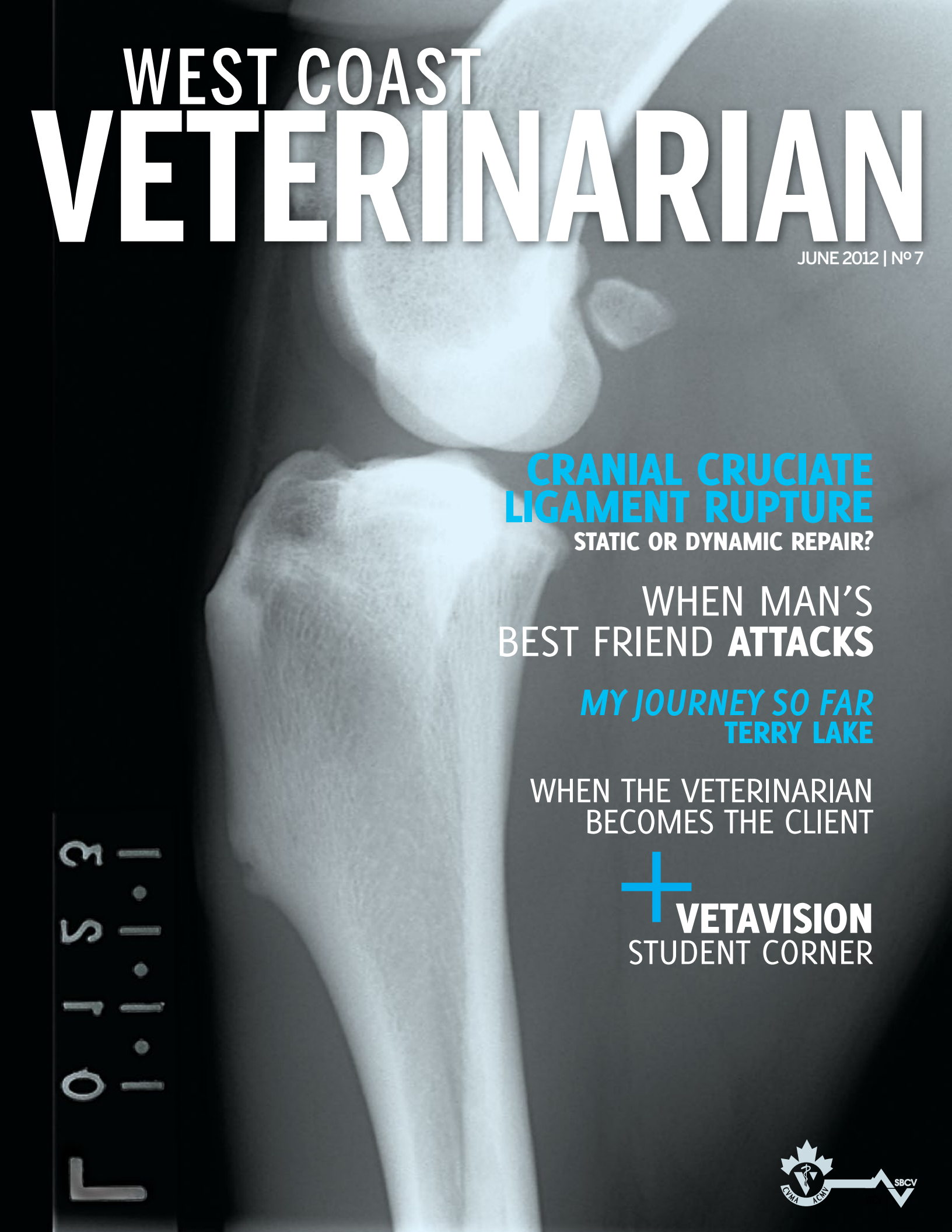

WEST COAST VETERINARIAN

JUNE 2012 | Nº 7

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STATIC OR DYNAMIC REPAIR?

WHEN MAN'S BEST FRIEND **ATTACKS**

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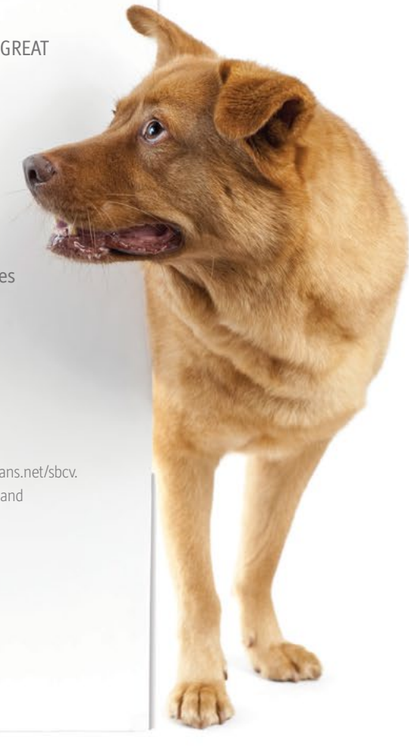
from the editor

COREY VAN'T HAAFF
EDITOR

Dog bite. These two words strike fear in me. Not because I don't want to get bitten, but because, as the owner of three dogs, I don't ever want my dogs to bite someone else. I wish I could say that I cannot imagine how it would feel to own a dog that had to be euthanized due to biting. But I can't say that. I am all too familiar with that feeling.

Reading Dr. Ledger's article on the veterinarian's role in finding answers when dog bite cases go to court re-opened old wounds. I agree with her completely that family pets enrich the fabric of our lives. Some years ago, one of my dogs, a gorgeous 18-month old German wirehaired pointer named Matilda, turned on another of my dogs and caused her death. Five weeks later, the same thing happened, though that dog survived. My Matilda was euthanized that weekend.

Dr. Ledger accurately portrays the horror and shock when things go terribly wrong, as is always the case with dog bites. Dr. Welsman captures the same reaction on a different level, when she describes dealing with a case of ringworm in her own household. It doesn't matter how many times one has seen or testified or even diagnosed a particular issue, it is always different when it hits home.



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MICHAEL KING BVSC, MS, DIPLOMATE ACVS, graduated from Massey University Veterinary College in 2000. After an internship in his home town of Auckland, New Zealand, he then completed a residency in small animal surgery at Virginia Tech in the USA and became a Diplomate of the ACVS in 2007. After 18 months in London, England, he returned again to Auckland, to work in New Zealand's largest private referral practice. In October of 2011, Michael took a position as a surgeon at Canada West Veterinary Specialists, in Vancouver, BC.

TERRY LAKE, is MLA for Kamloops-North Thompson and Minister of Environment. Previously, he was the Parliamentary Secretary for Health Promotion to the Minister of Health Services. He also served as Parliamentary Secretary for the Ranching Task Force to the Minister of Agriculture and Lands. A veterinarian by profession, Terry served as the Mayor of the City of Kamloops from 2005–2008.

REBECCA LEDGER, DVM, is a Vancouver-based animal behaviour and animal welfare scientist who has acted as an expert witness in many dog bite cases in British Columbia and Alberta. Rebecca also provides expertise to humane organizations, the sled dog industry, pet food companies, government, pharmaceutical industries, and the military in Canada, the United States, and Europe. In addition, Rebecca sees cat and dog behaviour cases on referral from veterinarians across British Columbia. Somehow, she has time to raise three children under six years old and still makes her own curtains.

KATHRYN WELSMAN, DVM, graduated from OVC in 2007 and practiced emergency medicine in the Lower Mainland until recently moving to Clinton, BC, where she works as a locum while taking advantage of the beautiful location for outdoor activities.

