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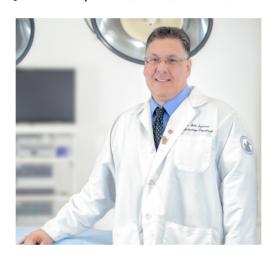
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Preoperative Cataract Patient Requirements...What Goes On After The Initial Eye Examination

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So, your patient, our mutually referred patient for cataract surgery, has had the first ophthalmic consultation with the veterinary ophthalmologist and is deemed an appropriate candidate for phacoemulsification surgery. Now what? The preoperative retinal testing includes an electroretinogram (ERG) and ocular ultrasound examination. Both these evaluations are performed on an outpatient half-day visit, using mild sedation to keep the patient still during these two very non-invasive procedures. The ERG is performed with an electronic computer-generated unit that stimulates a retinal waveform after a dark adaptation phase.

The normal ERG has a positive waveform that is unique to that unit. We have 2 ERG units that evaluate retinal activity and have different "normal" values.

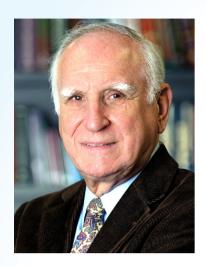
One must know their machine (and its idiosyncrasies). The ocular ultrasound is a high frequency evaluation of the globe and the intraocular contents with a topically applied probe (Figure 1) used after the installation of a topical anesthetic drop. We evaluate for the presence of a cataract, whether the retina is detached or not and for vitreal opacities or marked vitreal degeneration. The anterior and posterior lens capsules are critically evaluated for any potential lens rupture or congenital abnormality such as a posterior bowing of the lens capsule (called lenticonus).



Figure 1 Ocular ultrasound, which is a high-frequency evaluation of the globe and the intraocular contents with a topically applied probe.

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A NOTE FROM THE EDITOR



Summer is here... Yes!

Pets will be, as usual, getting samples of seasoned grilled and BBQ'd treats, most of which will disrupt their GI tracts, so summer means we will be treating more accidents, rashes, ingestions, gastrointestinal disruptions dehydration and injuries of many kinds.

LIVS is always open for any emergencies that may arise and our extended hours remain as before with each service ready to serve the needs of our clients and those patients referred to LIVS. The usual COVID protocols are continuing to be observed and care is still available all hours of every day.

Long Island University School of Veterinary Medicine's Integrative Medicine club recently met at LIVS. We hosted a lecture and demo for the school's club. It was very well received by the students and tons of fun for Dr. Selmer. The LIU students were over the top happy with the talk and demo on Integrative Medicine.

LIVS is fully functioning during the ongoing renovations which are progressing with great anticipation. The "Education Center" and amphitheater has been completed, our indoor walking area "Central Park" is available and so far 22 examination rooms are complete; the new façade has been erected and is being detailed....all exciting to see.

All our departments remain fully staffed to serve our patients all hours of every day and night. Consultations and appointments can be made by calling **(516) 501-1700**. As before we welcome all comments, please submit them to **Imarino@livs.org**.

-Leonard J. Marino, MD, FAAP, LVT

LIVS Exterior Renovation Progress





LIVS.ORG 2





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- 1. Aulakh KS, Lopez MJ, Hudson C, et al. Prospective clinical evaluation of intra-articular injection of tin-117m (117mSn) radiosynoviorthesis agent for management of naturally occurring elbow osteoarthritis in dogs: A pilot study. Veterinary Medicine: Research and Reports. 2021;12:1-12.
- 2. Donecker J, Fabiani M, Gaschen L, Aulakh KS. Treatment response in dogs with naturally occurring grade 3 elbow osteoarthritis following intra-articular injection of Sn (tin) colloid. PLoS ONE. 2021;16(7). e0254613.https://doi.org/10.1371/journal.pone.0254613.
- 3. Lattimer JC, Selting KA, Lunceford JM, et al. Intraarticular injection of a Tin-117m radiosynoviorthesis agent in normal canine elbows causes no adverse effects. Vet Radiol Ultrasound. 2019:1-8. doi: 10.1111/vru.12757.

