instilling 1 drop of rocuronium bromide (ROCURON® 10mg/ml) in 3 times (interval of 15 minutes). The full field-ERG was performed according to the ISCEV protocol using the Roland RETIport System® electrodiagnostic system. Three electrodes were used: active eletrode contact lens type (ERG-jet®), placed on the cornea previously desensitized with proximetacaine eye drops (Anestalcon®); reference electrode and ground electrode, both needles. An extended protocol of PhNR was performed after 10 minutes of blue light adaptation, using a red flash stimulus, with a duration of less than 5ms, intensity between 1 and 2.5 $cd.s.m^{-2}$ and an interstimulus interval of one second. A-wave, b- wave and PhNR amplitudes were measured. Results: The mean amplitudes were: a- wave=25.5µV±3.3, b-wave=126.6µV±17.1 and PhNR=7.2µV±2.2. Conclusions: The values of the amplitudes analyzed allowed to obtain PhNR parameter in blue-and-yelow macaws, becoming a viable test in this specie. However, it is recommended to carry out new studies with larger samples, to obtain a PhNR reference for macaws.
Key-words: ERG, birds, electrophysiology, retina, ganglion cells.

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PSEUDOMONAS AERUGINOSA AND *KLEBSIELLA PNEUMONIAE* HIPERVIRULENT VARIANTS ASSOCIATED WITH CORNEAL MELTING: CASE REPORT

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ABSTRACT

Purpose: To describe a case of liquefied stromal necrosis involving *Pseudomonas aeruginosa* and a hypervirulent (hypermucoviscous) *Klebsiella pneumoniae* in a dog. Case report: A one-year-old female Shih-tzu presented with a unilateral melting ulcer, diffuse corneal edema and a history of significant worsening of the clinical signs in less than 24 hours. Treatment with Tobramycin QID (Tobrex 3mg/ml Alcon, São Paulo Av N.S da Assunção,736), EDTA 0.35% QID (Eyepharma, Av. Brigadeiro Luis Antonio 4790 São Paulo), Atropine 1% BID (Eyepharma) for 3 days and Doxycycline 10mg/kg SID for 7 days (Agener União, São Paulo, Rua Cel. Luiz Tenorio de Brito 90) were instituted. Swabs of the lesion were collected for culture and antibiogram. Results: the organisms isolated were *K. pneumoniae* with hypermucoviscous morphology, indicating a hvKp hypervirulent variant and *Pseudomonas aeruginosa*. Antimicrobial susceptibility testing indicated that the organisms were resistant to doxycycline, which was discontinued. Tobramycin and EDTA 0.35% maintained until clinical improvement, at 21 days. These two bacteria are on the WHO list of priority pathogens given their importance in cases of antimicrobial resistance, they are commonly found in hospital settings, where tutors worked daily, and related to nosocomial infections. Both species are known for their high biofilm production capacity, showing the importance of EDTA as an adjunct treatment. Conclusions: The variant hypervirulent *Klebsiella pneumoniae* is related to more severe and invasive clinical cases, based on bacterial isolation, associated with the correct choice of treatment was fundamental to the successful outcome.
Key-words: liquefied stromal, antibiogram, corneal ulcer, dog.

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REFERENCE VALUES FOR OPHTHALMIC DIAGNOSTIC TESTS IN THE RODENT *Cerradomys goytaca* UNDER SEDATION

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ABSTRACT

Purpose: *Cerradomys goytaca* is an endemic rodent in the coastal region of restinga in northern Rio de Janeiro. It has a nocturnal and frugivorous habit. It was the first endemic species described in the Restinga de Jurubatiba (2011). The species is already listed as an animal at risk of extinction. In rodents, the study and understanding of the Ocular System (SO) and its vision can portray ecological adaptations of the species. Until now, there is no description of the SO of *C. goytaca*. The aim of this study was to establish reference values for some ophthalmological diagnostic tests in this species. Methods: Sixteen adult individuals were used, eight females. The animals were sedated with a solution of tiletamine (15mg/kg) + zolazepam (15mg/kg), applied intramuscularly. Tear production was measured using the standardized endodontic paper point test. Three measurements of intraocular pressure (IOP) were taken by rebound tonometry (FA-800Vet®). The length of the palpebral fissure was determined by digital pachymetry. Results: The tear production was 6.92 ± 0.89 mm (OD) and 7.04 ± 1.11 mm (OS). The IOP was 4.42 ± 0.68 mmHg (OD) and 4.51 ± 0.81 mmHg (OS). The length of the palpebral fissure was 8.05 ± 0.16 mm and did not show divergence of values between the sides. There were no significant differences between females and males or between the different sides. Conclusion: This study establishes reference values for ophthalmological examinations of *C. goytaca*, under sedation, collaborating and supporting future studies on the OS of the species.