WCV
JUNE 2012

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WEST COAST VETERINARIAN ISSUE 7

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CVMA-SBCV Chapter

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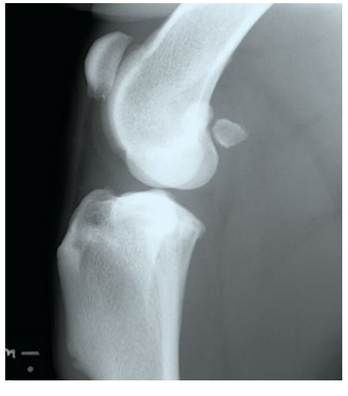

SERVING THE NEEDS OF BC VETERINARIANS

BY LLOYD KEDDIE, DVM

This affiliation between the Canadian Veterinary Medical Association and the Society of British Columbia Veterinarians to create the CVMA-SBCV Chapter has allowed for the delivery of the best possible value to veterinarians in the province of British Colombia. With 440 members this year, the CVMA-SBCV Chapter enhances the provision of both national and provincial services in the most cost-effective way, increases the group purchasing power of our members in BC, and eliminates overlaps and redundancy in the offer of services.

At the national level, here are just a few initiatives the CVMA has been working on for you lately:

CVMA CONDUCTS NATIONAL SURVEY ON VETERINARIAN WELLNESS

In April, the CVMA conducted an anonymous survey among its members to obtain national data on the current situation of Canadian veterinarians regarding the risks of burnout and suicide in our profession. The general findings of the study will be presented at the 2012 Summit of Veterinary Leaders under the theme *Member Wellness—The Art of Maintaining Your Sanity*. The Summit will be held on Wednesday, July 11, 2012 during the CVMA 64th Annual Convention in Montréal, Québec, and is open to all convention attendees. A subsequent summary report will be published in *The Canadian Veterinary Journal*.

BRITISH COLUMBIA CVMA COMPENSATION AND BENEFITS REPORT NOW AVAILABLE

The 2011 *British Columbia CVMA Report on Compensation and Benefits for Associate Veterinarians* is now available in the National Veterinary Economic Hub of the CVMA website. Members can access these and other economic reports by logging in to the CVMA homepage (www.canadianveterinarians.net) and clicking on the Business Management Quick Link. If you do not know your password, or have forgotten it, you can access it by either making a request to the automated system or contacting the CVMA.

VIDEO SEMINAR ON ALTERNATIVE STRATEGIES TO DRUG SHORTAGE NOW AVAILABLE

The Sandoz Canada drug shortage announced earlier this year has resulted in a number of key veterinary drugs currently being in short supply. A seminar called *Alternative Strategies to Address the Current Sandoz Canada Drug Shortage* was videotaped and is now available to CVMA members, thanks to the University of Calgary, Faculty of Veterinary Medicine. To view the 54-minute video, members should log in to the CVMA website and follow the link from the homepage News & Events article.

RECENTLY REVISED ANIMAL WELFARE AND GENERAL POSITION STATEMENTS

The CVMA recently revised the Animal Welfare Position Statement, *Trapping of Fur-Bearing Animals*, and the General Position Statement, *Vaccination Protocols for Dogs and Cats*. The CVMA National Issues and Animal Welfare Committees first develop position statements where there is adequate scientific basis and ethical concern to support the statements, and then present them to the CVMA Council for approval and adoption. These positions are meant to guide the profession, educate the public on the veterinary viewpoint on select issues, and provide a forward-thinking viewpoint on issues based on what is happening, not just in Canadian society and the veterinary profession, but internationally. All CVMA position statements can be viewed on the CVMA website, under Publications.

SOIRÉE QUÉBÉCOISE AT THE 2012 CVMA ANNUAL CONVENTION

After attending one of the many continuing education sessions offered during the 64th CVMA Annual Convention (July 11–14) or participating in the Summit of Veterinary Leaders, why not enjoy a true *Québécois Evening* held on Friday, July 13, 2012. Costumed folkloric musicians with accordion, guitar, violin, and bass will interpret the fabled traditional Québécois repertoire of great music, wonderful dancers and singers! The *Johnny Monti Troop* will create an atmosphere that allows for participation, as well as laughter. There will be an assorted buffet menu that will include authentic French-Canadian fare, plus a variety of other enticing dishes. Tickets for this special event may be purchased with your Convention Registration. Visit the Convention section of the CVMA website to register online today! Questions? Please contact Sarah Cunningham at scunningham@cvma-acmv.org or 1.800.567.2862, ext. 121.

FREE ONE-ON-ONE BUSINESS CONSULTATIONS AT CVMA CONVENTION

Free one-on-one business consultations will be offered to CVMA members during the 2012 CVMA Convention in Montréal on Thursday, July 12, 2012. A limited number of spaces are available. These personalized and private one-hour consultations with Darren Osborne can help you make positive changes in your practice.

Your feedback is extremely valuable to us. If you have an inquiry or a comment to share, please contact the CVMA office at admin@cvma-acmv.org or 1.800.567.2862. Our Member Services Department will gladly assist you.

Lloyd Keddie, DVM, has been part of the veterinary profession for over 37 years. He has found working within the context of the powerful human/animal bond very gratifying, and the sense of fulfillment he experiences as a result of a dynamic and challenging career as a mixed animal practitioner is immeasurable.

cvma-sbcv chapter president's report

BY MARCO VEENIS, DVM

This is the second edition of *West Coast Veterinarian* from our new editorial staff, and I would like to thank Corey and her staff as well as our Magazine Chair, Dr. Sarah Armstrong, for a job well done.

The CVMA-SBCV Chapter is doing well, membership is up, and our newly formed committees are hard at work on your behalf. A few examples: the Continuing Education Committee is busy organizing our Fall CE conference, and the Government Liaison Committee recently met with Hon. Don McRae, the BC Minister of Agriculture, to discuss funding for the Western College of Veterinary Medicine. Dr. Sarah Armstrong has started our Student Liaison Committee, reaching out to BC students at WCVM. Each year we select a young veterinarian to attend the CVMA Emerging Leaders Program where they will hone their leadership skills. CVMA-SBCV Chapter members who have graduated within the past 10 years are eligible for the program, and this year Dr. Heather Fraser of Kamloops will participate in the Emerging Leaders Program and attend the CVMA Conference in Montreal.

The last newsletter from the CVBC promises better communications with the Registrants. I welcome this initiative. With the introduction of the New Veterinarians Act that mandates voting by ballot, there is no longer a need for regular meetings with the Registrants. This hampers an open exchange of ideas and can lead to further dissent among veterinarians due to mis- and non-communication. I believe that open communication with our membership is vital to our success. The West Coast Veterinarian is one way we keep you informed on what is happening in veterinary BC. I also invite you to join our new online forum on our website, http://canadianveterinarians.net/sbcv-forum.aspx, and let your voice be heard.

Marco Veenis, DVM, graduated with distinction from Utrecht University in the Netherlands and practiced in Holland for nine years before moving to Canada in 1998. For the past 10 years he has raised his family and run a successful small animal clinic in Kelowna. Marco enjoys the daily challenges that practice presents him with and is proud to be a member of BC's veterinary community. As an immigrant and newly minted Canadian, he is grateful for the opportunities Canada has offered him and likes give back to his community by volunteering his time for organizations like the CVMA-SBCV Chapter.

HIGHLIGHTS

SEPTEMBER 14, 2012
CVMA-SBCV CHAPTER GOLF TOURNAMENT
Meadow Gardens Golf Club, Pitt Meadows, BC
A great relaxing day on the links with your colleagues and industry friends. Includes BBQ dinner and LOTS of fabulous prizes. Information at www.canadianveterinarians.net/sbcv

OCTOBER 22-23, 2012
DELTA EQUINE SEMINAR
Vancouver, BC
www.canadianveterinarians.net/sbcv
Dr. Jack Snyder, U Cal Davis: Lameness Diagnosis, New Treatments, and Rehabilitation
Dr. Sue MacDonnell, U Penn: Equine Problem Behaviours
Registration packages will be available in August. For additional information, contact seminar organizer Dr. John Twidale, horsedoctor@telus.net.

veterinary continuing education

JULY 11–14, 2012
CVMA CONFERENCE
Montreal, QC
www.canadianveterinarians.net

JULY 24–28, 2012
7TH WORLD CONGRESS OF VETERINARY DERMATOLOGY
Vancouver, BC
www.vetdermvancouver.com

JULY 26–29, 2012
INTERNATIONAL SYMPOSIUM ON CANINE & FELINE REPRODUCTION
Whistler, BC
www.ivis.org/iscfr/2012

JULY 29–AUGUST 2, 2012
INTERNATIONAL CONGRESS ON ANIMAL REPRODUCTION
Vancouver, BC
www.ICAR2012.com

SEPTEMBER 20–22, 2012
SASKATCHEWAN VMA CONFERENCE
Saskatoon, SK
www.svma.sk.ca

SEPTEMBER 20–22, 2012
AMERICAN ASSOCIATION OF BOVINE PRACTITIONERS CONFERENCE
Montreal, QC
www.aabp.org

SEPTEMBER 28–30, 2012
WASHINGTON VMA CONFERENCE
Yakima, WA
www.wsvma.org

OCTOBER 14–16, 2012
CANWEST VETERINARY CONFERENCE
Banff, AB
www.canwestconference.ca

NOVEMBER 3–4, 2012
CVMA-SOCIETY OF BC VETERINARIANS CHAPTER CONFERENCE
Surrey, BC
www.canadianveterinarians.net/sbcv
The 2nd CVMA-Society of BC Veterinarians Chapter Fall Conference will be bringing you top-quality continuing education, close to home.