Homogeneous Tin (117mSn) Colloid] Veterinary Device for Use in Dogs

NAME: Synovetin OA®

 $Tin \ (^{117m}Sn) \ stannic \ colloid \ in \ ammonium \ salt. \ It \ is \ supplied \ as \ a \ 2-4 \ mCi \ (74-148 \ MBq)/mL \ suspension \ for \ intra-articular \ (IA) \ injection.$

NET QUANTITY

Vials contain a prescribed dose up to 6.0 mCi (222 MBq) at the date and time to treat one dog.1 mL of suspension contains 2–4 mCi (74–148 MBq) of tin ("1"mSn) stannic colloid in ammonium salt at the date and time of end use.

PRODUCT DESCRIPTION

Synovetin OA® is a conversion electron therapeutic veterinary device comprising a colloidal, sterile suspension with a pH between 6.5 and 9.0 where at least 90% of the particles have a size between 1.5 µm and 20 µm (HORIBA light scatter instrument). The "im"Sn emits monoenergetic conversion electrons (significant energies 127–158 keV; emission probability 113%) and imageable gamma radiation (159 keV, 86% abundant). Accompanying low-energy emissions are Auger electrons (<22 keV) and X-rays (<30 keV). The half-life of "ITMSn is 14 days. 117mSn decays by isomeric transition to stable "I^TSn.

Excipients include ammonium carbonate ((NH $_4$) 2CO $_9$), ammonium chloride (NH $_4$ Cl), ammonium iodide (NH $_4$ I), iodine ($_2$) and trace tin (Sn) salts

MECHANISM OF ACTION

Synovetin OA^m is a veterinary device consisting of a homogeneous tin colloid which emits discrete (<300 μ m) low-energy conversion electrons confined to the joint space. The colloid is composed of microparticles (1.5 μ m to 20 μ m) that are retained in the joint space of the dog. The particles are absorbed and retained by synovicytes and macrophages in the synovium, resulting in apoptosis and reduction of inflammatory cells. Elimination of the pro- inflammatory cells reduces inflammation of the joint synovium, thereby reducing pain associated with synovits. The data, including radiographic evidence, supports use in Grade 1, 2, and 3 osteoarthritis (OA) of the elbow joint.

CAUTION

Federal law restricts this device to sale by or on the order of a licensed veterinarian trained in the use of radioactive veterinary medical products. Use of this product is restricted to facilities with a compatible Radioactive Materials (RAM) license.

INTENDED USE

 $Synovetin\ OA^{\oplus}\ is\ intended\ to\ reduce\ synovitis\ and\ associated\ pain\ of\ canine\ elbow\ joints\ afflicted\ with\ osteoarthritis.$

WARNINGS

Do not exceed 6.0 mCi (222 MBq) of radiation activity per dog per treatment. Not for use in humans. Keep this and all medications out of reach of children. Consult a physician in case of accidental injection or ingestion by humans.

PRECAUTIONS

Injection should be performed only by a licensed veterinarian skilled in the delivery of intra-articular (IA) injections who is located at a facility that has a RAM license.

Rigorous aseptic technique must be ensured during injection

ROUTE OF ADMINISTRATION

Intra-articular injection. The product must NOT be administered by any other route. Confirmation of needle placement is recommended, whether by anatomical landmarks, fluoroscope, C-arm, ultrasound, or radiography.

DIRECTIONS FOR ADMINISTRATION

Dogs should be appropriately anesthetized or deeply sedated prior to administration to prevent vocalization and resistance to dosing. A 22-ga. needle can be used to inject Synovetin OA® directly into the elbow joint. Pain during and after treatment may occur. Administration of non-steroidal anti-inflammatory agents at the labeled dose may help any post-treatment pain.

FREQUENCY OF ADMINISTRATION

If needed, Synovetin OA® can be readministered to a previously treated elbow at least 12 months after the last treatment.