Key-words: *Cerradomys goytaca*, paper point lacrimal test, intraocular pressure, ophthalmology rodent diagnosis test, veterinary ophthalmology.

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RELATION BETWEEN BACTERIAL CULTURE AND ANTIBIOGRAM IN CORNEAL ULCERS AND THE EXISTENCE OF PERIODONTAL DISEASE IN DOGS

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ABSTRACT

Purpose: The objective of this study was to identify microorganisms present in dogs with corneal ulcers and to identify bacterial sensitivity or resistance to the antibiotics used in the ophthalmological routine. Also, to verify if there is a correlation between corneal ulcers and dental disease. Methods: Samples were collected from 27 dogs with corneal ulcers and sent for culture and antibiogram exam, at the same time the oral cavity was inspected and classified for the presence of periodontal disease. Samples that had positive bacterial growth were identified and evaluated against the existence of bacterial resistance to topical and systemic antibiotics and then compared to the classification of periodontal disease. Results: Bacterial growth from 14 samples, showed 10 patients with bacteria resistance isolated from their corneal ulcers to any of the antimicrobials tested, all contained some degree of periodontal disease. Three of them were considered with mild periodontal disease (30%), 04 of them with moderate degree (40%), and the other 03 with severe periodontal disease (30%). Statistical analysis was not significant. Conclusion: Despite the lack of statistical significance, there is a clinical correlation between moderate to severe periodontal disease, influencing the emergence of bacterial resistance to antibiotics used in corneal ulcers in dogs. Ophthalmic manifestations due to odontogenic influence should be raised whenever the ophthalmopathy is refractory to antimicrobial treatment.

Key-words: corneal ulcer, bacterial resistance, periodontal disease, ophthalmic manifestation.

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RETENTION OF PERIOCULAR-SCALE ON LEOPARD-GECKO

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ABSTRACT

Purpose: The retention of periocular scale on reptiles caused by dysecdysis condition is common in many species and may cause visual impairment and interfere with the animal's vital skills. Case report: A leopard-gecko (*Eublepharis macularius*) was presented with swollen periocular region, anorexic and fatigue. Areas of dysecdysis were found causing deformations, including many layers of the shed retained in both eyes. The left eye was enophthalmic, with debris adhered to the palpebrae causing caseous exudate build up.The therapeutic protocol chosen was to offer a proper nutritional diet and reassess its habitat conditions, prescription of an antibiotic, non-steroidal anti-inflammatory drug and systemic vitamin supplement, N-acetyl cysteine 10% and sodium hyaluronate lubricant 1%, six times a day topic and surgical removal of shed accumulated and abscess. Results: The lack of vision caused the animal to develop hyporexia, aggravating the downfall of its body conditions and leading to unsatisfactory response to previously established treatment. Ultimately, the surgery could not be performed due to deterioration of the patient's overall health, causing its death. Conclusion: The case described has shown that late diagnosis of dysecdysis and the inadequate management of the animal has led to loss of visual acuity, condemning factor to its health decline, making the animal unable to survive.

Keywords: dysecdysis, reptiles, veterinary ophthalmology.

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SEASONALITY OF THE CONJUNCTIVAL MICROBIOTA OF BOVINES FROM A MICROREGION IN MIDWESTERN BRAZIL

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ABSTRACT

Purpose**:** to identify the microbiota in the conjunctival fornix of healthy bovines and to evaluate whether seasonality and cattle category (dairy *vs.* beef) play a role in our findings. Methods: the conjunctival fornix of 74 Holstein-Gyr and 70 Nelore cattle were sampled from February to March (rainy season) and August to September (dry season) of 2017. Bacterial and fungal strains were isolated by classical bacteriological and mycological methods and PCR. Results: Twelve bacterial genera were identified. *Bacillus cereus* was the most prevalent agent in both seasons and cattle categories. Number of bacteria was not influenced by seasonality or cattle category (p=0.25). The number of *Moraxella bovoculi* in dairy (5/74) and beef cattle (7/70) did not differ (p=0.76). *M. bovoculi* was found only during the rainy season in the dairy cattle (p=0.01), and only during the dry season in the beef cattle (p=0.04). During the dry season, the number of gram-positive bacteria was significantly higher in beef cattle (p=0.009). Fungi isolated in dairy cattle (16/144) were significantly higher than those isolated in beef cattle (4/144) (p=0.007); seasonality didn't influence this finding (p=0.53). Conclusions: *Bacillus cereus* was the most prevalent and *Corynebacterium* spp. and *Streptococcus* spp. the least prevalent bacteria found in the conjunctival fornix of healthy cattle. The prevalence of *Moraxella bovoculi* was 8.33% and was influenced by seasonality. The prevalence of fungal flora was 11.8% being higher in dairy cattle, but was not influenced by seasonality. *Trichosporon* spp. (41.2%) and *Aspergillus* spp. (35.3%) were the most frequent fungal genera.