DECEMBER 1–5, 2012
AMERICAN ASSOCIATION OF EQUINE PRACTITIONERS CONFERENCE
Anaheim, CA
www.aaep.org

FEBRUARY 17–21, 2013
WESTERN VETERINARY CONFERENCE
Las Vegas, NV
www.wvc.org

JULY 10–13, 2013
CVMA CONFERENCE
Victoria, BC
www.canadianveterinarians.net
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WE WELCOME SUBMISSIONS OF OTHER CE OPPORTUNITIES FOR FUTURE ISSUES OF WEST COAST VETERINARIAN MAGAZINE.

SPOTLIGHT ON GOVERNMENT RELATIONS COMMITTEE

BY ROB ASHBURNER, DVM

The Government Relations Committee was formed by the CVMA-SBCV Chapter in order to have an ongoing dialogue with the BC Government ministries that affect veterinary practice in BC. Members of the Committee are Rob Ashburner (Board Liaison), John Cruickshank (Chair), and Dave Kirby.

As the Ministry of Agriculture is responsible for the veterinary profession in BC, we decided to meet with the Minister to introduce the Chapter and discuss areas of concern and opportunities. We met Minister Don McRae on March 6, and the meeting was very positive and productive. The Minister expressed his appreciation of the help his department had received from veterinarians in BC during the transition from the old BCVMA to the new College of Veterinarians of BC (CVBC). We discussed many veterinarian-related issues including the Chapter's role in serving the needs of veterinarians in BC that would not otherwise be addressed by the CVBC.

The Minister was in favour of increasing the number of BC students trained at the Western College of Veterinary Medicine (WCVM) in Saskatoon. He will support us in asking the Ministry of Advanced Education for sustainable funding for WCVM and for an increase in the BC student quota at the WCVM from 20 to 25 students per year. He said he would speak to the Minister of Advanced Education (from whose budget the funding must come) about these matters.

It was agreed that we will meet with him on a regular basis in the future in order to maintain a dialogue and keep him informed about veterinary matters in BC.

Our next task was to meet with the Minister of Advanced Education specifically to discuss funding for the WCVM. The WCVM is funded by all four Western Provinces, and each has a quota of students: the quota for BC is 20, for Alberta 20, Saskatchewan 20, and Manitoba 15. We feel that it is inherently unfair to BC students to have the same quota of only 20, in a province with five million residents, as Saskatchewan which has a total population of only one million. Under the Interprovincial Agreement, the funding per student is increased based on the needs of universities in Saskatchewan. This year, BC Advanced Education is saying there will be no increases in funding for WCVM students while Saskatchewan is asking for a 4% increase.

We met with Naomi Yamamoto, the Minister of Advanced Education, on May 11. Dr. Don Freeman, Dean of the WCVM, accompanied us. The Minister listened to our concerns and reasons for increased quotas and consistent sustainable funding for the WCVM. She explained that this year in BC there are no additional funds for advanced education and no BC universities are being given increases in funding over last year.

We explained that the WCVM already has the lowest per-student funding of the Canadian veterinary schools and allowing for no increases this year will put it further behind and could ultimately adversely affect the quality of training that can be offered at the WCVM. In addition, the relatively small quota of students from BC could result in a decrease in the quality of veterinary services delivered, especially in rural British Columbia. We left the meeting with the understanding that we would keep the discussions going in the hopes that we could arrive at a mutually satisfactory solution to the funding issues at the WCVM.

Rob Ashburner (Board Liaison) ashburner@telus.net
Dave Kirby (Chair)
John Cruickshank

Rob Ashburner, DVM, a small animal practitioner in Vancouver, has been involved in the BCVMA and CVMA in a variety of capacities over the last 20 years. A former president of the BCVMA and CVMA, he is now Treasurer of the CVMA-SBCV Chapter.

YOUR PARTICIPATION IS WELCOME ON ANY OF THE FOLLOWING CVMA-SBCV CHAPTER COMMITTEES:

CONTINUING EDUCATION COMMITTEE

Currently working on getting member input for continuing education preferences and conference locations. John Basterfield, DVM, **Chair**; Barrie Hume, DVM; Tatjana Mirkovic, DVM; Michael Hannigan, DVM, **Board Liaison**.

ECONOMIC SURVEY COMMITTEE

Works with the CVMA Economic Survey staff to provide input and feedback on the annual British Columbia Economic Survey. Dan Thompson, DVM, **Chair**; Rob Ashburner, DVM, **Board Liaison**.

FINANCE COMMITTEE

Provides input on the budget and oversees financial planning for the Chapter. Rob Ashburner, DVM, **Chair**.

GOVERNMENT RELATIONS COMMITTEE

Monitors and responds to provincial government issues that may affect veterinarians and veterinary practice in the province. Dave Kirby, DVM, **Chair**; John Cruickshank, DVM; Rob Ashburner, DVM, **Board Liaison**.

MAGAZINE EDITORIAL COMMITTEE

Provides input, story ideas, content, and general direction for West Coast Veterinarian, the Chapter's quarterly publication. Sarah Armstrong, DVM, **Chair** and **Board Liaison**; Kathryn Welsman, DVM.

MEMBERSHIP COMMITTEE

Works on plans and initiatives to promote membership in the Chapter. Sue McTaggart, DVM, **Chair**; Rick Stanley, DVM, **Board Liaison**.

STUDENT LIAISON COMMITTEE

Serves to keep WCVM BC veterinary students in touch with the association via the student liaison. All BC veterinary students receive a free Chapter and CVMA membership along with a copy of *West Coast Veterinarian*. Sarah Armstrong, DVM, **Chair**; Kailee Price, Student.

VETAVISION

BY KAILEE PRICE

For the vet students of the Western College of Veterinary Medicine, this September will bring not only the return of classes and studying, but also Vetavision! For those not familiar with Vetavision, it's an open house, run by the students of the WCVM, that happens once every three years. It has been a long-time tradition of the college since 1967, just two years after the school opened its doors to the first class of students.

This year Vetavision spans the four days from September 20th to September 23rd. An estimated 12,000 to 17,000 visitors can expect to watch a variety of demonstrations, such as agility, flyball, and the Saskatoon Police Service dogs, in addition to an array of guest speakers, and various interactive booths set up throughout the college. Tours will be given to schools, 4-H, and Pony Clubs, and various other groups.

Saturday, September 22nd is "Pre-Vet Night" where students interested in pursuing a career in veterinary medicine can tour the Veterinary Medical Centre, speak with current students, and attend talks by Dr. Chris Clark—on the various career options with a DVM degree—and by Associate Dean Dr. Bruce Grahn—on the requirements for applying to attend the college. Other speakers include Dr. Todd Shury telling of his experiences as a wildlife veterinarian, Dr. Jerry Haigh performing readings from his book *Of Moose and Men, and Other Creatures*, and Dr. Tawni Silver presenting a talk on "The Wild and Wonderful World of Veterinary Radiology."

