

Pure Dog Talk 390 – Mastitis Causes, Prevention and Treatment

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Laura Reeves:

Welcome to Pure Dog Talk. I am your host, Laura Reeves, and, once again, I have the tremendous pleasure and joy of bringing you our very favorite veterinary voice, Dr. Marty Greer. And as so often happens, Marty and I are going to talk about something that's going on in my own life right now. So Marty, welcome. Thank you for joining us again.

Dr. Marty Greer:

I'm happy to be here.

Laura Reeves:

I am happy you're here, too. So today we are going to talk about mastitis and all of the things that go with it: what causes it, why it happens, how to fix it. All the good stuff.

Dr. Marty Greer:

Right.

Laura Reeves:

So our situation, we just had nine Spinone puppies. They're five weeks old. It was time for them to start being weaned and they needed to be wormed. So we said, "Okay, we'll send her home with the co-owner," and within 24 hours she broke with 105 fever and can't walk and, literally, went into the emergency clinic on a gurney. So talk us through this, Marty.

Dr. Marty Greer:

All right. Mastitis is inflammation or infection of the mammary glands, most commonly associated with female that's nursing her puppies or recently nursing puppies. It can occur occasionally, not very often, associated with a false pregnancy or some other causes, but most commonly we see it in the mom dog that's just had a litter of puppies and for whatever reason there's developed an inflammation or an infection and we can talk about those causes.

Laura Reeves:

Right. So what are those common causes? What do you see? Do you see it most frequently when you've just started to wean the litter? Do you see it during puppies that aren't nursing well. What's the most common thing you see in your practice?

Dr. Marty Greer:

Yeah, and it's really hard to classify because we can see it across any time during lactation. Sometimes it's a litter with a small number of puppies and there's not enough puppies nursing to keep the mammary glands from engorging and becoming infected.

Most of the time it's a bacterial infection that just spontaneously happens and although you need to keep the whelping box in the area that the female is in really clean to try to prevent it, I've seen it occur in places where I know that it's impeccably clean and it still happens anyway.

So the most common bacteria that we see are either coliforms, which are the bacteria in the GI tract, in the stool or staph and strep. So those are the ones that we usually see in the bitch's own environment, maybe in her own GI tract or on her own skin or on the puppies' skin. So it can just happen that for some reason they ascend up into the mammary gland. It can be associated with trauma, but most of the time it just spontaneously happens.

Laura Reeves:

One of the things that I know my particular co-breeder is super-duper-duper-duper obsessive about is keeping toenails trimmed short so that when they're nursing and scratching, they're not putting in an access to bacteria. Is that something that you think about?

Dr. Marty Greer:

It is. And the other recommendation that occurred that was all the talk over the last couple of years has been to use probiotics on the bitches to try and reduce the risk of either mastitis or metritis, and I think we just need to briefly mention metritis here -

Laura Reeves:

Yes.

Dr. Marty Greer:

... because occasionally we'll have a postpartum female that comes in. She's had a litter of puppies. She's not feeling well, she's running a fever and you think, "Well, gosh, this should be mastitis because she doesn't feel good and she's febrile and what's causing this?" And every now and then we'll have a metritis, which is an inflammation or an infection in the uterus and not in the mammary gland. So it can take some really careful assessment to try and distinguish the two even though it seems like they should be really obvious.

Early mastitis can be a little bit tricky to assess, so we look at every mammary gland. We express the milk out of every gland. Sometimes we'll have to look at it under the microscope and to look for metritis we'll ultrasound the female and take a look at her uterus and see if there's a retained placenta or some fluid that's accumulated in the uterus. So the treatments both require antibiotics, but they are different treatment, so it is important to distinguish between metritis and mastitis in those subtle cases.

Many times your mastitis kind of slaps you in the face. It's not that hard to see. You walk in the room and everything was good when you went to bed. You get up the next morning and you see one big, red, hot, swollen gland. That's not a diagnostic challenge.

Laura Reeves:

Right, exactly. It looks and feels like a brick on fire, so probably that's mastitis.

Dr. Marty Greer:

Yeah. Yeah, you got it. And it can occur in more than one gland.