DURATION OF EFFECT FROM ADMINISTRATION

Effectiveness has been shown to last up to 12 months following a single treatment of dogs with naturally occurring OA of the elbow

MAXIMUM ANNUAL DOSE

Total radiation dose per joint should not exceed 3.0 mCi/joint, with the total body dose not exceeding 6.0 mCi (i.e., two elbow joints during a 12-month period).

ADVERSE REACTIONS

Dogs participating in clinical studies to evaluate safety and effectiveness (n=74 dogs, 97 elbow joints) exhibited no significant adverse reactions when administered Synovetin OA®. Discomfort in the treated elbow has been rarely reported in some dogs up to 72 hours after treatment. If adverse events are observed or suspected, please report them by calling Exubrion Therapeutics® Customer Service at 1-833-942-1247.

POST-INJECTION CARE

Following administration of Synovetin OA®, the dog can recover with other post-operation animals in the general clinic population. Once the dog has fully recovered from anesthesia, it can be discharged to go home with the approval of the facility radiation safety officer or authorized user. All treatment site policies and license requirements should be observed.

OWNER INSTRUCTIONS FOR POST-TREATMENT CARE

When the level of radiation is determined to be below the established levels for release, the dog can be discharged. The dog will, however, retain a low level of radioactivity in the treated joint(s) for a short period of time. Specific written instructions based on the post-treatment radiation dosimetry for care and proximity to the treated dog will be provided by the radiation safety officer (RSO) or authorized user (AU) of a radioactive materials (RAM)-licensed veterinary hospital to the dog owner. These instructions include information on limiting proximity to the dog in the post-treatment period. If in the judgement of the veterinarian, the dog owners are not likely to comply with the release instructions, the product should not be administered. A RAM-licensed veterinary hospital RSO or AU should contact Exubrion Therapeutics® if there are specific questions. Apart from the proximity requirements to protect people there is no requirement for restraint of the dog itself, and it can resume its normal level of activity subject to the distance requirements.

MANUFACTURED BY Theragenics Corporation for Exubrion Therapeutics®

Manufacturer's contact information: Theragenics Corporation 5203 Bristol Industrial Way Buford, GA 30518 Customer Service Phone: 833-942-1247 info@exubrion.com

STORAGE INSTRUCTIONS

Store in the shipping container at controlled room temperature (10°-30°C or 50°-86°F) until ready to use.



Preoperative Cataract Patient Requirements...What Goes On After The Initial Eye Examination

Continued from Front Cover

Some diabetic dogs have such intumescent cataracts that the posterior lens capsule can be focally ruptured and can become an issue during the cataract removal surgery (Figure 2).

If retinal testing is considered appropriate for cataract surgery, the patient is referred to the RDVM for pre-operative bloodwork and a sterile urinalysis sample. Why do we need a sterile urinalysis? If there is an active urinary tract infection, often the post-operative uveitis will be prolonged or even severe to the point of endangering the health of the eye after surgery. For diabetic patients, a sterile urinalysis and urine culture & sensitivity are always advised. Diabetic dogs are particularly prone to develop post-operative complications if a urinary tract infection is not properly addressed beforehand.

Dental disease is a leading cause of chronic uveitis in patients if also not addressed prior to surgery.

Severe dental disease, plaque formation and overt buccal infections are all too common in dogs and can lead to, in some cases, severe post-operative uveitis and even devastating endophthalmitis (sterile or non-sterile). A dental cleaning would be advised either prior to retinal testing or after the ERG and ocular ultrasound evaluations. If the patient has a dental cleaning, we prefer to have the patient placed on a good broad-spectrum antibiotic for at least 2 weeks prior to cataract surgery.

Patients with significant heart murmurs or heart disease should also have a preoperative echocardiogram to assure that the general anesthetic event is a smooth and uneventful one. If there are major cardiac issues, i.e. 5/6 heart murmurs, marked cardiomyopathy or overt heart failure, then the cataract surgery and general anesthesia would not be advised.

Better to have a non-visual patient than a dead one. We have had the privilege of a board-certified anesthesiologist guide us through profoundly serious heart condition patient with success. If an anesthesiologist is available, then take advantage of their expertise.

