

Pure Dog Talk 493 – Leptospirosis Deadly Disease for You and Your Dog

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Laura Reeves:

Welcome to Pure Dog Talk. I am your host Laura Reeves and I have with us again today, Dr. Marty Greer. And by special request from one of our Pure Dog Talk patrons, we are going to be talking about leptospirosis, and we've touched on this topic in other veterinary voice episodes, but we're going to do a deep dive today, and we're going to look at some of the sero VARs and all that that entails diagnosing it, treating it, preventing it, all of the things. So welcome Marty.

Dr. Marty Greer:

Thank you. It's always good to be here. And this is a really important topic that I think a lot of veterinarians don't fully discuss with clients. So I think this is a great opportunity.

Laura Reeves:

I think it's awesome. So let's start at the top and this is again so much of these conversations we have are based on my own life with dogs. I have had dogs that react to the leptospirosis vaccine, and so have many people I know. And so, as a result, there was sort of this thought process that lepto is an out there very much blah-blah-blah you don't really actually have to vaccinate lepto. So let's talk about that. Let's do a little bit of myth-busting on that concept. Yeah.

Dr. Marty Greer:

I think that's a great place to start. So years ago, leptospirosis was a pretty significant disease. And then we saw it kind of declined in frequency and probably in the last decade or so there's been a reemerging of this disease. It's a bacterial disease and there were some dogs that reacted to lepto vaccine. And if a dog was going to react to vaccine negatively, it was probably either going to be lepto or coronavirus. So as a result, a lot of veterinarians and a lot of clients started to drop that out of their vaccine protocols. However, we do see lepto in our practice on a fairly regular basis. So when I hear practitioners, veterinary colleagues of mine say, we don't see lepto the answer is both. You don't look for lepto you probably don't see lepto. And that's a big concern that we have because we certainly see lepto in our practice.

And we're pretty forthcoming about talking to clients about the importance of the vaccine, the importance of testing and the diagnosis of it. So, yes, if you bury your head under a rock and you don't look for lepto, then you're probably not going to see it, even though it's out there. So, unfortunately there's a fairly significant number of lepto cases that get undiagnosed. And if you look through the list of symptoms, it's expansive, it is huge. Causes, vomiting and diarrhea, cough and high liver enzymes, elevated kidney values and respiratory disease, eye disease and infertility. So you can go right down the list. And if you look at the symptoms, it's anything that a dog can come in looking like.

Laura Reeves:

And so talk to us about, I understand, or I am given to understand and correct me if I am wrong. I am given to understand that leptospirosis is more common in some regions of our country than others in some regions of the world than others.

Dr. Marty Greer:

For sure. So, as I was driving tonight, I was talking to my husband and he said, so the trivia that I know about leptospirosis, and the only thing he could really share with me was "What state do we most commonly see leptospirosis

in?" And when I was doing some reading, it's not just leptospirosis in dogs. What state is most commonly affected by leptospirosis in people? Do you know?

Laura Reeves:

I have no idea.

Dr. Marty Greer:

It's Hawaii.

Laura Reeves:

Oh, Interesting.

Dr. Marty Greer:

So think about Hawaii. You think about the climate, moist damp, high humidity, alkaline soil, all of those factors contribute to leptospirosis being in the environment and therefore being something that we're exposed to. So Midwest, south Eastern states, of course, the more arid states like Arizona and new Mexico, California, those places tend not to have as much lepto because it's drier. And we most commonly see lepto about 3 to 18 months after significant flooding in an area. So keep in mind that Hawaii is the perfect climate for it. And that after flooding, we can see increased incidence. And historically we've always been taught as veterinarians that it's most commonly going to affect hunting dogs and herding dogs. The dogs that are exposed to those kinds of wet climates, it's spread through the urine of infected animals, but it can also stay in the environment for an extended period of time.

So you think about places like Omaha that got flooded this week, and you think about places like the Southern states, right? Michigan, Wisconsin, where we have standing water, significant amounts of flooding. What most people don't know is that Wisconsin actually has more lakes than Minnesota. The land of 10,000 lakes, Wisconsin has more. So we have more lepto too, aren't we lucky, but it's also spread through wild animals, livestock, mouse and rat urine. So in cities where they have things like rats, like the rat population increased pretty significantly in New York City with the advent of COVID because the restaurants weren't throwing food out into the dumpsters. And so the rats had to relocate and find new food supplies. So there was an explosion of leptospirosis in people and dogs in New York City during the COVID.

Laura Reeves:

Marty I would like to catch that one second time, you've mentioned it leptospirosis is a zoonotic disease, right? It is communicable from your animal to you.