Key words: Bovine infections keratoconjunctivitis, dairy cattle, beef cattle, season, eye.

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SERUM LEVELS OF C-REACTIVE PROTEIN IN DOGS WITH OCULAR ALTERATIONS ASSOCIATED OR NOT WITH SYSTEMIC DISEASES

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ABSTRACT

Purpose: C-reactive protein (CRP) is an important acute-phase protein since it is considered an early biomarker of inflammatory or infectious lesions. The study aimed to determine the efficacy of CRP as an early biomarker of ocular lesions, like uveitis, associated with systemic inflammatory etiology when compared to primary conditions. The use of CRP in veterinary medicine is ascendant in pyometra, gastroenteritis, heart, and periodontal diseases. Methods: This study compared serum CRP in dogs presenting uveitis associated with systemic diseases, including leishmaniasis, toxoplasmosis, leptospirosis, and ehrlichiosis with primary lesions such as ulcerative keratitis, proptosis, keratoconjunctivitis sicca and "cherry eye". Serological samples from 67 dogs were divided into 3 groups: G1 - 23 dogs with uveitis secondary to a confirmed systemic disease; G2 - 22 dogs with primary eye disorders and negative for diseases tests; G3 - control group composed of 22 healthy dogs without ocular disorders and negative for diseases tests. Diseases were confirmed or excluded using the Indirect Fluorescent Antibody Test (IFAT) against anti-leishmania, anti-toxoplasmosis, and microscopic agglutination serum for the detection of anti-leptospirosis antibodies; the SNAP 4Dx Plus Test was used for the evidence of infection with *Ehrlichia* spp. Results: CRP concentrations (mg/l) differed significantly ($P<0.001$) between G1 (2.27) and G2 (0.66) and between G1 and G3 (0.39). Conclusion: The measurement of CRP was shown to be effective as a biological marker of an ocular inflammatory process, especially when it is secondary to a systemic disease of infectious origin. CRP has potential application in ophthalmological practice in dogs.

Keywords: Acute phase protein, canine, inflammation, ophthalmology, uveitis.

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SHORT-TERM CLINICAL OUTCOMES OF USING A NEW INTRAOCULAR LENS (IOVet®) AFTER PHACOEMULSIFICATION: A MULTICENTER STUDY

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ABSTRACT

Purpose: To clinically evaluate, in the short term, eyes of dog operated by phacoemulsification with implantation of a new intraocular lens (IOL- IOVet®) with an optical zone of (6.5mm), haptics with four legs and a 2.4mm injector. Methods: Thirty-nine eyes of dogs, with different degrees of cataract were operated by eight surgeons (five board certified and three non-board certified) in different veterinary ophthalmology centers. Each surgeon used standard surgical technique of cataract extraction by phacoemulsification to implant the IOL. All patients received gatifloxacin or moxifloxacin every 6h, prednisolone acetate 1.0% and tromethamine ketarolac every 2h in the first week postoperative with decrease in the following weeks and carbonic anhydrase inhibitors every 12h for 15 days. The evaluations were performed before surgery, at 72h, 7, 14, 21 and 30 days. Postoperatively intraocular pressure (IOP), fibrin, flare, posterior syncytial and posterior capsule opacity (OCP) grade were evaluated. The IOP was measured by using applanation tonometry. Data were treated by ANOVA followed by Tukey's and T-pare test. Results: Mature cataract was the most operated type with 61.53% (24/39). Mean IOP (mmHg) values showed significant difference between 72h (11.15±3.32), 14 (13.56±3.00), 21 (13.61±2.74) and 30 (13.15±2.37) days post-surgery. As for the variables studied, absent or mild degrees predominated and showed significant difference ($p<0.05$) when compared to moderate and severe. Severe alteration was not observed in any of the analyzed situations. Conclusion: The IOL- IOVet® implanted did not cause significant postoperative changes and minimal postoperative inflammatory reaction was observed. None.

