April - June 2021

BULLETIN OF THE

PET PRACTITIONERS ASSOCIATION OF MUMBAI.

(For Circulation amongst PPAM Members)

Contents:

IF NOT DELIVERED,
PLEASE RETURN TO

The Secretary, PPAM.
Shop No. 1, Bramhandev CHS,
Padmabai Thakkar Road,
Shivaji Park, Mahim,
Mumbai 400 016.

Editorial

Stray Dog Vaccination Program and Pet Parent Awareness Programme. PPAM members your participation is important.

PPAM in collaboration with the Municipal Corporation of Greater Mumbai has embarked on a stray dog vaccination Program. You as a leading practitioner in your area need to get involved in this program. PPAM and Mumbai Veterinarians have always stood apart let's prove it once again by joining this unique Stray Dog vaccination program. The procedure is as follows.

1. You decide the quantity of free Anti Rabies vaccine you want from PPAM. (We recommend you start with 10 or 20 doses)
2. WhatsApp your requirement on 7045490470, (Dr. Vishwasrao) or call up 9322242184 or email vishwasraodr@hotmail.com. Mention your quantity of doses of Anti Rabies vaccine required, the address, and the time the vaccine to be delivered to you.
3. Once the vaccine is delivered to you, vaccinate stray dogs bought to your clinic free of cost. Take photographs of dogs vaccinated along with the caretaker and once doses are over, submit details at vishwasraodr@hotmail.com the details of vaccination you have done in the format mentioned on next page.
4. You can also participate in one more program of PPAM and MCGM, **The Pet Parent Awareness Programme** by displaying the poster in your clinic. The poster is printed in this bulletin can be cut and either paste in your clinic or a photocopy of it can be given to all pet owners coming to your clinic.

Dr. S. V. Vishwasrao
Ph.D. (Surgery),
Editor, PPAM Bulletin.
vishwasraodr@hotmail.com
Mobile - 9322242184

Details of Vaccination Format

Sr. No	Date of Vaccination	Details of stray dog, name if any, gender, coat colour, age approximately and care takers name.	Locality of the stray dog

Participation in the Stray dog vaccination program by PPAM members has an intrinsic value for our PPAM members. This program is an opportunity for mutual education of everyone involved. As an association of Veterinarians, we have non-commercial objectives related to this stray dog vaccination program which also has an impact on the environment. It is a catalyst for further development of our Association will encourage a sense of responsibility among members, guarantee the feeling of involvement of members, ensures things are done the right way, use of valuable experience and local condition knowledge will help in stray dog vaccination program to be more successful in the implementation process. PPAM members that have a say in the program are much more likely to be enthusiastic about the implementation of this program. If the PPAM members participate then their opinion carries a lot more weight and the PPAM managing committee members genuinely want to hear ideas and feedback.

Most technical engagement these days are no longer about spreading information and telling veterinarians what is to be done but is a two-way street between the managing committee and members of PPAM. Regardless of your area of practice, you can participate in this program and benefit society from your clinic itself. The more PPAM members participate in this program more will be feedbacks gathered in the process more likely the final results will meet the needs of our society. If any PPAM members opinion differs from the more popular opinions, managing committee members will get a balanced understanding of the member's views and enhance the value of the final understanding and results. More information can make the difference between good and poor program results. For gaining success in the stray dog vaccination program total number of PPAM members engaged is important. PPAM member participation is a process where each contributor gains a better understanding of both the issue of stray dogs and how other participants see the issue. It is an opportunity for the PPAM members to share their facts, experiences, knowledge, ideas, preferences, hopes, fears, opinions, and values. It is a process through which everyone's energy is combined to produce a better outcome. The main component of these programs is vaccination. WHO recommends that 70% of dogs in a population should be immunized to eliminate or prevent outbreaks of rabies. This critical percentage (pc) has been established empirically from observations on the relationship between vaccination coverage and rabies incidence in dog populations around the world. The efficacy of a vaccination program is expected to depend on vaccinated dogs living long enough for herd immunity to build up. The World Organisation for Animal Health (OIE) recommends the implementation of dog population management (DPM) to run alongside rabies control efforts. Apart from being a complementary measure alongside rabies control programs, efforts at DPM often seek to improve the welfare of dogs and reduce risks to public health (e.g. dog bites and the spread of other zoonotic diseases). It has been demonstrated that high-density domestic dog populations (>11 dogs per km) are a key infection reservoir for the virus and, as such, rabies control programs targeting domestic dogs can have a significant impact on reducing rabies virus transmission. Eliminating rabies from canid reservoirs requires a strategy that encompasses all sections of resident dog populations. In broad terms, dog populations can be categorized as 1) those under direct human control; or 2) those that are free-roaming. Free-roaming dogs are defined as any dogs in a public area that are not under direct human control and the term is widely accepted to encompass dogs that are either owned, unowned (stray), or community-owned (3), while stray dogs are defined as free-roaming dogs that have no identifiable owner. Stray dogs are often targeted as a nidus of rabies infection and are widely accepted to pose a more frightening threat to communities due to their reduced level of interaction with humans.

When a large number of PPAM members participate in these programs it could change the behaviour of the public at large towards stray animals. The likelihood of the general public changing their behaviours towards stray dogs increases when the public is aware, informed, and self-convinced that vaccination of stray dogs is needed. Stray dog vaccination program will help relationships between the public and veterinarians get strengthened because communication barriers are ruptured, trust is built, and people learn how to functionally work together—all skills that will be critical in addressing future issues. The general public will also support decisions of vaccinating stray dogs if the incidence of Rabies in stray dogs and subsequently in pet dogs and humans reduce. Successful public participation in such a program takes adequate time, resources, and flexibility. Public participation is constructive when all the participants, veterinarians, animal activists, policymakers, and peoples representative listen to each other, make positive contributions, gain a deeper knowledge of stray dog issues, and develop trust and respect for each other, even when there is disagreement. Inefficient and inadequate waste collection and management, due to lack of resources and planning has also led to significant increases in the volumes of waste on the streets and in open dumps, where it serves as food sources for free-roaming dogs. Poor waste management also has an impact on rabies control efforts.