Dr. Marty Greer:

Yes. Or from the same source that your animal was in. Years ago, my sister had a cottage out on a lake in Wisconsin, and we were swimming it on the side of the lake. We could see on the bank of the shore, there were cows that were grazing and I'm like, oh, look, we're swimming in lepto lake. This is awesome. So I was thinking about that. You like, if you get sick after you're swimming in water, that might be contaminated by livestock or other animal urine, you need to let your doctor know that those are really important things. We had a dog that came in many years ago with seizures, and I'm not sure exactly why we checked for lepto but we did. I think the dog's liver enzymes were high. So we said, well, we should probably check for lepto. You know, just sort of one of those things where you should probably check for lepto just because we have to be complete and we need to be sure.

And the dog's titer came back to 55,000. I've just never seen a titer as high as that. And I said to them, now you need to talk to your physician because I'm not allowed to make diagnosis or treatment plan for a human, even though you're an animal, you're the wrong kind of animal. So I have to send you to your doctor. And the physician that they went to was actually a friend of ours. And he said, oh, no, people don't get lepto. Well, that's not true. People do get lepto. And there have been reports of people that work in kennels dying and farmers and veterinarians getting sick. So absolutely positively humans can get lepto either from their animals, their pets, from hospitalized patients or from livestock. If you walk through the barn and the cow urinates and the urine splashes like urine does in the barn, it can cause an infection.

Dr. Marty Greer:

So there's a lot of ways that people can be exposed to lepto. So if you have a possible exposure and you're not feeling well, of course you need to let your veterinarian and your physician know, we actually had a client that came in again years ago, who had a litter of puppies that got sick. And it was before she started coming to us and she had the puppies diagnosed positive for leptospirosis. And it is most common in puppies under six months of age because their immune system isn't as great yet. And she had taken the puppies to the veterinarian for a follow-up exam. And the veterinarian said, so how are they doing? And she said, they're doing better. The veterinarian looked across the table at her and said, you don't look good. And she said, no, I'm not feeling at all well. And she said, you need to get to your doctor because actually the client had contracted lepto too.

So please be aware that this is not a reason not to own a dog, but if you are ill and your dog is ill as well, and you have similar symptoms that you need to let your physician know because leptospirosis is absolutely positively a zoonotic disease. So don't forget to mention to your physician, my dog is sick or I've been around livestock, or I've been swimming in a lake. There was actually an outbreak in one of the lakes in Madison, Wisconsin years ago, where a lot of people got sick from leptospirosis. So it may not be an outbreak. You may be the only person affected, but certainly let your physician know.

Laura Reeves:

All right. So zoonotic, it's scary. It kills dogs. It can kill people. Many years ago most of us use what we call a seven way shot: distemper, hepatitis leptospirosis, parvovirus. And we've all sort of gone away from that because of this sort of vaccine storm in our dogs. Talk to us about what your recommendation is for vaccinating. When you have puppies that are going to go into new homes, I know what I do. I'm very curious to hear what your recommendation would be.

Dr. Marty Greer:

Sure. So the recommendation is to not give leptospirosis vaccines to puppies under 12 weeks of age, because it tends to suppress their immune system and they have a more difficult time reacting to the other vaccines. But 12 weeks and older, they should be vaccinated. It's a series of two vaccinations, two to three weeks apart. And we do recommend lepto for all the puppies in our practice, unless the breeder has written into their contract, not to do it.

Now years ago, leptospirosis used to be the most antigenic part of the vaccine. And it was the most likely to cause a reaction and in dachshunds and pugs and some of the other small breeds of dogs, we did see a significant number of reactions. However, in the most recent years, the vaccine has had two Sera VARs added to it. So there are now four, instead of two Sera VARs in the vaccine, which is good because dogs can get more than those four Sera VARs. Which is one of the reasons people are like, well, why should I vaccinate? You don't vaccinate for all of them? Well, there is probably cross protection. So at least you get some kind of protection, but over the last few years, the vaccines have been "cleaned up". So they're less antigenic, less likely to cause an adverse vaccine reaction. Can we still see them? Oh yeah. The most recent one that I had was a bloodhound, not a small breed dog, not anything that you'd expect.

Laura Reeves:

I had it in wirehairs. Oddly enough, I had a couple of really serious lepto reactions in wirehairs.