Therefore, in summary, prior to any cataract surgery, we initially evaluate the potential patient with a thorough ophthalmic examination (including the "Big 3;" namely, Schirmer tear test, fluorescein dye stain and an intraocular pressure check), then schedule an ERG and ocular ultrasound on another date, have all appropriate bloodwork and sterile urinalysis performed, and be evaluated for dental disease and cardiac dysfunction prior any general anesthesia event. Hopefully, this explains the step-wise process that ais performed for the patient seeking cataract evaluation and phacoemulsification.

Any questions or comments, please do not hesitate to contact us.

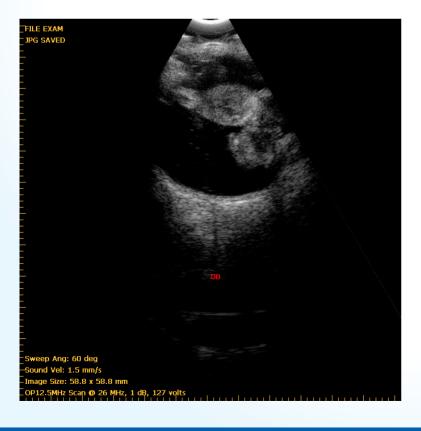


Figure 2: Some diabetic dogs have such intumescent cataracts that the posterior lens capsule can be focally ruptured and can become an issue during the cataract removal surgery



From the Beginning...



To the Present...



Into the Future...



LIVS.ORG 6

Vulvoplasty For Vulvar Fold Dermatitis

Catherine A. Loughin, DVM DACVS, DACCT



A common owner complaint is excessive licking and saliva staining in the perivulvar region. Excessive skin folds, also called a hypoplastic or recessed vulva, can lead to an accumulation of urine and vaginal secretions. The moist, dark environment that is created allows bacteria and yeast to thrive, resulting in vulvar fold dermatitis. This dermatitis can also cause a foul odor that recurs despite regular cleaning of the region. Owners may also report hematuria and frequent urinations that are associated with a urinary tract infection. This type of infection is ascending from the region of dermatitis and from the constant licking of the area. Vaginitis can also cause discharge and foul odors. Other signs noted with vulvar fold dermatitis is scooting along the floor, red irritated skin around the vulva, and inappropriate urination (urinary incontinence).

While all breeds of dogs can be susceptible, medium to giant breeds dogs have been shown to be more at risk. Those breeds who are predisposed to obesity would seem to be particularly predisposed. Dog breeds with a predilection for allergic skin disease and other inflammatory skin diseases, are also at risk. In published reports the mean weight of female dogs is 71 pounds, with a mean age of 3.5 years. Mean duration of symptoms was over 1 year in both studies, which confirms that this condition is easy to overlook and probably under-diagnosed. It is important to include it in the differential diagnosis of chronic UTIs.

Upon physical examination the skin fold may obscure most of the vulva. If the dog has a long hair coat, the hair may need to be trimmed to see the skin fold. Irritation of the skin may be noted as well as a brown discharge and malodor. See Figure 1.

Based on the history and physical exam findings, further diagnostics should be considered. Since urinary tract infections are common, urinalysis with a urine culture are submitted. For further evaluation of the urinary system, an abdominal ultrasound should be performed to assess the bladder for cystitis and stones, and also to assess the kidneys for potential pyelonephritis, calcifications, and masses. A complete blood count and biochemistry should also be done to assess for increases in leukocytes, anemia, azotemia, and other health concerns. Also, bacterial culture of the skin fold most commonly reveals E. coli, but multiple other bacteria can be found.

Medical management of vulvar fold dermatitis is attempted first in most cases. In dogs with mild dermatitis, topical treatment with medicated shampoos and wipes may keep clinical signs to a minimum. Weight loss in obese dogs may also decrease the amount of tissue in the skin fold and open the perivulvar region to a dryer environment. Systemic antibiotics will be necessary for severe skin infections, urinary tract infections or vaginitis. Medical management may be successful is some cases, but in the majority of dogs it is often unrewarding. For those dogs surgery is necessary.