The majority of the booths will be created and run by students, covering 30 different topics such as radiology, oncology, small and large animal surgery, clinical pathology, anatomy, and aquaculture. These student booths will allow people to try out some suture patterns, pull a model calf using obstetric chains, visit a fistulated cow, view plants and common household items that are toxic to pets, test their handwashing skills using powder that is visible under a black light, and meet Jasmine, the college's Swainson hawk. Of course there will also be many live animals that visitors can meet. And two new booths covering the topics of nutrition and public health have been added to this year's Vetavision.

As students at the WCVM, we have been planning our booths for months with many lunchtime meetings, brainstorming, and plenty of emails. The booth I have been helping to plan is the Bird and Exotic Animal booth. At every booth we will have roughly three students from each of the incoming first-year class, the second-year class, and the third-year class. It has been fun so far learning about different exotic animals, working with students from other years, and using a bit of creativity to develop an interesting and interactive booth. I have heard from other vet students that they have really enjoyed helping out with the previous Vetavision—I know I am looking forward to it, and I hope that a lot of visitors will soon be looking forward to it too.

I am grateful to Angela Le, WCVM class of 2013, who is in charge of the Vetavision team and who supplied me with much of the information provided above.

Kailee Price is a first-year WCVM student from Surrey, BC. She is also the CVMA-SBCV Chapter's first student liaison. Her role will be to communicate the Chapter's vision and current news/events to our BC veterinary students at WCVM, and she will also be distributing our magazine to these students.

DOSIMETERS

& THE THOMPSON RIVERS UNIVERSITY AHT PRACTICUM STUDENT

BY CATHY HALL-PATCH, RAHT

The clinical practicum is a valuable educational component of the two-year Animal Health Technology (AHT) campus program at Thompson Rivers University (TRU) in Kamloops. Over the past months, there have been some questions about radiation exposure and provision of dosimeters for TRU AHT students while on a practicum. While this information is written with the TRU AHT student in mind, you may also find it helpful for other students who are completing a practicum or an internship at your clinic. We encourage you to contact the program/practicum coordinator of the student's host institution if you have questions about non-TRU students.

WORKERS COMPENSATION ACT, WORKSAFEBC (WSBC), AND THE TRU AHT PRACTICUM STUDENT

Under the Workers Compensation Act, which is administered by WSBC, AHT practicum students fall under the definition of both a "*worker*" [Excerpts and Summaries, Part 1 – Definitions) and a "*new worker*" (Section 3.22a).

Regulation 7, Section 7.22 (Monitoring Exposure) of the Act specifies that "Unless exempted by the Board (WSBC), if a worker exceeds or may exceed the action level, ionizing radiation, the employer (practicum site) must ensure that the worker (AHT student) is provided with and properly uses a personal dosimeter acceptable to the Board."

Q What do these WSBC regulations mean for the practicum site?

A A dosimeter needs to be provided by the clinic for the TRU AHT student for the duration of the practicum.

NATIONAL DOSIMETRY SERVICE (NDS) AND THE USE OF DOSIMETERS AT THE WORKSITE

Conversations with NDS staff indicate that dosimeters are not only assigned to a specific individual, they are also assigned to the worksite (e.g., veterinary facility) where they were registered.

In addition, the *Best Practices for Handling a Dosimeter* (pg. 5) from the NDS Service Guide strongly recommends for accurate detection of radiation exposure that:

An assigned dosimeter is not to be worn at a non-work location (e.g., outside the radiology room or when not doing radiographic procedures) *and* is not to be removed from the worksite (e.g., the clinic where the dosimeter has been registered).

This recommendation has been established so that if an exposure is detected, the NDS can specifically identify where that exposure occurred. If a single dosimeter is worn at more than one worksite and registers a reading exceeding the action level, it would be extremely difficult to tell at which worksite the exposure occurred. To locate the source of the exposure, it will mean that all worksites will need to be investigated by WorkSafeBC.

Thus an individual who works at more than one veterinary facility (worksite) would have an assigned dosimeter at each worksite and would not take the dosimeter from one facility to the other.

Q What do these NDS recommendations mean for the practicum site?

A The clinic issues a personal dosimeter for the AHT student. The clinic provides an appropriate location (away from radiation sources when not in use) where the AHT student can store the dosimeter.

Q Can TRU issue a second dosimeter for the AHT student that is specifically for practicum?

A As indicated above, the dosimeter is assigned to the worksite (veterinary facility) where it is registered. In this case, the worksite for the second set of dosimeters would still be TRU. As these dosimeters are registered at TRU, they are not to be taken to another facility.

PROVIDING A DOSIMETER FOR A TRU AHT PRACTICUM STUDENT

The two three-week AHT practica take place in February and May of each year. The TRU AHT practicum coordinator strongly encourages AHT students to discuss ordering a dosimeter with the practicum site early in the Fall semester. This gives clinic personnel sufficient time to request a dosimeter within the regular ordering timeline.

That said, there are times when due to extenuating circumstances, a practicum site is not arranged until December/January or March/April, which may mean the clinic needs to order a dosimeter outside the regular three-month wearing period. This can potentially lead to a one-time ad hoc dosimeter request fee of more than $100.00.

Q How can the situation above and the ad hoc dosimeter request fee be avoided?

A The NDS recommends that clinics request and keep onsite a spare dosimeter, which allows the clinic the flexibility to host a practicum student at any time.

Q How is a spare dosimeter acquired?

A The clinic requests the spare dosimeter plaque and holder at their regular change period. This way there is only a minimal fee charged for the initial dosimeter and the ongoing processing fees (approximately $44 a year based on five dosimeters in a group—costs will vary based on the number of dosimeters in a group). The spare dosimeter is stored away from any radiation and is assigned to the student when they come for a practicum. (See the NDS Service Guide for instructions.)

Q Can this spare dosimeter be assigned to another person within the quarterly period?

A Once the spare is assigned to a student, it is used only by that particular student and is not reassigned to another individual during that quarterly period. Reassignment to a different student would mean that any exposure would not be registered to the correct user. (See *Terms and Conditions in Service Guide: National Dosimetry Services A Measure of Safety*.)

Note: The purpose of this article is to provide information about the Workers Compensation Act and the regulations related to AHT practicum students, best radiation safety practices, and options for ordering a dosimeter for a practicum student. *The Service Guide: National Dosimetry Services A Measure of Safety* (2009) produced by the National Dosimetry Service (NDS) is a valuable source of information and is referenced throughout this document. For more information about Dosimeters or to receive a copy of the Dosimeter Service Guide, contact NDS at 1-800- 261-6689 or NDS-SND@hc-sc.gc.ca. WCV

> "AN INDIVIDUAL WHO WORKS AT MORE THAN ONE VETERINARY FACILITY (WORKSITE) WOULD HAVE AN ASSIGNED DOSIMETER AT EACH WORKSITE"

WHEN MAN'S BEST FRIEND ATTACKS

THE VETERINARIAN'S ROLE IN FINDING ANSWERS

BY REBECCA LEDGER, DVM

The tragic death of a newborn baby in Airdrie earlier this year had pet owners, animal experts, and the RCMP searching for explanations as to why the family's pet Husky, which is also a recreational sled dog, bit the owners' infant boy, resulting in the baby's death.

The RCMP describes the attack as unprovoked since it involved a newborn infant. Therefore, the breed and the temperament of the dog, together with the circumstances in which the child and dog interacted, are instantly drawn into question.

Was the dog predisposed to attack? According to newspaper reports, it had no history of aggression. Furthermore, dog bite statistics indicate that only three people have died as a result of attacks from Huskies and their crosses in Canada over an 18-year period (Canadian Veterinary Journal, 2008), suggesting that the Husky is not a dangerous breed.

Were the parents at fault for being negligent in some way? Apparently the dog had been confined in the basement but escaped from a crate to get to the child. So, why else did this tragedy occur? In these situations, collaboration between the behavioural and veterinary professions is often key in providing the Courts with the insights needed to draw the correct conclusions and thus make appropriate decisions for public safety.

THE REPORTING PROCESS

I have provided expert opinion in many dog bite cases in BC and also Alberta, both for the Prosecution, typically the City Law Enforcement, and the Defence, typically owners who have had their dogs seized by Animal Control. In some instances, if both parties agree, the expert might also be asked to be an impartial witness for both sides.