Dr. Marty Greer:

Yeah. But when you look at the disease, it's also very serious and there's four different types of descriptions of the disease. And one can be so acute that before you can even see liver enzymes going up and kidney values going up and signs of illness, these dogs can die. It can be that sudden. So I take lepto very seriously. The most recent and memorable case that we've had was a dog that was diagnosed two hours from our practice in a whippet, not exactly a hunting or sporting breed or herding breed. And the dog was diagnosed with kidney failure and was told there was nothing we can do. The dog is going to die of kidney failure, just get over it. And fortunately, the family, the female owner in the family worked with a friend of mine and she said, no, no, no, no, you need to get this checked out.

So they came over on Halloween and they missed trick-or-treating with her little girl because they brought the dog in, did a test, found the dog had lepto. That was three years ago and the dog is alive and well, and believe it or not living on KD, the kidney diet, that Hills makes. The dog as a whippet is now a little chubby. Like I'm pretty excited that I have a chubby dog that got a history of kidney disease because the owners they were told to give up and he is surviving and

he's doing incredibly well. I see him twice a year, do blood work on him, he's doing fantastic. So there is a way to turn some of these dogs around, but what gets confusing is most people expect it to either be high liver enzymes or high kidney values. And the dog's drinking a lot, urinating, a lot vomiting, diarrhea, fever, blah, blah, blah.

But some of these dogs come in with symptoms of pneumonia. If they have pneumonia, the prognosis is much more serious than if they don't have pneumonia. But if you x-ray these dogs a fairly high percentage, like 70% of them have changes in their lungs from leptospirosis. And you don't really think of the lungs being part of that. We see dogs coming in with uveitis inflammation of the eyes. We had a young dog that was diagnosed with that by the ophthalmologist. And they said, go get some blood work done. So absolutely there are tests for this. So the tests, there's a blood test and there's a urine test and there's an antibody test and there's a PCR test. So there are different ways to test depending on the symptoms that the dog is exhibiting and the stage of the disease. So if the dog is recently infected and not yet on antibiotics, doing blood in your urine PCRs, where they actually look for the protein of the bacteria is the most effective way to test. In a longer standing case where the dogs have liver enzymes going up and kidney values going up.

Then you probably want to do a blood test doing an antibody test. And the best antibody test is done at two tests three weeks apart, where you do an acute titer in a convalescent titer, you're looking for the titer to rise quickly over that three week period of time. Now, while you're waiting for that to happen, you should not wait to put the dog on antibiotics. The recommendation is either amoxicillin, ampicillin or doxycycline. You don't want to sit around and say, well, we'll wait for the second test and see how it goes. No, no, no, no, no. Get the dog on antibiotics. Get the treatment started, whether it's your ophthalmologist or your general practitioner or an internist, whatever. But go ahead and get the antibiotics started. Baytril is not recommended. A lot of people reach for baytril for serious infections, but it's either amoxy, ampicillin or doxycycline that are the treatments of choice. And they're fairly long treatments. They are weeks long of treatment to make sure that we've cleared, not just the acute phase, but the carrier phase where the dog would continue to shed the bacteria in the urine.

So two kinds of tests, blood in urine, PCR and antibody, and you can get them both done. It's not that expensive to run both tests. If you have a dog that's acutely ill. So it's a very effective test. There's also one that's done in house, which is not quite as specific on the type of serum.

Laura Reeves:

Like a snap test or something?

Dr. Marty Greer:

Or that there's a snap test, but we in our practice like to send it to the diagnostic lab where they actually test for the six sera VARs and we can determine which sera VAR and what they're reacting to. And it's pretty interesting because it almost always, if one is up multiples are up because there's enough cross-reaction with the tests that you'll see both levels going up. So if you suspect it, if you think it, mention it to your veterinarian, you know, just say, Hey, you know is lepto a possibility because it can cause almost any symptom that you can see a dog becoming sick from. Now, we're only talking about dogs here because cats almost never, ever, ever get lepto. So I know this is a dog talk show, but I don't want to forget that there are people out there with cats and they're like, you didn't talk about the cat.

Hang tight guys got a little bit of information for you. We'll be right back to the podcast in a minute.

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Laura Reeves:

All right. So what you're talking about vaccinations tracks with I do my puppies are 8, 12, and 16. And I do leptospirosis as a standalone after their 16 weeks and before the rabies, that's how I run my series, but it sounds like you could do the leptospirosis between the 12 and the 16, if you wanted to.

Dr. Marty Greer:

Right. And we typically use it as a combination vaccine with our distemper and parvo. Some people prefer to pull it out. And if you do have a dog that has a reaction or has had a history of reactions, pulling it out and giving it as a separate antigen is a good idea. Or if you have a line of dogs like yours, that, you know, have a tendency to react to it, pulling it out of that vaccine series is fine, but the most serious leptospirosis infections that we see are in puppies under six months of age. So you don't want to wait too long, but by pulling it out, you have then been able to isolate which things that they're reacting to. If they have a reaction and you haven't overwhelmed them with so many antigens that their little bodies are just like, I can't do this, but on the other hand, the vaccine companies tell us that the fewer needles that you put into a dog, the fewer reactions that you see.