Laura Reeves:

Yes.

Dr. Marty Greer:

So it just depends on exactly how it initiates and what the source of the problem is. So yes, it's usually obvious, but not always, so don't overlook metritis as a possibility if you have a sick female that you can't understand what's going on.

Laura Reeves:

Okay. So then my next question, continuing in the process of we don't really know what causes it, do you see this run in families or breeds? Stacy and I were talking about it. She's had practically every litter, she's struggled through a mastitis. I've had it maybe twice in 25 years.

Dr. Marty Greer:

Yeah. And most of the literature says that it is not a familial or a breed-specific trait. So it may be that she has females that are just really voluptuous and really willing to lactate more readily than they need to, so it certainly can be an underlying cause if she has dogs that over-lactate. Most of the time in my lines of dogs, I have trouble getting them to lactate.

Laura Reeves:

Yes. That would be my problem.

Dr. Marty Greer:

So those are the differences that you see is sometimes you'll have those bitches that just really want to lactate-

Laura Reeves:

Guernsey cows.

Dr. Marty Greer:

... and one is nurse enough for the whole neighborhood.

Laura Reeves:

Yes. And this is the same gal who's... I think it was maybe this bitch's grandmother or something had a litter of puppies. The bitch had just been spayed and literally developed milk to feed the puppies. I had never heard of it. So.

Dr. Marty Greer:

Yeah, if you take out the ovaries at just the wrong time, you'll initiate lactation. So it doesn't happen very often, but it is often enough that it keeps the veterinarians on their toes.

Laura Reeves:

Blew my mind. So I'm just saying that's definitely a line of dogs that's willing to feed the babies.

Dr. Marty Greer:

You've got it.

Laura Reeves:

Oh, and then second follow up to that. Once you've seen it in an individual, are you more likely to see it in that individual again?

Dr. Marty Greer:

Not necessarily. Occasionally you will, but most of the time it's just a one and done. And the other thing is that you need to be just really vigilant., and I think once you've seen it once, you're probably a little bit more hypervigilant. We'll have people that call in, they're pretty sure that they have mastitis, even if they don't, just because they've seen some engorgement of the gland shortly after the puppies are born, so they're just really twitchy and really nervous about it, and understandably because mastitis can be very mild or it can be very serious and we can see a form of gangrenous mastitis caused by certain kinds of bacteria that is really, really nasty.

Laura Reeves:

And that's the one that Stacy's had, so, literally, you segue. That's exactly where I was going. Talk about the necrotizing mastitis.

Dr. Marty Greer:

Yeah. Fortunately it's not common. I've had one case of it and I've seen a couple of others from other veterinarians. Those do require surgical excision of the abnormal tissue. And in those cases, gangrenous really means that the gland or multiple glands will just absolutely turn black, and there's a very clear line where the tissue is normal and the tissue is abnormal. So it's not particularly difficult surgically to determine where you need to take tissue and where you need to leave it, but those are the only ones that I'll typically take to surgery.

Most of the other mastitis cases, even if they tend to abscess open and leave a bit of a tissue gap, I usually don't close those surgically or remove any tissue surgically unless, literally, the tissue is black and necrotic. And in those cases, yes, surgery has to be done to save the bitch's life.

Laura Reeves:

Yeah. That's why I say she's a little gun shy because she has had that, and that to me, again, like I say, I have a hard time getting them to feed their puppies, so this concept is so foreign to me.

Dr. Marty Greer:

Exactly.

Laura Reeves:

Exactly. So with that, keeping everything good and clean, which we obviously were all saying we do and certainly we're doing here. What else? What other precautions? Do you recommend antibiotics prophylactically? Anything along those lines?

Dr. Marty Greer:

Yeah, and we don't prophylactically use antibiotics on our bitches. What you do if you do that is just end up making more resistant bacterial disease if it does develop.

You do want to be careful. My husband at one point took our three day after her C-section postpartum bitch with a litter of puppies, he took her out of the whelping box and took her up to the pasture to help him load sheep into the trailer. That is not recommended. Running through the pasture through sheep manure is generally not a recommendation.