A case file is usually started as soon as a complaint is made to Animal Control or the police that a dog has bitten a person or another animal. An attending officer is often the first to assess the dog and the circumstances in which the dog has allegedly caused harm, and to then propose the fate of the dog.

There are various possible outcomes for dogs that have been involved in bite incidents. At its least impactful, the Court may require that the dog is returned to its owner with no restrictions, or at its most severe, the Court may order that the dog be euthanized. In most of the cases I have worked on, the dog is eventually returned to the owner but with a range of restrictions imposed. These may include that the dog be neutered, muzzled, and kept on-leash when in public places, only walked by specified people, and that it receive or attain a particular level of obedience training or behavioural therapy. Contrary to what many people believe, there is no 'one bite rule' in BC which applies to aggressive dogs, meaning that a dog may be subject to any one of these recommendations even after just one aggressive incident, or even if the Animal Control Officer has reason to believe that the dog is dangerous even if it has not actually inflicted serious injury. The proposed sentence is entirely at the discretion of Animal Control and, ultimately, the presiding judge.

Not every bite incident requires a trial. If the dog's owner agrees to these recommendations from law enforcement, then there may be no need for a trial. However, if the owner disagrees with the sentence and wishes to contest the recommendation, then the case may go to court. At this point, both the Prosecution and the Defence may seek the expert opinion of an animal behaviour professional.

BEING RETAINED AS AN EXPERT WITNESS

The role of the expert witness is to provide the Court with an independent and objective opinion in the area in which they are professionally qualified and proficient. The impartiality of this opinion is paramount, and overrides any responsibility to the party who is retaining the witness—they are there to inform the Court. Having said this, before they are retained, there is often an informal discussion with the prospective party to ascertain whether or not the perspective of the expert witness is favourable to their case. Based on this, the party may or may not decide to retain them. What is not appropriate is for the expert to adjust their opinion to suit their party.

THE ROLE OF THE EXPERT WITNESS

Once retained, the extent of the expert witness's input can vary considerably. They may be asked to simply write a report or to testify in court. The Court typically asks for opinion on a range of issues. Was the dog provoked? Did the dog's reaction justify its response? Is the accused dog dangerous? Are the owners responsible enough to manage a dog like this? And, will this dog bite again? The opinions of both the behaviourist and the veterinarian are both extremely helpful in gaining answers to these questions.

WAS THE DOG PROVOKED?

Dogs bite for many reasons, and it is this motivation behind an attack on which the Courts seek expert opinion. To assist with this, the expert needs to understand the behaviour of the dog at the time of the attack, as well as the circumstances leading up to it. This evidence is interpreted based on witness statements of the event.

Where was the dog when the attack happened? Might the dog have felt threatened—was it fearful? Did the dog attempt to get away before it attacked? Did the dog give any warning signals first?

If the answer to these questions is yes, then it is likely that the attack was motivated out of fear, that the dog was displaying defensive aggression and he was in some way provoked. In fact, most dog bites are inflicted as a result of this type of defensive aggression.

"COLLABORATION BETWEEN THE BEHAVIOURAL AND VETERINARY PROFESSIONS IS OFTEN KEY"

If the answer to these questions is no, if the dog was the instigator of the bite, then other explanations may be sought. Was the dog confident in its attack? Did it pursue the victim with no attempts to avoid the conflict? Or was the bite actually the result of a predatory attack?

Predatory behaviour can sometimes be directed at non-prey targets if they show even a single underlying salient feature common to typical prey—such as being small, squealing, or moving quickly. A dog's aggressiveness does not necessarily correspond to its predatory behaviour, which is why dogs with no history of aggression may still bite nonetheless.

THE VETERINARIAN'S ROLE

Dogs rarely bite for no apparent reason, so, once the source of the provocation has been identified, the discussion usually turns to whether or not the bite was 'justified.' Subjective terms, such as 'reasonable' and 'fair,' are used, to determine whether the dog's response was 'acceptable,' given the degree of provocation.

It is in these instances that the veterinarian's expertise can be especially enlightening, by helping to elucidate whether the dog's aggression was attributable to a diagnosed and treatable medical condition. Or, was the dog's threshold for aggression affected by the presence of a medical issue?

ABOVE A dog that attempts to solicit attention and gives a friendly response as you approach the kennel is very unlikely to bite.

"DOGS WITH NO HISTORY OF AGGRESSION MAY STILL BITE"

This not only helps to identify any mitigating circumstances to the attack, but also the chances that the dog could be successfully rehabilitated and managed in the future.

Veterinarians and owners frequently rely on behavioural changes in pets to help identify underlying injury or disease. Aggression is an important cue that underlies a range of health issues, such as various metabolic diseases (e.g., kidney, liver, and thyroid disorders), tumours, hormonal and neurological imbalances (e.g., related to GABA, serotonin, and dopamine), toxicity (e.g., food, lead), nutritional deficiencies (e.g., thiamine), and pain resulting from injury or disease.

As any veterinarian knows who has attended to an animal in distress, pain can drastically alter a dog's tolerance to being approached, touched and handled. A dog that is experiencing pain may attempt to bite in order to protect itself from further discomfort, or a dog with elevated anxiety may perceive benign situations as potentially threatening, even when they are not, making the dog more likely to respond with defensive aggression.

Despite its significance in a case, this medical perspective is often omitted from evidence, in part because 'behaviour' has historically been considered as a 'training' issue rather than something with a strong physiological basis.

The veterinarian's ability to diagnose or rule out underlying medical conditions, although often critical to the outcome of a case, is not always straightforward. Seized dogs are not usually permitted to leave the holding facility, and thus the range of tests that the veterinarian can administer are limited to those that can be undertaken within a kennel. And, if the dog is highly territorial in its kennel, gaining access to the dog may simply be too dangerous to attempt. But, if diagnostic tests can be done, and successful treatment demonstrated, then this bodes well for the release of the dog to the owner. At this point, the Court then has more questions for the veterinarian…

OWNER COMPLIANCE

It is often argued by the Defence that an owner who makes the emotional, temporal, and financial investment necessary to have their seized dog returned to them has already demonstrated a high level of commitment to their dog. In addition, however, the Courts often want to hear from experts regarding the degree to which they feel that the owner has complied with advice in the past and the likelihood that they would comply with a management plan should the dog be released to them in the future.

In these instances, the veterinarian may be asked how compliant the owners have been previously with medical and behavioural recommendations. Can the owner afford to implement the changes that are required? And, based on the veterinarian's personal interactions with the clients, do they believe that the owner will comply with recommendations related to behavioural management?

The case of the Husky in Airdrie is a sobering reminder that even when owners do act responsibly, things can still go tragically wrong. Sometimes the most obvious conclusion to draw is that it was an accident.

Our family pets enrich the fabric of our lives and our family interactions. When something does go so tragically wrong, we are all horrified and shocked and want immediate answers. It is critical that the RCMP and Animal Control undertake the due diligence to understand what happened, and that they seek medical information from veterinarians about the dogs involved, so that we are all able to gain an accurate perspective into these events, and prevent similar incidents from happening again. WCV

OPPOSITE TOP Many dogs bite when they are anxious or fearful. A kennelled dog, which has no escape route as it is approached, is at risk of biting. **BOTTOM RIGHT** The behaviour of the dog can often restrict the type of tests and treatments that can be administered. The veterinarian needs to be cautious when entering the kennel with a dog that is deemed as dangerous. **BOTTOM LEFT** Dogs seized by Animal Control are rarely permitted to be taken off-site for veterinary care. The veterinarian needs to be able to assess the dog within the kennel. *Veterinarian in photos: Dr. Anna Wallace.*

MY JOURNEY SO FAR ...

BY TERRY LAKE, DVM, MINISTER OF ENVIRONMENT FOR BRITISH COLUMBIA

One of the most common questions people ask me is "Why would you go from being a veterinarian to being a politician?" It's true that I went from being a member of one of society's most respected professions to a member of one of the least respected, but it was not in one fell swoop. In fact, as a vet, I spent a lot of time involved in the politics of the profession, serving two terms on the council of the old BCVMA and then as an executive member of the World Small Animal Veterinary Association.