Key-words: Cataract, dog, complication, intraocular pressure

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SPONTANEOUS ANTERIOR LENS CAPSULE RUPTURE IN 10 MONTHS CHIHUAHUA WITHOUT CATARACT

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ABSTRACT

Purpose: Lens capsular rupture can occur spontaneously in cases of rapidly developing cataracts that become intumescent, such as in diabetes, or not spontaneously in blunt or perforating eye trauma, and accidentally during phacoemulsification. Our purpose is to report the case of a 10-month-old Chihuahua who presented spontaneous anterior lens capsular rupture without cataract. Case report: The patient had no history or signs of ocular trauma or surgery, not even cataracts or systemic disease. On ophthalmic examination, the left eye showed changes compatible with uveitis, in addition to posterior synechia between 7 and 9 hours. Treatment for uveitis was performed and the signs regressed but recurred when it was discontinued. Results: 70 days after the first examination, biomicroscopy showed anterior displacement of the iris due to a slight elevation of the anterior lenticular capsule, coinciding with the site of posterior synechiae and lens opacity. UBM was requested and the result was suggestive of anterior lens capsule rupture with posterior synechia. Treatment with phacoemulsification was performed and, during the procedure, the suspicion was confirmed, with leakage of lenticular content. After the surgery, the patient did not present a new condition of uveitis. Conclusions: Due to the absence of causes mentioned in the literature that can lead to anterior lens capsular rupture, we can suggest that such alteration occurred spontaneously, which resulted in uveitis in the case presented. UBM was essential to establish the diagnosis and phacoemulsification was effective as a definitive treatment.
Key-words: lens capsular rupture, uveitis, dogs, phacoemulsification, ultrasound biomicroscopy.

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SPONTANEOUS REMISSION OF JUVENILE CATARACTS IN A SIBERIAN HUSKY: CASE REPORT

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ABSTRACT

Purpose: To report a case of juvenile intumescent cataract remission in a Siberian Husky dog. Case report: A two-year-old male Siberian Husky was referred with a complaint of right eye opacity. Diabetes was ruled out in the patient. During the ophthalmologic exam was observed an immature intumescent cataract in the right eye, with higher density in the nucleus region. In the left eye was observed an incipient posterior subcapsular cataract, with opacity adjacent and parallel to lens suture lines. Vision was attested by menace response test, being positive on the left eye and negative on the right eye. Discrete conjunctival hyperemia was noted on the right eye, with no other signs of phacolytic uveitis. Other ophthalmological parameters were within the normal range. Sodium diclofenac eye drop was prescribed to the right eye, every 12 hours, until further recommendations. After nearly one month, the dog was reassessed, noticing significant improvement concerning the transparency of right eye lens, which achieved cataract remission and return of vision. A posterior subcapsular cataract remained, compatible with the congenital type like left eye. There was no progression of cataract in the left eye. Results: The case in question shows a bilateral juvenile cataract in a Siberian Husky, in which right eye, in approximately one month, there was reabsorption of the lenticular fluid and cataract opacity reduction. Conclusion: Few similar cases are described in the literature, being interesting to bring this information to fellow veterinary ophthalmologists.
Keywords: juvenile cataract; cataract remission; Siberian Husky.

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SQUAMOUS PAPILLOMA IN THE REGION SCLEROCORNEAL IN A DOG

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ABSTRACT

Purpose: To report a case of squamous papilloma in the region sclerocorneal in a canine. Papillomatosis is a neoplasm with tropism for any mucous membrane and skin, whose growth is associated with infection by a *Papillomavirus*. Despite the classic location of canine disease being in the cavity oral, there are cases of papilloma described in conjunctivae, eyelids and in the cornea. Its frequency in dogs is equivalent to 13% of ocular neoformations and rare in cats. Case report: Patient SRD, 2 years old, male, 7.2kg, castrated. Presenting an eye neoformation with 7 days of evolution. On physical examination, we observed epiphora, blepharospasm and neoformation measuring 0,5cm in diameter, verrucous, white-grayish in the left eyeball, sclerocorneal region for 3 hours. An ocular ultrasound was performed and there were not visualized changes. The patient underwent general and local anesthesia of the left eyeball for the surgical procedure of excision of the nodule. With the aid of the surgical microscope, the excision of the nodule was performed by means of keratectomy and sclerectomy. superficial 3 hour region with a nº15 scalpel, followed by third eyelid flap. The excised fragment was submitted to histopathological examination. Results: Histopathology revealed hyperplastic stratum basale and spinous epithelial cells, arranged in endophytic plaques, which project into the dermis and exhibit numerous keratohyalin granules. Seven typical mitotic figures were observed in an area of 2.37mm^2. Multiple cells exhibit spongiosis. No viral inclusions (cytopathic effects) were seen. Conclusion: The microscopic findings were consistent with the papilloma squamous in literature. The histopathological was of paramount importance to determine the prognosis, since it is a benign neoplasm. The chosen treatment was surgical exereses, even though it is a benign and self-limiting neoplasm, this regression depends on the animal's immunity, as well as evolving and compromising the dog's quality of life.