We all are aware that participation is effective when each PPAM member not only states clearly his or her position and interests but also listens to understand those of others. Participation is most successful when it is well planned, well timed, competently managed, and has sufficient resources all of which the PPAM managing committee has taken care of. It is important to recognize that decisions regarding stray dog vaccination programs can have both current and future impacts, therefore, it is important to include younger and budding veterinarians and senior veterinarians.

At PPAM we are aware that the stray dog vaccination program may not improve vaccination status and reduction of Rabies cases overnight but over a while, we definitely will be able to make a difference.

I hope I have convinced you to get involved but let me also tell our members how to start and get involved in this program. Talking to the Editor PPAM bulletin on 9322242184 or messaging on WhatsApp number 7045490470 in person or emailing on vishwasraodr@hotmail.com is a great way to get an understanding of the project and how you can get involved. PPAM must take a lead to inspire and motivate other veterinary Associations. PPAM has the opportunity to be a role model for other Associations. We as PPAM managing committee members are confident that PPAM members will accept the responsibility of participating in the stray dog vaccination program with humility and fill the responsibility with grace and efficacy.

Stray Dog Vaccination Program

The program is in progress and work is being done by PPAM members. We expect more and more members to join this program. It feels good knowing that we all are involved in Stray Dog Vaccination Program that benefits the community.

Sr. No	Name of Participating Veterinarian with area	Doses of Anti Rabies provided
1.	**Dr. Shah Vengsarkar Sangeeta**, Shivaji Park, Mumbai	30 doses
2.	**Dr. Vishwasrao Shriniwas**, Bandra West, Mumbai	20 doses
3.	**Dr. Gokarna Nishit**, Vasai West	20 doses
4.	**Dr. Neelam Singh**, Dadar, Mumbai	20 doses
5.	**Dr. Jayakar Nihar**, Goregaon, Malad, Kandivali	50 doses
6.	**Dr. Gadge**, S. M. Malad West	30 doses
7.	**Dr. Jairam Ramani,** Malad	50 doses
8.	**Dr. Gauri Ubhare**, District Raigad, Taluka Mangaon	50 doses yet to be delivered due to logistic reasons.
9.	**Dr. Neha** from Dr. Vade, Vedant Pet Dispensary Borivali	50 doses
10.	**Dr. Tamhankar Smita**, Pets Bliss Veterinary Clinic, Vile Parle East	30 doses

Dr. Gokarna Nishit Clinic at Vasai West, Palghar

Dr. Anil Vade Clinic at Borivali West

Dr. Neha Borkar Clinic at Borivali West

Dr. Tamhankar Smita Clinic at Vile Parle East

Dr. Ramani Jairam Clinic at Andheri East

Dr. Tanya, Dadar West

Dr. S. M. Gadge Clinic at Malad West

Dr. Jayakar Nihar Clinic at Goregaon West

Dr. S. V. Vishwasrao Clinic at Hill Road, Bandra West

Brownie of Almeida Park, Bandra West

Lalu of Almeida Park, Bandra West

Kali of Almeida Park, Bandra West

Dr. Shah Vengsarkar Sangeeta Clinic at Shivaji Park, Dadar

Continuing Education Program by PPAM Members

1

You can sit with us!

To honor the world veterinary day 2021, we sit with vets from all around and talk about their experiences through the amazing journey that veterinary

vetquestindia.wordpress.com

https://vetquestindia.wordpress.com/you-can-sit-with-us/ 3:12 PM

2

PPAM

OCULAR EMERGENCIES

Sunday, 2nd May 2021 at 04:30 pm to 6:00 pm

LIVE WEBINAR

This webinar is free for all PPAM members and all associations members affiliated to FSAPAI and all Vet Students across India

Dr. Kasturi Bhadsavle

Kasturi Bhadsavle completed her bachelors (2004) as well a masters in surgery (2006) from Bombay veterinary college, India. Her research topic for masters was cataract surgery in dogs due to her keen interest in ophthalmology. At that time, Veterinary ophthalmology was in its infancy in India and hence she pursued her interest by externships with veterinary ophthalmologists in Israel, United States and Australia.

Kasturi is the founder of The Eye Vet Clinics in Mumbai and Pune, which is the first and exclusive veterinary ophthalmology specialty clinic in India.

Pet Practitioners Association Of Mumbai

RSVP on below link

https://bit.ly/3xmnNzb Select webinar PPAM

3

On the occasion of The **World Veterinary Day,** Greetings from Vetina to this noble profession of being a Veterinarian

Please join us for a webinar on this important day

TOPIC

Recent Advances in Diagnosis and Treatment of Arthritis in Pets

Register Now!

SPEAKER

DR. S. V. VISHWASRAO

SATURDAY | 24 APRIL | 7.00 PM

VETINA Your Needs Delivered

Win exciting prizes by participating in online quiz in live webinar!

4

VETINA Your Needs Delivered

Webinar- "Parasitological Perspective in Canine Dermatology"

Dr. Mukulesh Gatne

B.V.Sc. & A.H.; M.V.Sc. Ph. D (Parasitology),

29th May 2021

Start at 07.00 PM

REGISTER NOW

5

PET POD Online CE Programme Webinar

INTAS ANIMAL HEALTH | NUVO

Telemedicine and Challenges in Small Animal Healthcare Practices

Dr. Makrand Chavan

M.V.Sc. Gynaecology (Gold Medalist)

Consulting Vet, Mumbai

Live on 23rd May 2021, Sunday at 11 am

Veterinary Health Department of Municipal Corporation of Greater Mumbai (MCGM) in collaboration with Pet Practitioners Association of Mumbai (PPAM)

PET PARENTS AWARENESS PROGRAMME

1. As per sections 191(A) and 191(B) of the Mumbai Municipal Corporation Act 1888 it is mandatory to have a license to keep a dog. MCGM dog license and its renewal are now available online on the MCGM web portal. (For Assistance in obtaining an online dog license please call 022-20853284 extension 318 between 10.30 AM to 5.30 PM from Monday to Saturday. Alternately, you can email on vetsu04.deonar@mcgm.gov.in). A license is issued to a dog only after six months of age of your pet.
2. Rabies vaccine has to be given to puppies at THREE months of age then again, a booster at NINE months of age, and then vaccinate once every year as long as the pet lives. Pet parents your cooperation will help eradicate this disease as rabies is virtually 100% fatal.
3. Leptospirosis vaccine also needs to be given to your pet once a year as long as the pet lives. Pet parents your cooperation will help control Leptospirosis which is a zoonotic disease.