Like most "professional" politicians, I can trace my career roots back to high school student councils where the attraction of winning a popularity contest as well as having a say in how things are done proved too powerful to resist. From the number of times I was asked when I would run for real office, I resigned myself to the likelihood that I would eventually see my name on a ballot. I always thought if people were opinionated and thought they could do a better job, then they should be prepared to stick their neck out publicly—sometimes I wish I had just thought that and not said it out loud.

So how does being a veterinarian prepare someone for a career in politics? Well, first of all, we all remember the heaping mounds of information we were expected to read, assimilate, and regurgitate in vet school. The past year and a half of being Minister of the Environment has brought back many memories of cramming but without the foosball breaks. The major difference is that all my exams are played out in Question Period or on Global Television, and my marks are about the same as they were in Saskatoon (class average, in case you were wondering).

While the public face of politics may seem like a series of sound bites and "key messages," the day-to-day challenges are not dissimilar to practice, in which problem solving is the order of the day. Every issue has a history, symptoms, and a need for some diagnostics before a treatment plan is devised. Just like practice, not every decision is based solely on the science. Stakeholders (clients) must be consulted, and some agreement must be reached on the costs and benefits of a course of action. Sometimes the science rules the day, while other times—not so much. Perhaps the greatest difference is the number of people and viewpoints involved in political decision making. A cabinet has 18–20 voices with another 25–30 in caucus. It's a very adept cabinet minister who can bring everyone around to his or her position, and often a choice has to be made about which hill to die on. Even with the best clients, best science, and lots of financial resources we can all think of cases that did not turn out the way we had expected. We hope the client, and in my case the electorate, will judge us on a body of work rather than on one case or issue (can you say HST?)

A key to success in practice and politics is the ability to communicate. In practice, the client needs to understand the problem and the recommended course of action, so communication must be clear and concise. In politics, many would say the art of communication is saying a lot while leaving some wiggle room in the course of action. This may be the case with public communication in which every statement can be used against you, but when working with colleagues and staff, clear and concise rules the day.

Likely the most common trait of a politician and a veterinarian is the desire to make a difference. In practice we see so many examples of how our work affects the patient and their owners and usually this is in a relatively short period of time. In politics the result of tough decisions often is not evident until years later. As Mayor of Kamloops, I led a team that had a vision to invest in the community at a cost of tens of millions of dollars from the local taxpayers, which did not sit well with everybody. Now when I see the immensely popular new sports facilities, the thriving downtown, and the successful supported housing projects, I feel pretty proud but can still point to the scars earned along the way.

While improving the lives of animals is an inextricable part of our veterinary profession, I continue to look for ways to advocate for both companion and domestic animals. In local government I had the opportunity to bring in bylaws banning the use of exotic animals in circus performances and craft dog owner responsibility bylaws. While working provincially I have served on the Ranching Task Force, Sled Dog Task Force, played a role in a private members bill advocating responsible breeder legislation and assisted with the new Veterinarians Act. I guess you could say you can take the boy out of veterinary medicine but not the veterinary medicine out of the boy. It has been and still is a great honour to be part of the profession, and I want to recognize all of my colleagues who have supported my efforts along the way and also those who contribute to the "politics" of the profession serving at the national, provincial, and local levels—without you we would not be "one of the most respected professions" in the country. WCV

IT'S "JUST" RINGWORM
LESSONS LEARNED

BY KATHRYN WELSMAN, DVM

For most veterinarians, ringworm brings to mind a fairly innocuous but sometimes annoying zoonotic fungal disease. That was my impression too until I recently had to deal with its effects on my own household, which included treating two cats, one dog, and two humans. In most healthy animals, ringworm is a self-curing disease, but proper treatment accelerates the process, which is what I was hoping for. According to much of the literature, the best treatment is a three-pronged approach including topical, systemic, and environmental treatment simultaneously. Here is the treatment plan I chose for my household:

1. Lime sulfur baths twice weekly (all pets)
2. Itraconazole 5–10mg/kg daily dose given for two weeks, then on alternating weeks until negative culture (all pets)
3. Treat dog's secondary pyoderma with cephalexin
4. Use e-collar on dog to reduce self-trauma to face and prevent the spread from the face to elsewhere on the body
5. Topical miconazole on lesions
6. Isolate the cats to one room and the dog to another
7. Vacuum animal rooms daily to remove hair
8. Change and bleach animal bedding daily
9. Bleach litter boxes, food and water bowls weekly
10. Bleach the entire house once weekly after initial "top to bottom" thorough cleaning
11. Change furnace filter every two weeks
12. Change vacuum filter after every use
13. Throw out carpets, brooms, dog and cat beds, toys, leashes, bowls, etc., that can't be bleached or dry cleaned
14. Dry clean cushion covers, carpets, etc.
15. Bleach all family bedding, clothes, and towels daily
16. Clean vehicle upholstery
17. Shave cats

"I HAD LEARNED THREE IMPORTANT LESSONS"

After nearly three months of this agonizing routine and finally getting everyone ringworm free, I realized I had learned three important lessons about the veterinary profession.

LESSON 1: POOR OWNER COMPLIANCE

When I drew up my plan I didn't really take into consideration the amount of effort it would require and what kind of compliance I would have with my own instructions. It turned out to be poor because the lime sulfur stunk, the cats hated the baths, the dog resented the baths and destroyed about five e-collars, the cats detested their medication, and the dog complained about being cooped up by himself. I also didn't shave my cats, as I just couldn't imagine them with no hair. On top of this, during the isolation, my guilt got the best of me and my own very strict rule about which toys my Lab could have went out the window due to his boredom. Unfortunately, throwing caution to the wind was a bad idea as he ended up eating a Frisbee and required foreign body surgery in the middle of his ringworm treatment. Despite the fact that I understood all the medical reasons for following my protocol, I still fell short of my own recommendations. It really put into perspective the concept of poor owner compliance and highlighted some of the reasons that cause this compliance to be so low. It has reinforced my need to understand my clients better and to collaborate with them to formulate plans that are achievable for them instead of dictating what needs to be done.

LESSON 2: EMOTIONAL TOLL

Now, think of the emotional toll all of this might have on a client. Once the client leaves the veterinary clinic, we probably don't think about what is truly going on at home. In my case not only was I isolated from my pets, I felt bad about their sanity and felt horrible for bringing ringworm into the house. I felt like a bad owner every time I medicated my cats, and matters escalated until they would cringe whenever I came into the room, or I would force my husband to be the "bad guy." The dog had little socialization for fear we would spread the fungus, and I worried about transmitting it to my clients, family, and friends. This was a lot of emotional burden to carry considering it was "just" ringworm, and not a life-threatening or debilitating disease. It made me think whether or not I really understand what my clients are facing when we give them a diagnosis and treatment plan. Until now, I usually spent a lot of time counselling clients when delivering news about big diseases like diabetes, IMHA or lymphoma, but after this experience I'd like to think that I'll be more sensitive when discussing any kind of diagnosis no matter how insignificant I think it is, as the person hearing the news might think otherwise.

LESSON 3: FINANCIAL TOLL ON THE CLIENT

When all of this was over, I finally sat down and started to add up the costs; it would have been better if I hadn't! I figured out what I was out of pocket for all the veterinary care, cleaning supplies, increased electrical/heating bills from all the laundry, dry cleaning, furnace filters and replacing all the bedding and animal supplies that had to be thrown out, and it amounted to around $3,000.00. Now imagine what a client would have paid. A bit shocking for "just" ringworm. This in itself was certainly an important lesson—to realize that many of our clients aren't expecting these big costs, and that this can be extremely stressful and even unattainable for some. I also had never stopped to think about all the "other" non-medical costs that a client might incur while treating their pets, and what further burden these put on a client.