Laura Reeves:

No.

Dr. Marty Greer:

So basically, keeping the whelping box clean, keeping the bitch clean, is good. You can spray her mammary glands with chlorhexidine, which is Novasan. You can spray them and then rinse them off so that she's less likely to have a problem. Like I said, you can certainly use a probiotic, so those are the things you can do preventively, and then if you do develop mastitis, it's definitely a disorder that you're going to need to use an antibiotic for and I, typically, will reach for Clavamox. I don't as frequently reach for trimethoprim sulfa, which is Bactrim, or Baytril and rofloxacillin because most of the time you don't need those, but you can certainly culture it, start on Clavamox, and then transition to a different antibiotic if it's indicated based on her clinical response and the culture that you come up with. Additionally, I will frequently give a big bolus of IV fluids to those girls when they come into the hospital.

I won't keep them because I want to get them back home with their puppies, but while they're at the hospital for an hour or so, I'll pretty aggressively give IV fluids, and then along with that, I'll put them on Meloxicam as an antiinflammatory and pain medication. We're a little reluctant to do that, but we've been using Meloxicam for close to 20 years on our postpartum bitches and the amount that transmits through into the milk is not going to cause a problem for the puppies.

It reduces inflammation in the mammary gland, makes the females feel a lot better. If they're feeling better, they'll eat better. They'll lay down for the puppies to nurse better and most of the time you don't need to remove the puppies from the lactating bitch. You can usually send her home and let her continue to nurse her puppies, which has actually got the advantage of keeping the mammary glands more empty than if you just take her home and immediately wean the puppies.

Now, there are times you have to wean the puppies, either if she's got gangrenous mastitis or if she's really, really sick and she has to stay in the hospital. And in those cases, if the puppies are old enough to be weaned, you can add cabergoline, which is a prescription medication that you can get at most pharmacies. You can add cabergoline at five micrograms per kilogram. It's a itsy-bitsy, tiny little dose that frequently needs to be compounded at a compounding pharmacy, but that will help the bitches to dry up their lactation more quickly, and you're only going to want to do that if you're ready to wean the puppies. If you want her to go back home the next afternoon and continue to nurse, then you don't want to use cabergoline.

The other little trick that we'll frequently use is cabbage leaves.

Laura Reeves:

Yes.

Dr. Marty Greer:

Yes, they really do work. I don't know whoever decided to try it. It was probably back in the Middle Ages before we had antibiotics and some woman was standing in the kitchen and thought that it looked like it was the right shape to just put on so they use it on humans. They use it in dogs.

Some people will use vet wrap or a tee-shirt or something to keep the cabbage leaves compressed against the skin for an hour or two and then you can take them off and let the puppies continue to nurse. So it does work. You can just go to the store and buy yourself a head of cabbage. Cut it in half, and voila, you have little mammary gland compresses.

Laura Reeves:

It's amazing.

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

So hey, crew, new year, new decade. Let's have some new Pure Dog Talk promos while we're at it, shall we? All right. Our patrons group continues to grow and thrive. It's like the NPR of dog-dom. It's so cool. And Pure Dog Talk offers you, my loyal listeners, an opportunity to get in on the fun.

Pure Dog Talk patrons are invited to join a closed Facebook chat group just for you and I promise you no "drama mamas", no keyboard warriors, just fabulous, supportive, Pure Dog Talk fans. That's it.

Each month I pick a photo submitted by our patrons group to be the cover image on the Facebook page. You guys have seen it. And anybody with a quick question gets immediate feedback from moi, personally, as well as input from the array of patron group members. It's pretty fun.

The patrons group also gets first dibs on podcast topic suggestions, so if you have something you want to hear about, that's a good way to do it.

And to celebrate the new year, I am adding a whole new technological challenge to my life. Oh, my god. I will be hosting Facebook Live discussions for patrons only on the final Monday of each month from 6:00 to 7:00 PM Pacific time zone.

Yeah, baby, yeah!