4. Your veterinarian will examine the dogs before vaccination, remember vaccination is done in healthy dogs, deworming your pets before vaccination will help build better immunity for your pets. Regarding other vaccinations such as Canine Distemper Virus, Canine Adenovirus, and Canine Parvovirus your veterinarian's advice should be followed. Please get your pet clinically examined by a veterinarian so that your pet does not suffer from any infectious disease.
5. Flea, ticks, mites, and internal worms are common in dogs. Periodically get a parasite control program done for your pets as per advice from your veterinarian.
6. Kindly ensure your pet dog is not a nuisance to others.
7. Kindly ensure your pet dog is under control and should be on a leash when in a public place or common utility places. The intent is to protect the health and safety of the public and to protect your pet.
8. Pet parents' cooperation is expected in keeping our Mumbai clean. Pet owners must ensure appropriate disposal or clean-up of their dogs' litter (poop). Kindly note this is also required by law (model sanitation bylaws 2006, under section 461ee of Mumbai Municipal Corporation Act).

Let us together work for the harmonious coexistence of man and animals.
Let us together build a kind and compassionate Mumbai.

Clinical Signs of Orbital Diseases

Dennis Brooks DVM, PhD
Professor Emeritus, University of Florida

Dennis Brooks DVM

EOSINOPHILIC MYOSITIS

This is an immune-mediated reaction against type 2 muscle fibers. Exophthalmos results from inflammatory swelling of the muscles of mastication (temporal, masseter, pterygoid) which forces orbital fat and the eye forward. It is a bilateral condition that occurs primarily in German Shepherds and Weimaraners. The severity is variable and recurrences are frequent. Dogs present with an acute onset attack of exophthalmos and they may be painful upon attempts to open the mouth. Chronically, enophthalmos may occur as result of secondary muscle degeneration, especially with multiple recurrences.

Diagnosis is based upon a history of previous attacks, increased CPK, and muscle biopsy (eosinophils, lymphocytes, mononuclear cells, and muscle necrosis). EMG will show evidence of a myopathy. Peripheral eosinophil count is not a reliable indicator. Therapy consists of immune-suppressive systemic corticosteroids. Azathioprin may be required in refractory cases. Often the eyes need topical treatment to minimize or prevent exposure keratitis.

EXTRAOCULAR MUSCLE MYOSITIS OF GOLDEN RETRIEVERS

An immune-mediated disease seen in Golden Retrievers. It is not usually painful but affected animals are exophthalmic. Treatment is with systemic corticosteroids.

PERIORBITAL CELLULITIS (so-called "Retrobulbar" Abscess and Orbital Cellulitis). These conditions can be caused by foreign bodies frequently lodge in the soft and hard palates; extension of infections (hematogenous or local) from sinus cavities or teeth (includes abscess of zygomatic salivary gland, lacrimal gland or parotid salivary gland); larvae of migrating parasites (Dirofilaria immitis, Ancylostoma sp., Pneumonyssus caninum); or idiopathic - common.

Clinical signs include unilateral (usually); acute onset; fever; reluctance to eat; submandibular lymphadenopathy; reddened, discolored swelling posterior to the last upper molar may be seen ipsilaterally; pain on jaw manipulation and retropulsion of eye; variable elevated white blood count; exophthalmos (chemosis, protrusion of the third eyelid, exposure keratitis, swelling of the eyelids) and impaired ocular motility. Corneal perforation, optic neuritis and atrophy occur if therapy is inadequate and delayed. It is important to differentiate from retrobulbar tumors and lid abscesses.

Treatment includes surgical establishment of drainage into the mouth posterior to the upper molar and local irrigation; culture and sensitivity of material from drainage; systemic antibiotics and supportive care for the globe and cornea (warm compresses, topical antibiotic ointments, artificial tears, 3rd eyelid flaps, etc.) are indicated. Often, systemic corticosteroid treatment is necessary.

DIAGNOSTIC TECHNIQUES IN ORBITAL DISEASE

1. Physical examination with a complete ophthalmic exam (signs of orbital disease);
2. Cytologic examination and culture of aspirates from the orbit;
3. Exploration of fistulous tracts (sterile blunt probe and/or positive contrast radiography);
4. Radiographic evaluation: including survey films looking for bony changes, radiopaque foreign bodies, trauma and chronic or recurrent orbital disease as well as special techniques such as orbital angiography, negative and positive contrast orbitography, sialograms, and dacryocystorhinography if indicated. Ultrasonography is very valuable to evaluate retrobulbar soft tissues and help delineate boundaries of masses. MRI is a great tool to evaluate and plan therapy for soft tissue lesions and CT for bony type lesions.

EYELIDS AND NASOLACRIMAL SYSTEM

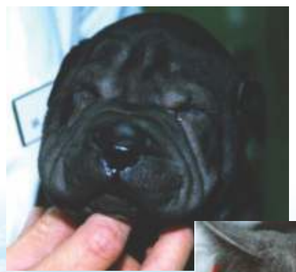
Agenesis: Absence of or part of the eyelid. Seen most commonly in cats:. It is a bilateral defect in the upper lid extending from the lateral canthus toward the medial canthus. Size of defect varies. Causes exposure keratitis, eyelid hairs can rub on the surface of the cornea producing severe discomfort. Treatment: Small kittens recommend lubricating ointments until old enough to have reconstruction surgery of the eyelids. Surgical Correction in adults: blepharoplasty; taking a pedicle graft from the lower lid and third eyelid to fix the defect

Ankyloblepharon: Adhesion of the upper and lower edges of the eyelids. If the eyes are not opened by 14 days, they should be opened with gentle traction. If this is unsuccessful then a tip of a scissor can be placed in a small opening at the medial canthus. Neonatal conjunctivitis can develop from Ankyloblepharon. S small amount of discharge may be note in the medial canthus. Sometimes there can be a large accumulation of discharge causing the eyelids to appear swollen.