So after all is said and done, even though I don't wish a ringworm outbreak on anyone, likely it is valuable for veterinary team members to be "the client" more often and see things from their perspective in order to make us better care givers and remind us of these important lessons. WCV

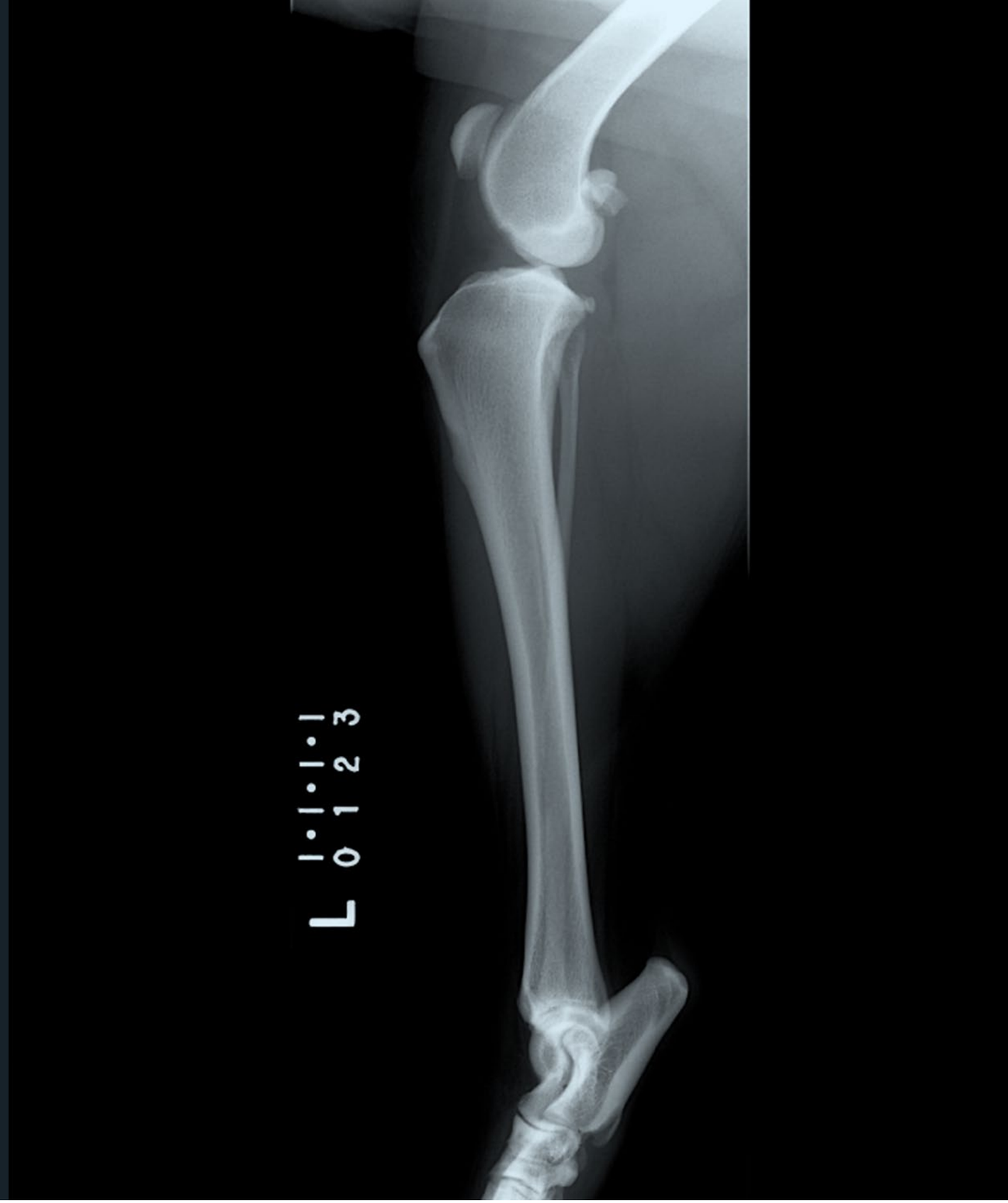
TIBIAL TUBEROSITY ADVANCEMENT

A DIFFERENT APPROACH TO THE CRANIAL CRUCIATE

BY MICHAEL KING, BVSC, MS, DIPLOMATE ACVS

Cranial cruciate ligament rupture is one of the most common orthopedic conditions seen in dogs. However, despite a huge amount of research, we still do not understand what the underlying cause of canine cruciate insufficiency is.

With the plethora of surgical techniques described over the past 50 years, it is also clear that the "perfect" method of treatment has probably not been determined yet. We are getting closer though.



PATHOGENESIS OF CRUCIATE INJURY

When first definitively described in 1952, cranial cruciate ligament rupture was thought of as a parallel to the similar condition seen in people, where there is trauma to the knee: *abnormal forces exerted on a normal ligament*. As has become clear more recently, rupture in canine patients is due to primary degeneration of the ligament itself over time, which subsequently tears (Figure 1) with typical physical activity: *normal forces acting on an abnormal ligament*.

The reason for this degeneration is unknown, though a variety of causes have been proposed including stifle conformation, immune-mediated processes, age, and synovial inflammation. There does appear to be a genetic component, with Labradors, Boxers, Rottweilers, and many other breeds predisposed, which helps explain the frequently bilateral nature of this condition.

In contrast, canine cranial cruciate rupture is relatively underrepresented in Greyhounds (and sighthounds generally), despite their extreme athletic performance. Genetic markers have been identified in Newfoundlands, and research is continuing to try and determine similar markers in other breeds.

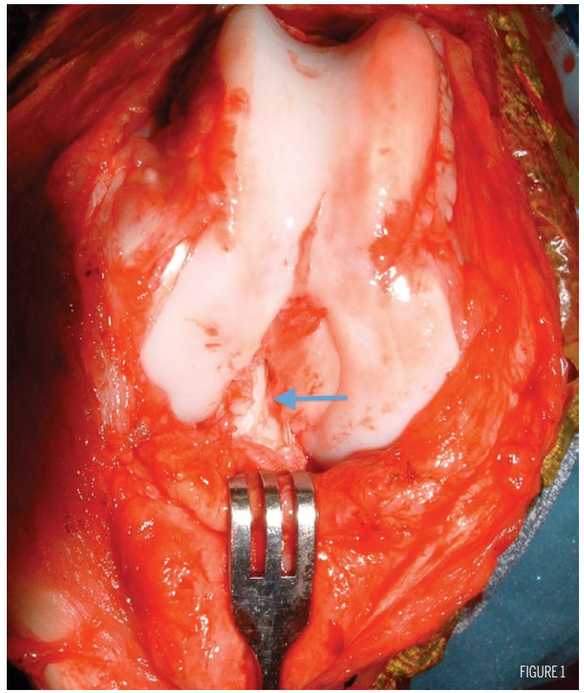


FIGURE 1

TREATMENT

Traditionally techniques have been based on trying to prevent cranial drawer—the instability that is present and detectable on examination of most dogs with cranial cruciate rupture. However, as the condition is almost invariably degenerative, "repairing" the ruptured ligament itself is not possible. A variety of "static-repair" methods have been tried, using a host of different natural and synthetic materials, all placed to counteract cranial drawer.

STATIC REPAIR

The goal with static techniques is to mimic the cranial cruciate ligament; the techniques are divided into intracapsular and extracapsular methods, depending on the location of the stabilizing material used.

Portions of ligament or fascia, and even skin, have been described as replacements for the cruciate in intracapsular repair. They are passed through the joint itself, and secured in place to roughly approximate the ligament's normal location. Unfortunately, it is impossible for any such structure to accurately replicate the cranial cruciate, as the undamaged ligament has a uniquely extrasynovial location, encased in synovial membrane, despite its positioning within the centre of the stifle joint. This results in persistent inflammation within the joint following intracapsular repair.

Extracapsular techniques avoid this issue by placing stabilizing material away from the synovium. The most common of these methods is the lateral fabellar suture, where non-absorbable suture material is placed around the lateral fabella, and secured to the cranial aspect of the proximal tibial tuberosity. While this prevents cranial drawer (at least initially), other planes of motion (particularly normal internal tibial rotation and stifle extension) are artificially restricted.

A more recent adaption of this is the Tightrope technique. Very high tensile strength Fibrewire suture material is placed at isometric points laterally across the stifle, secured through bone tunnels drilled into the femur and tibia.