Y'all join us from wherever you are, but that's when they'll be. Just a few of our planned topics of conversation include advertising on a shoestring budget. Yeah, trust me, we can talk about that. Campaigning a Special just for inner handlers, Problem Solving the Stack, Tricks of the Trade for Grooming, what products do I like or anybody else like, Open Mic Q and A's, all that stuff.

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But you guys? Y'all believed in this mission and you've supported it from the beginning. You are the heart and soul of my crusade to provide all purebred dog lovers a constantly growing, challenging, treasure trove of knowledge in a 21st century format.

Thank you very much.

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Laura Reeves:

In terms of the old wives' tales and other things that we talk about, some recommendations that came in that people swore by for the lactating bitch at whelping and through nursing. Everybody always has got answers so I want to go to the trained professional and say, "Okay, yes, no?" Sunflower lecithin and parsley were the two that people had suggestions on.

Dr. Marty Greer:

Yeah, and parsley should be fine.

Laura Reeves:

Yes.

Dr. Marty Greer:

But I don't know anything about the sunflower lecithin so I'd have to do some reading to make any comments on that.

Laura Reeves:

And then hot compress, trying to work that hard, on-fire brick, trying to work that through. Have you found that to be useful, successful, not worth it? Anything?

Dr. Marty Greer:

Yes. If you want her to continue to lactate and cold compresses if you want to dry her up. So it depends on what your ultimate goal is. If you're trying to get those puppies weaned and you're ready for her to stop lactating, cold compresses are indicated. If you want her to continue to lactate, then warm compresses will help to soften the gland. And yes, you want to express the milk out of the gland and try to get the normal milk to flow in. And that's again only if you want to keep the puppies nursing.

If you want the puppies to stop nursing and you want her to dry up, then, of course, you don't want to express the gland because all you'll do is perpetuate the lactation and that's counterproductive. So just depends on how old the puppies are and what your goals are, how many there are, if you can get them to eat. And you can wean puppies as early as 12 days, if necessary. It's not recommended, but you can wean as early as 12 days by switching them over to Royal Canin Starter Mousse and putting it on a very flat plate, and then, of course, bottle feeding and tube feeding if they're not adequately eating off the plate. But that Starter Mousse, I'll tell you, is like puppy crack, so it does a tremendous job of getting puppies weaned when you are under the gun and really have to do something to keep them nursing.

Laura Reeves:

Okay, that's good to know. I've got a friend that I know who's going through this with a litter of young puppies that the mom's not doing well and they're trying to get the puppies weaned and I had said two and a half weeks. So good. Good to know on that.

Dr. Marty Greer:

Yep. We're okay to Starter Mousse. Honestly, it's the best weaning diet that there is on the market. It just boggles my mind how quickly puppies will take to that if they're a little bit hungry.

I've had Collie puppies, which they're not real hardy puppies. They're not Labradors. But I've had 12-day-old collie puppies take to a flat plate with Starter Mousse on it, if you've got the right environment and the right amount of patience that you'll be willing to sit down and encourage them and help them to start finding the plate.

Laura Reeves:

Absolutely. And another question that had come through on this. You put the puppies back on the bitch to nurse. What comes out of the affected gland is not dangerous to the puppies. Is that accurate?

Dr. Marty Greer:

Not generally. You'll try to probably encourage the puppies to nurse on a different gland than the one that looks really infected. Some people will just take some paper tape and a gauze square and tape it over the gland if it's ulcerated and open. But, in general, the puppies can continue to nurse and, in fact, I think it's better if they do rather than to wean them prematurely. I really think it's best if you don't have to wean puppies early if you can at all avoid it.

Laura Reeves:

Right, and while we're on it, and we're at this particular topic, your favorite day to wean, or is it completely breed-based?

Dr. Marty Greer:

It's a lot breed-based. My Corgis, by three weeks of age, are pretty sick of their puppies, so they're more than willing to hop up and leave them. You'll have other dogs like Cavalier King Charles Spaniels and Golden Retrievers that would nurse until the puppies were as tall as they are. So it really depends on the breed and it depends a little bit on the individual bitch, as well. Some are just really mother of the year and others are like, "No. Done. No, I'm done with you."

Laura Reeves:

No, done.