The cause is usually due to a genital infection in the bitch. In cats herpes virus can be the cause

Ankyloblepharon in 3 day old pup

Entropion: Entropion is an inward rolling of the eyelid margin. This causes the eyelid hairs to rub on the cornea. It is most common in dogs and sheep, and uncommon in horses and cats (except for Persians). Entropion can be either congenital or acquired. Congenital entropion may not manifest itself initially, and it may be inherited in certain breeds. Commonly affected breeds include Chow, English Bulldog, Toy and Miniature Poodle, Norwegian Elkhound, Great Dane, Rottweiler, Pug, Shar Pei, and sporting breeds. It is sometimes seen in combination with ectropion. Acquired entropion can be spastic (secondary to chronic irritation and pain) where spasms of the orbicularis oculi muscle occur. Given enough time, it may be irreversible. If spastic entropion is suspected, a drop of topical anesthetic should be placed on the cornea to relieve superficial pain and the eye should be observed shortly after topical anesthesia for resolution of the entropion. Acquired entropion can also be cicatricial, and results from prior or previous eyelid damage. Clinical signs seen with entropion include epiphora, blepharospasm, conjunctivitis, and keratitis. The amount and type of signs varies with the extent of involvement and duration. Medial entropion may occlude the lower lacrimal punctum.



Puppy entropion

Entropic cat

Prior to attempting any therapy for entropion, consider the following:

1. Evaluate the eyelid position with the lid at rest and during the palpebral blinking response.
2. Identify and treat concurrent problems as needed (ectropion, distichiasis, corneal disease).
3. Determine the extent of required anatomic correction while awake. If the entropion is spastic, may need topical corneal anesthetic to help evaluate how much of the entropion is anatomic.
4. Surgical techniques should always under-correct slightly for optimal results. Post-operative scarring adds to the extent of the correction.
5. DO NOT SURGICALLY CORRECT AN IMMATURE ANIMAL (< 6 MO), IF POSSIBLE. Manage medically or with temporary sutures as they may improve spontaneously or become more severe with further growth.
6. Medical treatment of entropion involves ocular lubricant ointments, such as Lacrilube, Dura Tears, or Hypotears™. This is sometimes used to protect the cornea from the eyelid hairs while waiting for an animal to mature.
7. Surgical treatment can be either temporary or permanent. Temporary procedures involve using nonabsorbable sutures to evert or "tuck" eyelids in immature animals (usually less than 6 months of age). Sutures are left in place 10 to 14 days, and can provide dramatic results in Shar Pei puppies. Staples and superglue have also been utilized. Permanent procedures are more invasive. The AKC says that dogs having entropion surgery may not be shown. However, remember the following when planning and performing entropion surgery. The amount of correction must be estimated prior to general anesthesia, as anesthesia will relax the eyelid muscles and globe and create major conformational changes. There are a large number of procedures available to correct entropion. The choice should be determined by cause, location, and extent of the entropion.

ECTROPION: Ectropion is eversion of the eyelid margin. It is often congenital, and a breed characteristic, in St. Bernard's, Bloodhounds, Basset Hounds, and American Cocker Spaniels is also seen sporadically in other breeds. Acquired ectropion can be cicatricial (resulting from previous eyelid damage), senile (caused by decreased tone to the orbicularis oculi muscle), physiologic (seen in hunting breeds, especially following exercise with overall facial muscle fatigue; see slight droop of lower eyelid and relaxation of other facial muscles), and paralytic (following damage to the branches of CN VII; other signs of CN VII damage are usually concurrent). Clinical signs may be only cosmetic. Affected dogs tend to have exposure conjunctivitis with accumulation

of debris in the lower conjunctival fornix. If the ectropion is severe, you may see keratitis. Medical treatment involves cleaning the eyes daily. Surgical treatment is necessary only if keratitis or severe conjunctivitis are present. Recommended surgical procedures include V to Y correction for cicatricial ectropion and the Kuhnt-Szymanowski technique for "simple" ectropion repair.

BLEPHARITIS

Blepharitis (inflammation/infection of the lids) is common, may be localized or diffuse, and can involve one or both eyelids. It may also be unilateral or bilateral. Clinical signs include blepharospasm, hyperemia, swelling, exudation, alopecia, pruritus, and epiphora. Bacterial blepharitis may be caused by Staphylococcus aureus and Streptococcus, and the condition may be associated with systemic pyoderma. Diagnosis is based on culture and sensitivity of the lid margin. Biopsy is often indicated especially with chronic blepharitis, culture lid margins. Treatment is with warm compresses and topical antibiotics for mild cases. Severe/chronic cases often require systemic antibiotics and corticosteroids in certain cases to decrease inflammation. Dermatophytes like Microsporum and Trichophyton can cause blepharitis. Demodex and Sarcoptes may be complicated by self trauma and secondary bacterial lid infection. Localized blepharitis from insect bites, contact allergens/irritants, solar and systemic diseases such as atopy are possible.

TRAUMATIC EYELID INJURIES

Eyelid lacerations are fairly common injuries. It is important to thoroughly examine the globe both externally and via ophthalmoscopy. The nasolacrimal system should also be evaluated for damage, especially with medial canthal injuries. Eyelids are highly vascular and have a great capacity to heal and resist infection. Minimal debridement is needed due to vascular supply, and an eyelid "tag" or flap should never be excised. Post operative care includes topical and/or systemic antibiotics, Elizabethan collar as needed, and topical ice packs during recovery and warm compresses 2-4 days post-op.

EYELID NEOPLASMS:

The majority of canine eyelid tumors are benign. Those that appear histologically malignant tend to be infiltrative but rarely metastasize.

A. **Sebaceous gland adenoma:** Most common lid tumor in dogs, frequently found in older dogs. Visible through the conjunctival surface and extend onto the eyelid. Should be removed if causing irritation or increasing in size.

B. **Papillomas:** In young dogs may be associated with oral papillomatosis. Usually regress spontaneously. Remove only if causing a clinical problem. In older dogs they are usually slow growing and benign.

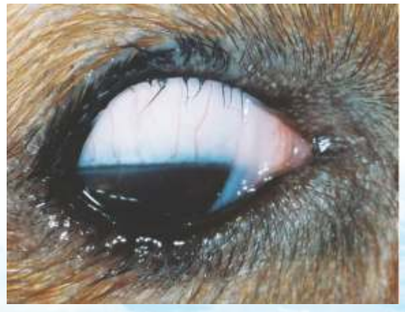
C. **Melanomas:** Frequently darkly pigmented, but not always. Tend to occur at eyelid margin. Early surgical resection is recommended. May recur. Not very responsive to other types of therapy.