"TPLO AND TTA HAVE QUICKLY BECOME THE TWO PRE-EMINENT METHODS FOR TREATMENT OF CANINE CRANIAL CRUCIATE LIGAMENT RUPTURE AMONGST SPECIALIST VETERINARY SURGEONS WORLDWIDE"

There is no question that at least some of these techniques improve the comfort and activity level of affected dogs, but there are some caveats:

1 All the stifles operated on (irrelevant of how stable they seem immediately post-operatively) have cranial drawer return within a matter of weeks. Though it may not bother the dogs quite as much, these knees are unstable once again, at least to some degree. The Tightrope technique is designed to lessen this, though some instability is still seen over time post-operatively.

2 Though there is improvement, dogs treated in this way generally do not return to normal athletic activity—especially larger breeds.

3 Arthritic changes already present within the stifle continue to worsen with time despite surgical attempts to stabilize.

These perceived shortcomings have resulted in a rethink over the past 15 years about how best to treat cruciate deficiency, and they provided the impetus for Dr. Barclay Slocum to develop the Tibial Plateau Leveling Osteotomy (TPLO). Instead of a "static" repair, a "dynamic" approach is taken.

DYNAMIC REPAIR

Rather than attempting to prevent cranial drawer, the TPLO (Figures 2a and b) alters the mechanics of the stifle, by rotating the tibial plateau (*green line*) so that it is perpendicular (*yellow arrow*) to the weight-bearing force through the tibia (*blue arrow*). This eliminates the cranial tibial thrust force that occurs (*red arrow*) due to the angled slope of the unoperated stifle. Outcomes have been very pleasing, and the majority of small animal specialist surgeons adopted this or similar techniques rapidly as their method of choice.

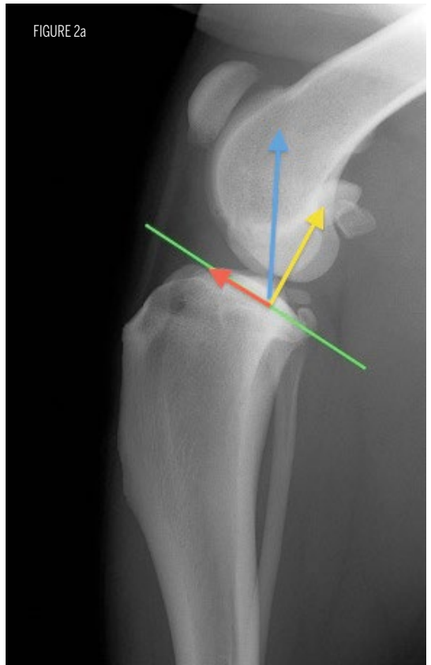


FIGURE 2a

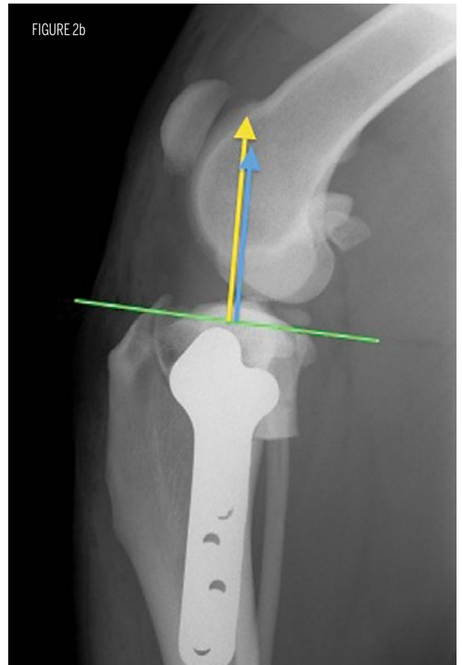


FIGURE 2b

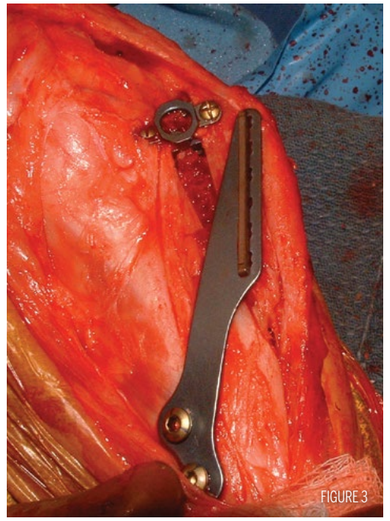


FIGURE 3

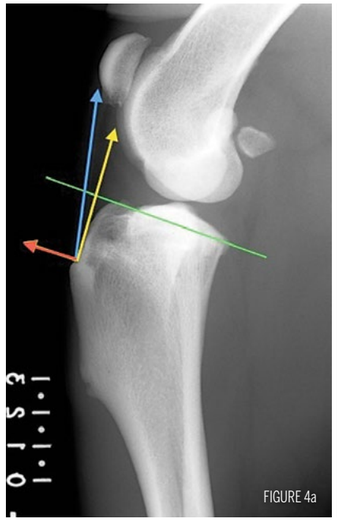


FIGURE 4a

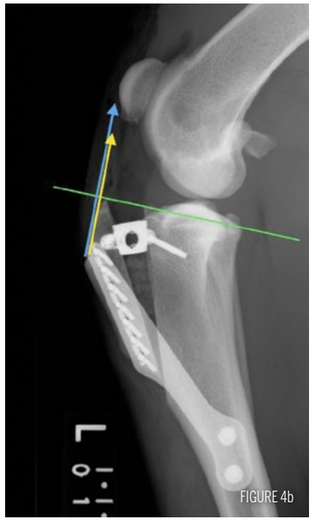


FIGURE 4b

More recently a group of orthopedists and biomechanical engineers from Zurich developed the Tibial Tuberosity Advancement procedure (TTA) (Figure 3). This builds on Slocum's original idea, but rather than looking at the bones of the stifle in isolation, it also considers the contribution from muscular forces. The theory proposed by TTA (Figure 4a) is that in the weight-bearing leg the quadriceps mechanism represents the most powerful force acting on the stifle. Due to the direction of the patella ligament (cranio-proximal to caudo-distal orientation), upon muscle contraction (*blue arrow*), the quadriceps not only provides a proximal pull on the tibia (*yellow arrow*), but also a cranially-directed force (*red arrow*), and this is what results in cranial tibial thrust. By advancing the tibial tuberosity slightly (usually between 6–12 mm depending on the size of the patient), the patella ligament is shifted to a position at 90 degrees to the tibial plateau (Figure 4b). Upon weight-bearing, the muscles around the stifle contract, and with the quadriceps pull (*blue arrow*) directed perpendicular to the plateau (*yellow arrow*), there is no longer any tibial thrust.

Just as with the TPLO, patients are usually weight-bearing on the operated leg within 48 hours after a TTA procedure, and generally show a rapid return to normal athletic activity.

The only study that I am aware of that compares the clinical efficacy of TTA and TPLO is an unpublished investigation by surgeons at Virginia Tech, undertaken during my Surgical Residency there. In that randomized, prospective study we determined that there was no difference in outcome over the six months of the study period between dogs that received a TPLO and those that underwent TTA.

How can two techniques with different theories both work so similarly and effectively? It turns out that performing a TPLO also results in the patella ligament becoming 90 degrees to the tibial plateau, but is achieved by rotating the plateau itself, rather than advancing the tibial tuberosity (as in the TTA). This suggests that the Zurich model is perhaps a more accurate representation of what actually happens to the cruciate-deficient stifle with weight-bearing.

Given the similar outcome overall, recommendation of TTA over TPLO (and vice versa) for a specific patient is dependent on factors such as conformation, and any other orthopedic abnormalities that may be present. Surgical time and post-operative care is very similar for both techniques, and client satisfaction continues to be high.

TPLO and TTA have quickly become the two pre-eminent methods for treatment of canine cranial cruciate ligament rupture amongst specialist veterinary surgeons worldwide, and we are pleased to offer both techniques at Canada West Veterinary Specialists. WCV

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