So that's the benefit of doing the combination vaccine. So depending on your lifestyle, where the dog lives, what part of the country, you're in, what your genetics are, what breed you have. There's a number of ways that you can craft a vaccine protocol that can all be very effective, but you need to think about it very carefully now, Coronavirus. And I don't want to get too far off on this, but coronavirus, we rarely vaccinate for it because that's another thing that we tend to see a lot of reactions to. So if you're doing Corona too, you may want to think about whether you need to do leptospirosis instead of Corona or split them up somehow. So it depends, there are panels that we do see Corona in. So I do recommend it in those particular cases, but overall Corona is not one of the things we vaccinate for, but I am adamant in the Midwest and the Southeast part of the country or in the bigger cities like New York, you really need to do leptospirosis vaccines because of the risk and because of the exposure levels.

So talk to your veterinarian about where you live, what your lifestyle is, what your dog does for a living and what your dog's genetics. If you have a dachshund, I might split it up. If you have one of Laura's dogs, I might split it up. You know, it depends. So there's not a hardcore one size fits all vaccination protocol. And I think that's really important for people to realize that they can work with their veterinary professionals and craft a vaccine protocol that meets their lifestyle. The American Animal Hospital Association has a great lifestyle calculator for determining what vaccines to use. And we're also going to put up a link to the ACVIM, which is the American College of Veterinary Internal Medicine on their consensus statements. So there's going to be some good resources on the website for them to take a look at so that they don't have to go Googling or asking Facebook friends what they think,

Laura Reeves:

Please let's not ask Dr. Google. Let's ask Dr. Marty, because that seems like a much better plan.

Dr. Marty Greer:

Well, I can send you to the right resources.

Laura Reeves:

Okay. So Marty quick then follow on your dog is affected. What are the treatment plans and what is the sort of prognosis?

Dr. Marty Greer:

Sure. And like I said, pneumonia, the dogs with the respiratory disease have a much poorer prognosis. And of course the higher the liver enzymes are the higher, the kidney values, the more serious it is. But treatment basically is if the dog is dehydrated and ill and really sick, they need to be in the hospital on IV fluids so that they can be rehydrated and some dogs will actually go into failure and their kidneys will stop making urine. So those dogs have to be on Lasix or another diuretic and IV fluids and really an intensive care. If you have a dog, that's a milder case where they may just have some

slight elevations of the liver enzymes, but they're eating and drinking. And they're not really all that sick or they don't have bad uveitis or bad pneumonia. Then you may be able to just treat on an outpatient basis.

There's some discussion about whether doxycycline or amoxicillin or ampicillin would be the first drug to use, depending on which practitioner you go to and what their opinion is. Then of course, they're going to pick one of those two antibiotics and then supportive care. So if the dog is vomiting, they get Cerenia. The dog isn't producing urine, they get Lasix. If the dog has respiratory signs, they may need oxygen. So there's going to be some supportive care that goes with it, depending on the clinical signs and how sick the dog is.

Laura Reeves:

But primarily we're treating with antibiotics.

Dr. Marty Greer:

Oh yeah. Antibiotics are absolutely the backbone of this and culturing the urine. I forgot to mention that culture in the urine is not a good way to find leptospirosis. Lepto doesn't grow well. It's spirochete bacteria, which is a real bugger to grow on a plate.

So if your dog has signs of a UTI and they don't grow anything on the culture plate, that doesn't mean that lepto has been ruled out. You still need to talk about lepto. So if you've got this little nagging voice in the back of your head, that your dog isn't doing well, remember to discuss lepto with your veterinarian. And if you're sick, remember to talk about your dog's illness or your exposure to your physician, like power washing the kennel with a dog that has lepto bad, bad idea it aerosolizes it, so you breathe it right in it can break through mucus membranes. Lepto can enter the body through mucus membranes, like your eyes or your mouth. It can break into cuts in the skin. So anything like that, that your dog or you have are possible exposures. If you work at a veterinary clinic. And if we have a lepto suspect in our hospital, there's big signs everywhere.

Especially if you're pregnant, you have to be very, very careful. Or if you're immunocompromised, you have to be even more careful. So just be aware. My radiologist, the one that comes to our practice on a monthly basis, she's had three pregnancies. And during all three, of course, she was exposed to positive dogs for lepto. She would look at me and go, okay, you know, this dog probably has lepto because I'm pregnant. Right. I'm like, great.