D. **Histiocytoma:** Usually raised, hairless, and pink nodules which are rapidly growing. Surgical resection recommended.

E. **Squamous cell carcinoma:** This is rare in the dog but most common lid tumor of cats, cows and horses. May be rapidly growing and highly invasive. Tend to ulcerate early and will occasionally metastasize. Early biopsy and wide surgical excision are imperative. Radiation therapy decreases the chance of recurrence.

EYELASH DISEASES DISTICHIASIS/DISTRICHIASIS

This is most common form of eyelash disease in dogs. Cilia arising from meibomian glands and exit from the normal meibomian gland opening at the lid margin (single cilia - distichiasis; multiple cilia from a single follicle- districhiasis). It can occur on both upper and lower eyelid. Clinical signs include epiphora, blepharospasm, and conjunctivitis, and sometimes keratitis. Only those hairs creating a problem need to be treated. It may be congenital or secondary (chronic) meibomianitis which results in glandular metaplasia. Breeds commonly affected include Poodle, St. Bernard, Golden Retriever, Boxer, Shetland Sheepdogs, Bedlington Terrier, Yorkshire Terrier, Pekingese and American Cocker Spaniel.



Distichiasis

Treatment can be medical (if only a few distichia present and problem is minor, or if animal is poor surgical candidate - use sterile lubricants as needed) or surgical. Epilation is pulling out the hair with topical anesthesia and cilia forceps. This provides temporary relief, but hairs do grow back. Complications with other types of distichia surgery include recurrence of distichia, and scarring of eyelid with or without entropion. Electrolysis involves running a fine needle along hair shaft to the root and using heat to destroy the follicle. It is not recommended if distichia are numerous and it is a time consuming procedure. For basal meibomian gland cautery, an electro scalpel or cryosurgery probe is used to destroy the base of the meibomian glands to a depth of 1/2 the eyelid thickness. It destroys the germinal hair bulb of the distichia. There are several eyelid splitting techniques reported. Cryosurgery works well but depigments lid margins. The depigmentation is usually transient, but can be permanent.

TRICHIASIS

Normal position but hair is directed toward cornea. Few cause clinical disease, most are secondary to previous injury and scar formation. They occurs in Poodles, Chihuahuas and other small breeds. Clinical signs include epiphora, conjunctivitis, and keratitis. Treatment is directed toward removing the offending hairs or correcting the eyelid deviation.

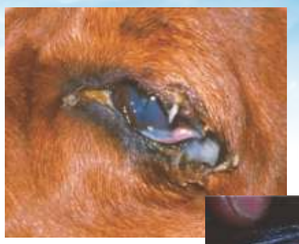
ECTOPIC CILIA

Cilia grow down from the meibomian gland and exits through the palpebral conjunctiva. This occur frequently near the center of the upper lid. Often very small and magnification is required to observed these. Fluorescein stain may coat the mucous and tears on the cilia making it easier to visualize. Animals with ectopic cilia often have ocular (corneal) pain and chronic corneal erosions. Diagnosis is made with the eyelid everted and magnification to look for a papilla of tissue containing the hair(s). Conjunctival resection is the preferred treatment. There is an average of 20% recurrences after electro-epilation.

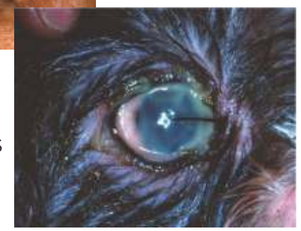
NASOLACRIMAL SYSTEM

Keratoconjunctivitis SICCA (dry eye):

This is an aqueous deficiency of the precorneal tear film (PTF) causing progressive inflammatory changes of the cornea and conjunctiva. Clinical signs are mucopurulent discharge, conjunctival hyperemia, corneal pigmentation and a dull lusterless cornea that varies with the amount of tear production. Breeds at Risk include English Bulldog, West Highland White Terrier, hasa Apso, Pug, Cocker Spaniel, Pekingese, Yorkshire Terrier, Shih Tzu, Miniature Schnauzer, Boston terrier. Burmese cats and many more. Atropine and edotolac topically, and systemic sulfadiazine, salicylazosulfapyridine (Azulfidine®), Tribrissin®(small dogs at increased risk) can cause KCS. Other causes of KCS include canine distemper virus, conjunctivitis scarring the lacrimal ducts, neurogenic damage to the lacrimal gland, immune related disorder of the lacrimal gland (suspected in up to 80% of dog cases), hypothyroidism, Hyperadrenocorticism, Diabetes mellitus, Demodectic mange, SLE, RA, and removal of the superficial gland of the nictitating membrane.



KCS



KCS

Schirmer tear test:

Normal 15-25 mm/minute
Suspicious = 8-10 mm/minute
Low = <8 mm/minute

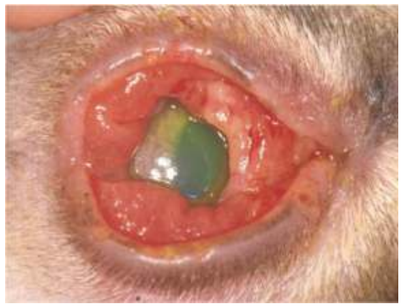
Rose Bengal stain: epithelium of conjunctiva and cornea will remain red if devitalized or necrotic.