Keywords: Benign neoplasia, Self limiting, Surgical removal, Eyepiece.

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SURGEON'S PERCEPTION OF A NEW INTRAOCULAR LENS MODEL FOR DOGS: A MULTICENTER STUDY

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ABSTRACT

Purpose. To evaluate the quality of a new intraocular lens (IOL-IOVet) model for post-cataract surgery implantation in dogs, from the perspective of different surgeons. Methods. Six fixed-size (14mm) intraocular lenses (IOVet) were distributed to 8 cataract surgeons distributed in 7 veterinary ophthalmology centers. They were distributed to surgeons with different degrees of experience in order to minimize the surgeons' dexterity as a factor in the evaluation criterion. For any implanted IOL each surgeon answered a questionnaire. Questions were asked to verify the usability of the product and the answers were placed on a scale from 1 to 5, with 1 being completely dissatisfied and 5 being completely satisfied according to the *Likert* scale. Questions were made as follows: IOL design and manipulation for injection (Q1), placement and closure of the cartridge (Q2), expulsion by the cartridge (Q3), accommodation in the capsular bag (Q4), rotational stability in the capsular bag (Q5), malleability and thickness of haptics (Q6). A question about whether during the application of the lens there were problems with it (Q7), if so, what is the problem, also was answered. Results: 47 applications were evaluated. All animals had their IOLs implanted inside the capsular bag. It was found that all answers showed results as satisfied or completely satisfied. In Q2 and Q4, highest completely satisfied rates were achieved with 93.6% (44/47) and 85.1% (40/47), respectively. Conclusion: The new IOL proved to be well accepted by cataract surgeons, regardless of professional experience, and its implantation feasible after canine phacoemulsification surgery. None.

Key-words: Intraocular lens, Phacoemulsification, cataract, dog

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USE OF 90º TRANSPOSITION FLAP FOR SURGICAL TREATMENT OF EYELID COLOBOMA IN A CAT.

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ABSTRACT

PURPOSE: This study aims to describe the surgical treatment of palpebral coloboma in a cat using the rotational flap technique, with a transposition skin flap 90º from the defect, originating in the temporal region. Case report: A mixed breed feline with intermittent blepharospasm, tearing and bilateral eye secretion was diagnosed with coloboma in the temporal region of the upper eyelids. The palpebral coloboma was affecting 2/3 of the right eyelid margin and approximately 1/3 of the left eyelid margin. Medical treatment was instituted on the left side and surgical correction was performed on the right side using a transposition flap, with the flap coming from the temporal region, 90º related to the defect. Results: Superficial necrosis was observed in a small area in the distal part of the flap within the first 7 postoperative days. Nonetheless, wound healing progressed efficiently and the sutures were removed 16 days after the operation. The patient was reassessed by the 28th and 80th days following the surgery, exhibiting satisfactory corneal coverage and preserved blinking ability, in addition to good eyelid occlusion. Conclusion: The use of 90º transposition flap is an alternative technique to the correction of the eyelid coloboma, which allowed a significant improvement in the ocular condition of the subject studied as well as better clinical signs, providing adequate protection of the ocular surface and eyelid functionality, in addition to a satisfactory aesthetic outcome.

Key-words: feline, agenesis, palpebral coloboma, transposition flap.

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USE OF OZONE THERAPY IN THE TREATMENT OF EYELID NECROSIS IN DOGS.