Dr. Marty Greer:

"Uh, you just go." So you have to be prepared for any of those things, so get your Starter Mousse ordered from Royal Canin before you need it. Don't wait until the day you think you're going to wean. And it's a lot easier to use that product than it is to grind up puppy food in your blender and try to soak it and try to get them to start taking something. You can use things like baby rice cereal mixed with chicken baby food and yogurt and enough water to make it into a paste. But I'll tell you, the Starter Mousse is like nothing you've ever used before. So if you haven't used it, don't poopoo it. Get a case of it ordered from your Royal Canin website. You can be on their breeder's website. I don't work for Royal Canin, just to be perfectly clear.

Laura Reeves:

I was just about to ask you, "When did they hire you, man?"

Dr. Marty Greer:

They didn't, but they're the only company with a pregnancy diet and they're the only company with a weaning diet. Eukenuba used to have a really nice granular form of their puppy food, but none of the other companies have a diet that compares to the pregnancy diet and the weaning diet. Honestly, I don't work for them, so this is a completely honest assessment of what your choices are on the market.

Laura Reeves:

I did this time just because this particular co-breeder is a big fan of adding raw to her dogs' diets and has raw on hand and formulates it properly and all that. I have always just soaked the kibble, mashed it with a potato masher and, "Here, eat." This time we added some raw to the kibble for the transition. Like piranhas they were.

Dr. Marty Greer:

Yeah, but there's some thoughts that raw meat diets might predispose dogs to mastitis, so if the puppies had bacteria in their mouth from the raw meat diet, from the salmonella or other enterococcus, E.coli, any of those bacteria that you might find in a raw meat diet. And then they go back to nurse on mom, they may have actually inoculated her mammary gland from the bacteria that are in their mouth. So that may have been a source. And if she's having an ongoing problem that may not be related to the bitch's environment or to the bitch's hereditary-

Laura Reeves:

Interesting.

Dr. Marty Greer:

... but rather to the type of diet that she's feeding the puppies, so she may want to reassess that during the-

Laura Reeves:

That is fascinating. That is very, very good information, guys, to think about that. Everybody out there in listener land, because I know there's a lot of people that feed raw and that is very interesting.

Dr. Marty Greer:

I do have some dogs that clients are very, very adamant that they're feeding a raw meat diet. So one of the things that I would encourage them to do, because it does put you at increased risk of mastitis, metritis, some other disorders, would be to consider cooking the raw meat diet. I know in some ways that defeats the purpose, but you're not changing the proteins, you're not changing the carbohydrates and you are then getting rid of the bacteria and the parasites. So during those time periods that we don't want the females on a raw meat diet, that would be a compromise and I would be more comfortable with that.

It still doesn't resolve the issue of the calcium phosphorus imbalances that we can see with the homemade diets, but like I said, it might be an alternative for people that are really committed to a raw meat diet because they like the ingredient profile and would be a way to straddle the line.

There are a few veterinarians that I know that simply will not work with clients that are feeding a raw meat diet, so I'm not quite that adamant, but there are definitely times in a life cycle...

When I was pregnant, my husband overcooked my meat on purpose because toxoplasmosis is a concern. We can see neosporum. I've seen pictures of entire litters of puppies lost to neosporum. Unfortunately, those pictures belong to Antech Laboratories and they're not something I can access to show people, but I've seen entire litters develop neosporum from raw meat diets, as well.

So I just think you need to be really thoughtful about how you approach this so that you're not setting yourself up for bacterial and parasitic diseases that are going to impair the bitch's fertility and her ability to raise puppies.

Laura Reeves:

Well, that is an interesting observation. It had not even crossed my mind because I don't feed raw, so, okay.

Dr. Marty Greer:

Yeah, nor do I.

Laura Reeves:

So there is a line of demarcation. We can't blame it, but that is something to consider. Okay, I like it. What else do we know about mastitis? And once the bitch is dried up or if she cannot continue to nurse, getting her all tucked back and temperature down and dealing with all of that, just strictly antibiotics and the cold compresses? That's your recommendation on that?