KCS Treatment:

Medical: Always attempt 1-2 months of medical treatment because the problem may be transient. Owner compliance may be difficult. Goals are to remove pain and mainctain vision. Replace tears with topical Hypotears (CIBA Vision) Tears Naturale (Alcon), Lacrilube (Allergen), Duratears (Alcon) or Lacriserts (Merck). Stimulate production of tears with topical **0.2% Cyclosporine (CSA), DRUG OF CHOICE FOR KCS.** It is reported to increase tear production in 80% of cases which had not responded to other modes of therapy. CSA inhibits T lymphocyte induced apoptosis of lacrimal gland acinar cells. It also interferes with prolactin, and has antiinflammatory activity. It greatly reduces pigmentary/inflammatory keratitis. The dose is 1/8-1/4 inch strip twice daily but may take up to 12 weeks before increasing tear production. No systemic toxic signs have been noted from topical application. Local irritation has been reported. Topical 0.02% Tacrolimus and 1% Pimecrolimus may have the same effect and may work in place of CSA. Topical 2% Pilocarpine at 2 drops per 20 pounds well mixed in the food twice a day per OS can help ICS in some dogs. . Increase dose slowly until tears produced or signs of toxicity occur. Signs of oral pilocarpine intoxication: salivation, emesis, diarrhea, tachycardia, heart block, pulmonary edema. Give in small amount of food (snack) due to bitter taste. Control Bacterial Flora with topical broad spectrum antibiotic BID (triple antibiotic ointment) and control inflammation with topical corticosteroids, may combine with topical antibiotic (TriOptic-S, triple antibiotic with hydrocortisone); USE ONLY IF NO CORNEAL ULCERATION!!

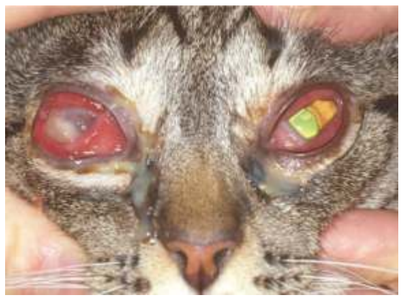
CONJUNCTIVA

CONJUNCTIVITIS: Most common extraocular problem in practice. The signs vary with duration but include hyperemia (redness), chemosis (swelling), follicles and a serous, mucoid, or purulent discharge. Pain is variable, and conjunctivitis burne and itches. Diagnostic tests for conjunctivitis include STT and PRT (routine on all conjunctivitis cases), culture/sensitivity of the fornix, cytology, and PCR tests of viruses and Chlamydia in cats. Etiologies of conjunctivitis include bacteria with a purulent discharge (Staphylococci and Streptococci), viruses such as canine Adenovirus I & II, distemper virus (may have KCS), herpes, and Chlamydophila, and mycoplasma. Fungi and parasites rarely cause conjunctivitis in small animals. Allergies, wind, dust, foreign bodies and KCS can cause conjunctivitis.



NEOPLASIA RESEMBLING CONJUNCTIVITIS.

Hemangioma, hemangiosarcoma, melanoma, papilloma, squamous cell carcinoma can masquerade as conjunctivitis.



Conjunctival lymphoma

NODULAR EPISCLERITIS (nodular fasciitis, fibrous histiocytoma) is a disease process that is between an inflammatory reaction and neoplasia. Nodular, nonpigmented masses of episclera, extending into limbus, nictitating membrane, orbit or eyelid can be unilateral or bilateral. NE is frequently seen in Collies. The growth rate is variable and the diagnosis made with biopsy. Treatment topical and systemic steroids., and azathioprin in a few cases.

NICTITATING MEMBRANE / THIRD EYELID (TE)

Protrusion of the third eyelid can be associated with ocular pain.

Eversion of cartilage The cartilage is abnormally formed, causes nictitans to roll inward or outward. This is seen in Basset Hounds and Weimaraners and can lead to chronic irritation and be associated with "cherry eyes". The treatment is surgical removal of affected cartilage

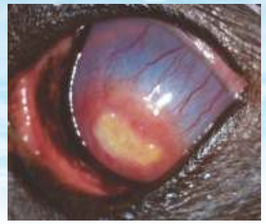
HYPERTROPHY AND PROLAPSE NICTITANS GLAND ("CHERRY EYE")

This is primarily seen in young dogs, less than 2 years, in Beagles, American Cocker Spaniels, Bulldogs, and Pekingese. The gland protrudes above free border of the TE, becomes inflamed and enlarged and may have epiphora, a mucoid discharge and conjunctival inflammation. Treatment is topical corticosteroids and surgical replacement of the gland. Excision of the gland may predispose to keratoconjunctivitis sicca (KCS).

Cherry Eye in a bulldog

ULCERATIVE KERATITIS: The most important disease of the cornea.

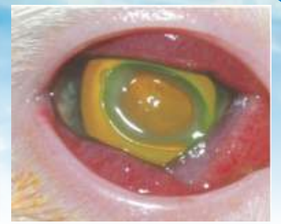
Ulcerative keratitis (corneal ulceration) means that the corneal epithelium and possibly varying amounts of underlying corneal stroma are missing. In simple traumatic corneal injuries in which a small amount of epithelium is absent, healing is rapid. Normal corneal epithelium is a very effective barrier against invading bacteria. If the ulcer



Corneal ulcer

Herpes ulcer in cat

Descemetocele



Dark means cornea is thin.

becomes infected or the epithelium is unable to attach to the underlying stroma, healing is delayed.

In chronic or infected ulcers, proteases and collagenases digest protein and collagen of the stroma and may greatly speed the progression of an ulcer to a descemetocele, rupture of the cornea, and then to iris prolapse (within 12-48 hours in some cases).

Corneal dissolution and liquefaction under the influence of proteases is often referred to as "melting". Ulcers in which proteases are active have a grayish-gelatinous liquefied appearance around the ulcer margin which must be distinguished from corneal edema.

Ulcerative keratitis is the most serious ocular disease for veterinarians. Regardless of the initial cause, all ulcers have the potential to progress to endophthalmitis if not treated.

Alfaxalone as an Induction Agent for Terrapins and Tortoises Anaesthesia

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The aim of this study was to evaluate short-term intravenous anaesthesia with alfaxalone in chelonians. In the first part of the study, alfaxalone at a dose rate of 5 mg/kg was administered intravenously to 10 adult female red-eared terrapins (Trachemys scripta elegans) following 24 hours of fasting. The induction time, tracheal tube insertion time, surgical plane of anaesthesia interval, and full recovery time were recorded. The head, neck and leg withdrawal reflex was lost within 21.09±8.07 seconds. The mean tracheal tube insertion time, the time of surgical plane of anaesthesia and full recovery time were 27.50±12.96 seconds, 26.40±4.72 minutes and 33.70±4.76 minutes, respectively. In the second part of the study, 50 chelonians (20 red-eared terrapins, 10 Hermann's tortoises, eight spur-thighed tortoises, six marginated tortoises and six Russian tortoises) were treated intravenously with 5 mg/kg alfaxalone after administration of 1 mg/kg meloxicam and 2 mg/kg butorphanol intramuscularly. The head, neck and leg withdrawal reflex was lost within 21.52±6.57 seconds, the endotracheal tube could be inserted within 25.76±8.24 seconds, and the time to deep pain sensation loss was 29.46±9.67 seconds. Intravenous use of alfaxalone proved to be a suitable method of induction for inhalation anaesthesia in terrapins and tortoises.