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ABSTRACT

Purpose: The purpose of this report is to show the use of ozone therapy in the treatment of postoperative eyelid necrosis in 3 surgical cases. Case report: One Golden (case 1) and two Shih-Tzu (case 2 and 3) had necrosis after lip-to-lid transposition surgery, H-plasty and cauterization after ectopic cilia surgery, respectively. Since the beginning, it was used as treatment the cupping technique, rectal insufflation and local ozone injection (case 2); and the same treatment added topical ozonized oil (sunflower oil – Ozone&Life→ case 1) or topical ozonized eye drops (Systane→ case 3), and antibiotics topical ointment support (Regencel→). Case 1 received 16 ozone therapy sessions (8 weeks, twice a week), case 2 received 24 sessions (8 weeks, three times a week) and case 3 received 4 sessions (4 weeks, once a week) until complete healing. Results: Before the treatment, in all cases the margins of the surgeries had a necrotic appearance, mucopurulent discharge and eyelid edema. After the beginning of the treatment, the wound had a fast revitalization of the necrotic edges and the appearance of new granulation tissue in: 4 days (case 2), 7 days (case 3) and 17 days (case 1). Conclusion: the use of ozone therapy proved to be safe and effective in the treatment of eyelid necrosis, accelerating the appearance of new healthy tissue to the lesion by regulating the antioxidant system and metabolism, improves oxygen metabolism, modulation of the immune system and increases the bactericidal and fungicidal spectrum.
Key-words: eyelid, necrosis, ozone therapy

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UVEAL SCHWANNOMA IN A PIT BULL DOG

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ABSTRACT

Pourpose: This case describes clinical, histopathological and immunohistochemical aspects of a Blue-eyed uveal schwannoma (USBED) involving an 8-year-old female dog, Pit Bull with a greenish iris. Case Report: Slip lamp biomicroscopy of the left eye found a pinkish neoformation in the anterior chamber starting from the iris and invading the iridocorneal angle, without signs of intraocular inflammation associated with it. The intraocular pressure measured 15 mmHg. Ocular ultrasound examination revealed a 3,4 mm thick formation filling almost the entire anterior chamber of left eye. Once the patient's general health status was determined, through general clinical evaluation and staging and preoperative tests without alterations, enucleation was indicated as treatment. Results: The histopathological examination revealed proliferation of neoplastic and spindle cells occupying much of the anterior chamber, and part of the iris invading iridocorneal angle. The immunohistochemical being strongly positive for the GFAP marker and negative for Melan-A indicating that the neoplastic cells had glial origin. Morphological and immunohistochemical findings were consistent with blue-eyed uveal schwannoma. Two years after, there was no evidence of sign of metastasis. Conclusions: Further studies will be needed to better clarify the etiopathology and malignancy of these neoplasms. Likewise, there are still no data available regarding the possibility or not of metastatic dissemination. Therefore, it is believed in the importance of periodic monitoring of the animal described in this case report for control.
Key-words: Schwannoma, spindle cell tumor, blue eyes, uvea, dog.

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UVEITIS BY ENCEPHALYTOZOONOSIS IN RABBITS

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ABSTRACT

Purpose**:** Encephalitozoonosis is a zoonotic infectious disease that occurs primarily in rabbits and is caused by the microsporidia *Encephalitozoon cuniculi*. It is often subclinical and poorly reported, and may cause neurological, renal and ocular alterations. The objective of this paper is to describe the clinical cases of two rabbits with uveitis, who developed, respectively, liver and kidney disease associated with microsporidia infection. Case report: Two male domestic rabbits, Lionhead and Mini lop, aged 10 months and 7 years, respectively, presented with anterior uveitis; the first with hypopyon and the second with ulcerative keratitis; without clinical neurological changes. Results: Blood tests and ultrasound showed hepatic alterations in the Lionhead rabbit and renal alterations in the Mini lop. Urinalysis of both, using the Gram technique, revealed microsporidia spores, suggestive of *E. cuniculi*. The treatment chosen based on benzimidazoles did not promote the cure of the systemic disease, but caused medullary aplasia in Lionhead in the second week after treatment and the Mini lop died after 5 months. There was remission of uveitis with topical prednisolone in Lionhead and improvement of corneal ulcer with tacrolimus, gatifloxacin and nepafenac in Mini lop during follow-up. Conclusion: The literature reports cases of phacogenic uveitis associated with eye infections caused by microsporidia, however, what was observed in these rabbits were cases of granulomatous uveitis and ulcerative keratitis. Because it is an underdiagnosed disease and an emerging zoonosis, with high prevalence in rabbits, treatments with fewer side effects and greater effectiveness are necessary.

KEY WORDS: uveitis, encephalitozoonosis, rabbits

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