Laura Reeves:

Oh my gosh.

Dr. Marty Greer:

Just be aware that it's very serious. So you don't want to take this lightly. And if you live in an area that it's a risk vaccinate, it's not that expensive. It's absolutely worth splitting it up. If you're more comfortable doing it that way, but don't leave your dogs unvaccinated. I see too many dogs that come through our door that people like, oh yeah, my vets that I didn't get that. Right. Okay. Seriously. It is in the Midwest. It is in southeast states. If you live in the high mountains of Utah. Okay, fine. You're probably right. You live in the Appalachians. You live in Florida, you live in New York city. You live in Wisconsin, Minnesota, get the lepto vaccine. Don't mess around with it.

Laura Reeves:

Well, and I know that you have mentioned this previously in other sources, I've looked at, have specifically talked about the flooding. I remember reading stories about the flooding when it was in Texas, I remembered it was so terrible. And after hurricane Katrina and all those kinds of things. So I think that's really a big trigger for people to think about, don't you?

Dr. Marty Greer:

Absolutely. And actually the lepto bacteria vaccine tends to not give you a full 12 months of immunity. So one of my clients was adamant that he likes to vaccinate in the spring and summer so that they get the six to nine months of protection. If you live in Wisconsin or Minnesota, you probably shouldn't vaccinate in December, January, and expect a full year of protection. So they're going to have their immunity dropping off at about the time that the exposure is at the

greatest. So if you're reluctant to do vaccines and you want to maximize your exposure and your success with your vaccines, then vaccinate in March, April. Right about the time that we start to see the wet grass and the standing water and the urine and all those things. So just remember those little critters, those little cute things that come up into your yard during the night when you're not out there.

Laura Reeves:

Raccoons, possums, yeah.

Dr. Marty Greer:

And then your dog goes out in the morning and the grass is dewy and it's all wonderful. And it smells great. And they go out and roll around and lick the grass. And you think your dog's not exposed? Oh yeah, you're wrong. They're exposed.

Laura Reeves:

Right. The time that we did talk about leptospirosis even just briefly, the thing that stuck with me is your conversation about raccoons and their little what'd you call them scratching posts or wherever it is that they go.

Dr. Marty Greer:

Latrines.

Laura Reeves:

Yes. That freaked me out.

Dr. Marty Greer:

Yeah. Yeah. If you really want to freak yourself out, take a look at the center for disease control website on raccoon latrines, how to identify them and how to disinfect them. That's very informative. Very good. But leptospirosis is definitely out there. And I live in the country, you know, I have stuff like this happen in, at my house too. Deer, all those cute little funny things in your yard.

Laura Reeves:

Skunks.

Dr. Marty Greer:

Yeah. Skunks one of everyone's favorites. So all those cute little furry things that come into your yard at night, they are nocturnal. They're out there and your dog knows they were out there. You hear a dog barking at four o'clock in the morning. That's cause there's a critter in your yard and they're just waiting to go out there and expose themselves.

Laura Reeves:

Oh my gosh. Okay. Well, Marty, thank you. Exposed to a raccoon. I'm just the vision that just came into my head. I appreciate your time. As always tremendously, you are a gift to our listeners and I thank you.

Dr. Marty Greer:

Thanks. So we'll have those two links on the website. So people can take a look and get themselves educated about the things that they really should about. And like I said, Facebook's a great place to show off your show pictures, but it is not the premier place for scientific information.

Laura Reeves:

That's exactly why we made Pure Dog Talk. And that is not a joke.

Dr. Marty Greer:

Thank you. We appreciate that about you. Excellent.

All right, crew, let's share the love shall we. Episode 500 is, oh my God. Rapidly approaching. And I was searching for inspiration on what to talk about in this episode. And I decided that there is nothing more inspiring to me than the stories you guys have shared about Pure Dog Talk and its impact in your lives. So it's decided we're having a contest. Write your story for me to share on air as part of our historic number 500 celebration episode. All submissions will be judged by a panel of celebrity listeners. Judges will select three stories to be included in part or in entirety in the episode. Episode 500 will air on October 25th. Deadline for story entries is October 1st. Submissions should be sent to laura@puredogtalk.com. I can't wait to share the love.

As always. If you have any questions or input, we'd love to hear from you. The show notes and links to resources on today's topic are available at puredogtalk.com. Drop us a note in the comments or email to laura@puredogtalk.com. Remember guys, this podcast is for you. So if you want to know something, give me a holler. We'll do a podcast for you. If you wouldn't mind, you could help me out here. Take a couple minutes to visit iTunes and give us a review.

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