Introduction

Alfaxalone (3-α-hydroxy-5-α-pregnane-11,20-dione) has been reported as being used for sedation or anaesthesia in reptiles (Lawrence and Jackson 1983, Frye 1991, Carmel 2002, Simpson 2004, Scheelings and others 2010). Alfaxalone has been tested in reptiles mainly by intramuscular route (Bertelsen and Sauer 2011, Knotek and others 2011b, Shepard and others 2011, Kischinowsky and others 2013), where high dosages were required to obtain anaesthetic effects. In the few published studies conducted on the intravenous administration of alfaxalone in reptiles there is a variation in recommended dose rates and degree of anaesthetic monitoring. Some authors described a reliable induction of anaesthesia in reptiles with the loss of deep pain sensation within the first two minutes after intravenous administration of alfaxalone at the dose rate of

ntroductio

2–4 mg/kg and full restoration of activity 10–30 minutes later (Carmel 2002, Simpson 2004).

Inhalation anaesthesia in chelonians is difficult due to their very strong head and neck withdrawal reflex and the ability of terrapins and tortoises to hold their breath for extended time. Induction with an injectable agent which allows safe tracheal tube insertion to inhalation anaesthesia is therefore required. The aim of the present study was to evaluate low-dose alfaxalone as a short-acting anaesthetic agent for induction prior to inhalational anaesthesia in terrapins and tortoises.

Material and methods

The first part of the study was performed with a group of 10 adult female red-eared terrapins (Trachemys scripta elegans) aged 12–15 years, with an average weight of 1.20±0.22 kg, housed at the Avian and Exotic Animal Clinic of the University of Veterinary and Pharmaceutical Sciences, Brno, Czech Republic. The animals were housed and handled with the agreement of the Branch Commission for Animal Welfare of the Ministry of Agriculture of the Czech Republic (accreditation no. 46613/2003-1020). The terrapins were kept in standard husbandry conditions in aquaria (74 cm×67 cm×88 cm) with a 12 hour/12 hour day/night cycle provided by 100 W incandescent bulbs, and basking provided by UV/infrared lamps (D3 Basking Lamp 160 W, Arcadia, UK). Temperature in aquaria ranged from 25 to 30°C, with water temperature ranging from 24 to 27°C, and air humidity from 70 to 85 per cent.

After fasting for 24 hours the terrapins were anaesthetised using alfaxalone (Alfaxan 10 mg/ml; Vétoquinol, France) as a bolus dose of 5 mg/kg via the subcarapacial (subvertebral) sinus. The terrapins were placed on an electric heating pad (Bosch PFP 1031; Bosch, Czech Republic) kept at 37.5°C. Selected clinical indicators were continuously recorded, including the loss of the head, neck and leg withdrawal reflex (Fig 1), loss of glottal control enabling the insertion of the endotracheal tube, loss of toe-pinch reflex on the pelvic limb (Fig 2), restoration of toe-pinch reflex, restoration of the head, neck and leg withdrawal reflex, and voluntary movement. The time from the injection of alfaxalone to the loss of the head, neck and leg withdrawal reflex was recorded as induction time. The time from the injection of alfaxalone to the loss of glottal control was recorded as tracheal tube insertion time. Terrapins with tracheal tube inserted were ventilated with air by the use of ventilator (intermittent positive pressure ventilation maintained by small animal ventilator SAV03; Vetronic Services UK). The time from the injection of alfaxalone to the loss of the toe-pinch reflex was recorded as a time to deep pain sensation loss. The time from the loss of the toe-pinch reflex to the restoration of the toe-pinch reflex was recorded as surgical plane of anaesthesia interval. The time from the administration of alfaxalone to the restoration of the head, neck and leg withdrawal reflex, and voluntary movement was recorded as the time of full recovery (Bennett 1991, 1996).

Fig 1: Control of the head, neck and legs withdrawal reflex in redeared terrapin

Fig 2: Control of the toe-pinch reflex in red-eared terrapin

Fig 3: Tracheal tube inserted in spur-thighed tortoise after alfaxalone administration

The second part of the study involved 50 chelonians: 20 red-eared terrapins (Trachemys scripta elegans) aged 6–10 years, 10 Hermann's tortoises (Testudo hermanni) aged 4–15 years, eight spurthighed tortoises (Testudo graeca) aged 5–13 years, six marginated tortoises (Testudo marginata) aged four to nine years and six Russian tortoises (Testudo horsfieldi) aged 4–16 years. Chelonians were patients presented to the Avian and Exotic Animal Clinic for different surgical treatments (soft tissue surgery, ovariectomy, salpingotomy, reposition of penile or cloaca prolapse, penile amputation, orthopaedic surgery on the shell and limbs). After fasting for 24 hours the patients received a combination of meloxicam (1 mg/kg intramuscularly, Metacam 5 mg/ml; Boehringer Ingelheim, Germany) with butorphanol (2 mg/kg intramuscularly, Torbugesic 10 mg/ml; Pfizer, Spain), 25–35 minutes before the alfaxalone administration. Alfaxalone (Alfaxan 10 mg/ml; Vétoquinol, France) was administered as a bolus dose of 5 mg/kg via the subcarapacial (subvertebral) sinus. The patients were placed on an electric heating pad (Bosch PFP 1031) kept at 37.5°C and a tracheal tube was inserted for the isoflurane inhalation anaesthesia (5–3 per cent Isofluran, Nicholas Piramal, Piramal Healthcare UK, combined with oxygen 0.6–1.0 litre/minute; intermittent positive pressure ventilation maintained by small animal ventilator SAV03). The induction time, the tracheal tube insertion time and the time to deep pain sensation loss were recorded (Fig 3).