Dr. Marty Greer:

Right. The fluids will help bring down the fever and so will the nonsteroidal anti-inflammatories. I personally use Metacam. You can also use Rimadyl. Some people use Tramadol, but I really don't like Tramadol in my bitches that are lactating because I'm concerned that they're going to get drowsy and flop down on a puppy and cause some damage. So I tend to use Metacam or Rimadyl.

And like I said, I've used them for 20 years. And when you read through the literature, you may not find people that are willing to do it, but I have done 200 C-sections a year for the last 20 years, and I've used Metacam on every one of them. So that's what, 4,000 C-sections or thereabouts?

In that amount of time, I have yet to see a puppy that has developed any kidney, liver, or other unfortunate disorders associated with the mother's being on non-steroidal. You do want to be careful with starting very, very small puppies on nonsteroidal anti-inflammatories, but the bitches don't put enough into their milk to cause a problem. And the antibiotic load that goes from the bitch into the puppy, again, is small, but again, you probably want to consider using a probiotic on the puppies just to reduce the risk that they're going to end up with a bacterial component-

Laura Reeves:

Overgrowth, right.

Dr. Marty Greer:

... of problems or, yeah, or diarrhea. You can buy the powdered probiotics and mix them in with the food. You can mix it with a little bit of yogurt and give it to the puppies orally or you can very easily use the paste so that you have a way that you can get the probiotics into the puppies. So you've got a couple of ways that you can use probiotics safely and effectively and manage the bitches and the puppies' GI tracts, as well as the risks of metritis and mastitis.

Laura Reeves:

All right, so any other caveats, cautionaries, or "Dear God, don't do this when it comes to mastitis"?

Dr. Marty Greer:

A couple. Yeah, a couple.

Laura Reeves:

Okay.

Dr. Marty Greer:

One is to check your bitch's mammary glands before you breed her and make sure she doesn't have a mammary tumor before you breed.

Laura Reeves:

Okay.

Dr. Marty Greer:

Because if you do, you should really seriously think about not breeding her on that heat cycle. And mastitis can oftentimes mimic mammary tumors, inflammatory mammary carcinoma, which is a rare form of mammary cancer in the dog.

But do be aware that there can be other differentials. It's not always straightforward. So if your veterinarian is kind of scratching their head and acting like they're not really sure, they're not convinced it's mastitis, please realize that they're probably thinking through the other possible causes for the bitch to have a mammary gland problem.

And sometimes mastitis can start off focal and localized and it can feel like a nodule during a late pregnancy and early lactation. So don't be in too big a hurry to take those dogs to surgery. Monitor that lump and see if it resolves because it may not be a mammary tumor. It may be related to some inspissated milk in a focal mastitis. So mastitis can present in multiple ways. There's also reports of blastomycosis causing mastitis in bitches, but it's almost always in bitches that are not lactating.

Laura Reeves:

Interesting.

Dr. Marty Greer:

I personally have never seen blasto causing mastitis in the dog. I have seen four cases of it causing prostatitis in the male dogs, but I have never seen it in a female. But do be aware that it can occur.

So again, if you're not getting a normal response and it's a bitch that isn't lactating, or even if she is, talk about testing the dog for blasto, especially if you're in a blasto area. Most people that live in areas that have a lot of blasto are aware of it because they've got knowledge of other people that have had problems with it. But you can really easily do a urine test on those dogs. It's kind of counterintuitive, but the urine test is the best test that we have to check for blastomycosis, whether it's in the lungs or in the mammary gland or in the prostate.

The one lab that runs that is MiraVista Labs in Indiana, and they do an outstanding job with a very short turnaround time. So there are easy ways to diagnose blasto. If you think you're not seeing a response to clinical therapy, if the antibiotic's not working, then that's where I would be looking to go next.

Laura Reeves:

I will make sure to link in here our podcast that we did specifically on blastomycosis and some of the other fungal infections that we can deal with.

Dr. Marty Greer:

Yeah.

Laura Reeves:

All right. Marty, thank you so very much.

Dr. Marty Greer:

Thank you.

Laura Reeves:

All right. I will talk to you soon.

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.

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