Figure 1: A dog prepped for a vulvoplasty. The redundant skin folds are easily detectable.

Vulvoplasty, also known as episioplasty, is a reconstructive surgical procedure we perform to remove excess skin folds around the vulva to provide better ventilation of the area. The amount of perivulvar skin to be removed dorsally and laterally is determined by the surgeon by manipulating the redundant skin. A crescent-shape incision is made around the vulva and the excessive skin and subcutaneous tissue is removed. The incision is then closed in 3 layers. See figure 2.



Figure 2: Postoperative picture of the same dog. Note the placement of sutures and the lack of redundant skin.

After the surgery we ask the owners to restricted activity for 2 weeks to allow the incision to heal appropriately. Excessive activity can cause dehiscence. Owners may also apply cold compresses to the perivulvar area during the first 24–48 hours to aid in decreasing inflammation. Oral analgesics, such as non-steroidal antiinflammatory drugs or mild opioids will be recommended to keep the dog comfortable. Skin sutures are removed 10–14 days after surgery. Most dogs are irritated by the surgical wound and need to wear an Elizabethan collar or a comfort collar until the sutures are removed. If the dog is scooting or showing other signs of itching Benadryl will be recommended. Broad spectrum antibiotics will also be dispensed to control concurrent skin infections and prevent surgical infection.

Vulvoplasty For Vulvar Fold Dermatitis

Continued from Page 7

The prognosis after vulvoplasty is excellent. Inadequate removal of perivulvar skin may result in persistence of perivulvar dermatitis, and removal of too much perivulvar skin may cause dehiscence due to tension. These complications are avoided with good surgical technique and operative planning. Owner satisfaction with this procedure is extremely high, and complete resolution of preoperative signs if achieved in the majority of cases with only minor complications.

Integrative Medicine at LIVS



Michel Selmer, DVM MS, CTCVMP, CVMMP

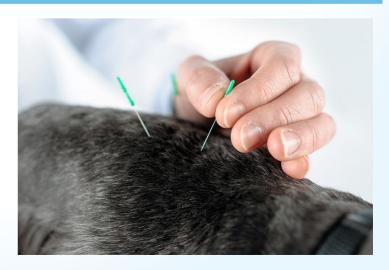
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Neurology/Neurosurgery Department



Patrick Roynard, DVM
MRCVS, DACVIM (Neurology)
(Neurology/Neurosurgery)



Neil Mittelman, DVM DACVIM (LAIM;Neurology) (Neurology/Neurosurgery)

Who are we?

Our board-certified Neurologists are experts in diagnosing and treating complex neurological conditions in animals. With knowledge in today's leading-edge technology and expertise in ongoing research and treatment protocols, your pet will have access to the appropriate care and treatment necessary.

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For more information contact our medical director Dr. Shadi Ireifej DVM, DACVS

at (845) 527-9812 or shadi.ireifej@vettriage.com



Dr. Dominic J. Marino named AVCS Founding Fellow in Joint Replacement Surgery (JRS)



Dr. Dominic J. Marino is one of the most experienced hip replacement surgeons in the country. He is recognized as an ACVS Founding Fellow in Joint Replacement Surgery (JRS). ACVS Founding Fellows are distinguished leaders as evidenced by their exemplary training, extensive experience, innovative research, and committed practice. They devote a significant portion of their professional effort in seeking to prevent, diagnose, treat, and rehabilitate patients in the specialized field of joint replacement surgery. Dr. Marino has performed over 2,000 THR procedures, starting in the early nineties. His areas of special interest include joint replacement surgery, brain surgery, and spine surgery.

Including Dr. Marino, there are only 15 veterinary surgeons recognized by the ACVS as Founding Fellows in Joint Replacement Surgery.

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HYBRID THR



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To learn more about Total Hip Replacement procedures and other Hip Dysplasia treatment options, or to refer a case: 516-501-1700 | livs.org

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