Statistical analysis of measured indicators was performed by the statistical software GraphPad Prism V.5.04 (GraphPad Software, Inc, San Diego, California, USA).

Results

The results of both parts of the study are summarised in Tables 1 and 2. Intravenous alfaxalone anaesthesia performed well as an induction agent, with rapid onset of activity allowing tracheal tube insertion and a short period of deep pain sensation loss and a more protracted period equating to a surgical plane of anaesthesia, with full recovery (where inhalational agents not used) approximately half an hour post induction.

The results of the second part of this study are presented in Table 2. After the intravenous administration of alfaxalone, the head, neck and leg withdrawal reflex was lost within 12–40 seconds, the endotracheal tube could be inserted within 15–60 seconds, and the time to deep pain sensation loss was 20–70 seconds (Table 2).

Discussion

In chelonians, smooth induction of anaesthesia and uneventful recovery has previously been shown to be achievable with high doses of alfaxalone administered intramuscularly (Kischinowsky and others 2013). This study showed intravenous use of alfaxalone at a dose of 5 mg/kg to be a suitable method of short-term anaesthesia for tracheal tube insertion and induction to inhalation anaesthesia in terrapins and tortoises.

The benefits of alfaxalone administered to reptiles intravenously include rapid induction and fast recovery (Knotek 2010). Our findings in terrapins and tortoises are similar to those reported in lizards (Knotek and others 2011a, 2013a,b), except that time intervals that were monitored within the anaesthesia are longer in chelonians. These differences may result from unique physiological responses of cardiac and respiratory systems to anaesthetic agents, observed in particular taxonomic groups of reptiles (Bennett 1991, Heard 2001). It is also suggested that terrapins have the ability to protect from tissue damage caused by hypoxia and xenobiotics with special physiological adaptations – the ability to enhance their antioxidants defences (Venancio and others 2013a,b). Intravenous use of alfaxalone at a dose of 5 mg/kg proved to be a suitable method of induction to inhalation anaesthesia in terrapins and tortoises.

The presented protocol did not result in any anaesthetic deaths. However, the authors acknowledge that the absence of data on cardiac function (such as heart rate and blood pressure) or respiratory function (such as from pulse oximetry, blood gas analysis or capnography) means a detailed assessment of the safety of this protocol cannot be assessed.

Acknowledgements

The authors extend their thanks to Dr Robert S. P. Johnson, BVSc, MACVSc, CertZooMed, South Penrith Veterinary Clinic, New South Wales, Australia for his valuable comments and kind help with translation of the manuscript. This project received partial support from the Internal Grant Agency of the University of Veterinary and Pharmaceutical Sciences Brno (IGA No. 32/2010/FVL).

TABLE 1: Alfaxalone induction to anaesthesia (5 mg/kg intravenously) in 10 adult female red-eared terrapins

Value	Induction time (seconds)	Tracheal tube insertion time (seconds)	Time to deep pain sensation loss (seconds)	Interval of surgical plane of anaesthesia (minutes)	Time of full recovery (minutes)
Minimum	15	20	21	20	29
Maximum	40	60	70	35	45
Mean	21.90	27.50	29.70	26.40	33.70
sd	8.07	12.96	15.28	4.72	4.76

TABLE 2: Alfaxalone induction to anaesthesia (5 mg/kg intravenously) in 50 terrapins and tortoises*

Value	Induction time (seconds)	Tracheal tube insertion time (seconds)	Time to deep pain sensation loss (seconds)
Minimum	12	15	20
Maximum	40	60	70
Mean	21.52	25.76	29.46
sd	6.57	8.24	9.67

*After fasting for 24 h the patients received a combination of meloxicam (1 mg/kg) with butorphanol (2mg/kg) intramuscularly, 2535 minutes before the alfaxalone administration

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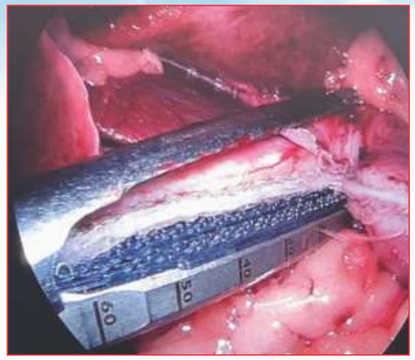
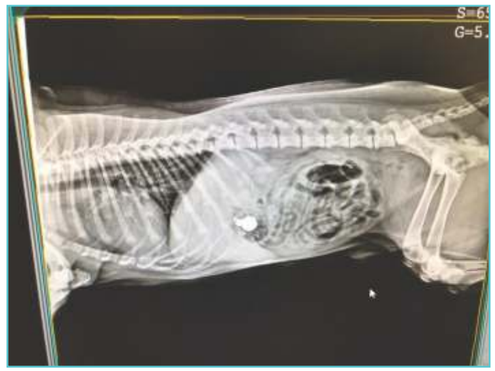
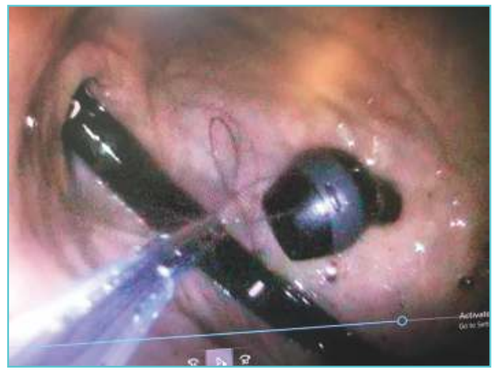
Laparoscopic Weight-Loss surgery in a dog.
PPAM member Dr. Narendra Pardeshi part of the team.



An obese female dog named Deepika, weighing 50 kgs has undergone laparoscopic weight-loss surgery to shed 5 kgs in just a week. The 8-year-6-month old Deepika underwent the laparoscopic sleeve gastrectomy procedure. After losing 5 kgs of excess fat in just a week post-surgery, Deepika is able to walk and move around. The surgery was performed by a team led by well-known bariatric surgeon Dr Shashank Shah and veterinary surgeon Dr. Narendra Pardeshi, who is the founder of Small Animal Clinic, Pune.

Endoscopic removal of Earpod from Beagle
at Dr. S. M. Gadge Prolife Speciality Clinic, Malad West





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