EPISODE 6: Foot Care in Diabetes | Part 2: Seeing a Podiatrist

Dr. Rita Kalyani: Welcome to ***Diabetes Deconstructed***, a podcast for people interested in learning more about diabetes. I'm your host, Dr. Rita Kalyani, at Johns Hopkins. We developed this podcast as a companion to our Patient Guide to Diabetes website. If you want a trusted and easy to understand resource for diabetes, or to listen to previous podcasts, please visit ***Hopkins Diabetes Info dot org***.

This is Part 2 of our series on diabetes and foot care. Today we're delighted to speak with Dr. Nelson Maniscalco about the importance of proper foot care in people with diabetes.

Welcome back, Dr. Maniscalco.

Dr. Nelson Maniscalco: Thank you very much. It's a pleasure as always.

RK: Let's pick up where we left last time. What are the next steps of treatment? What can an individual expect if they come to see you as a podiatrist in terms of next steps in management and treatment?

NM: The very first thing to do is because we'll be checking our feet every day is just assess how quickly and how dramatically that change has happened. If it's a simple ulcer or a wound, or if there's redness if there's pus, if there's swelling, things that would be concerning for an infection that would make that more serious, that would require that you're not just making an appointment, but you seek more urgent care either at an urgent care center or emergency department. But the first step for noticing an ulcer on the bottom of your foot would be to call your either medical doctor if you don't have a podiatrist or call your podiatrist and let them know that. I would always want to know even the slightest little change if something were to happen to your skin so that we can address that appropriately. Typically, if these are treated quickly, these things don't progress to more serious issues. It's when they sit and when they linger and then bacterial infection can happen that they worsen. Occasionally, if ulcers don't respond well or there's not good blood flow to heal the wound, or if there are just other complications at play, a higher level of management will be required. And places like wound care centers and multidisciplinary wound clinics are available for patients like this. But the first step is always to let either your medical doctor, your diabetes doctor or your podiatrist know that.

RK: Are antibiotics usually used as well in the case of the ulcer infection, is that right?

NM: So if there's an infected alteration, antibiotics are classically used, yes. If it's a mild to moderate infection, oral antibiotics can be used. Often, your doctor will also take a culture or a

little piece of that ulcer and send it to the lab to find out exactly what bugs are causing your infection. And then you can tailor the antibiotic therapy a little bit better. If it's a severe infection rapidly spreading, or there's pus coming out significant amounts or it just seems like it's moving very quickly, intravenous antibiotics may be required, which would be a visit to the hospital.

RK: Is surgery ever required or a local excision?

NM: Surgery or excision can be required in cases of ulcers that either do become infected and form pockets of infection deeper in the skin. Or if the ulcer just is not healing with regular wound care, which consists of taking pressure off of the area and keeping it clean and trimming up the tissue so that it can heal better to stimulate blood flow and healing. Sometimes operative debridement in the OR debridement is the form for cleaning up the wound, sometimes taking that to the operating room to either excise the wound or clean it up more deeply and more thoroughly is required. And in the case of infection, sometimes just identifying and being able to clear all that infection out by decompressing it is necessary. And then if the infection does, unfortunately, sometimes spread to the bone that can require removal of the bone or amputation.

RK: It sounds like in general though, it's very treatable. And even with all the concern that patients or individuals or family members may have from seeing their loved ones have foot ulcers, that there are many options available and that usually people recover well, if they follow the appropriate steps. Is that right?

NM: Absolutely. And that has a lot to do with their willingness to seek care and the level of control of the diabetes. Very rarely do I see someone with a hemoglobin A1C consistently or three-month blood sugar average consistently in the sixes with major amputations. However, very frequently, you will see A1Cs or averages in the 12s/13s/14s that undergo complications such as that. But in a large part, these things can be very treatable if they're caught early enough and appropriately enough. In few cases though some of these types of infections can be rapidly spreading. And since the toes are the furthest from the heart, they have the lowest blood supply and they are more prone to neuropathy. They are unfortunately some of the things that get affected more quickly and sooner when it comes to things like this.

RK: So this all underscores the importance of being vigilant about self-management of diabetes, the blood sugars, the blood pressure, the cholesterol, and with good preventative measures, it sounds like these can be prevented too, the ulcers on the infections and the other complications that we talked about.

NM: Absolutely, to a large extent they can.

RK: You know, a question that I often get in clinic is, why do I need to see a foot doctor? You know, as an endocrinologist, I see patients every three to six months, depending on how well their diabetes is being managed, they may see a nurse practitioner in between that, a diabetes educator or dietitian, maybe their primary care provider, they may see multiple providers throughout the year. And I know during our visits, I'll often do a detailed foot exam or at least a comprehensive foot exam to the extent that we do in the diabetes clinic. So why does a patient with diabetes need to see a podiatrist? What other measures or whatever other assessments are you able to do in your clinic that can be beneficial for patients and really prompt a visit to the podiatrist?

NM: We'll start with why exactly patients will ask that question in the first place. And I think it's just a lack of knowledge of just the simple components of the way that diabetes can affect their feet. Now, thankfully, the term diabetic foot has been floating around for a while as a catchall term for the concerns that people have once they're diagnosed with diabetes. So there is more of an awareness now I feel like and that's a very good thing. But we offer comprehensive examinations here; we'll check circulation by palpating the pulses or feeling the pulses in the feet is the first thing I do when I enter a room, I will put my hands on your feet and I will feel for the pulses. You have four major ones that I should be able to feel and if we can't feel them right away, I have a machine called a Doppler that can listen to that. It's an ultrasound similar to the ones used in pregnancy; they can listen to the blood flow and that can tell me to a large extent what the circulation is like to the feet. And then if next steps are required, we could order more advanced testing for the circulation. I'm also able to check the skin. Being a podiatrist, I have a very good understanding of the anatomy of the foot, and I'm able to assess for things like fungal infections and bacterial infections. I can evaluate the level of dryness in the skin and see if there's a necessity to treat that in a certain way and we can talk about shoes, the types of training that is particular to people like a podiatrist. And when it comes to evaluating for neuropathy, we do monofilament exams, which is the little pinprick test that people use on the bottom of the foot with your eyes closed. We can test for vibratory sensation, we can test for sharp and dull. All the things that can be impacted by numbness in the feet that can put you at risk.

RK: So would you say that everyone with diabetes at some point should see a podiatrist or perhaps only those that might be found to be at higher risk of complications by their health care providers?

NM: I think it would be beneficial for any diabetic patient to see their podiatrist at least once per year just to form a baseline initially and then monitor for any deterioration based on progression of the disease.

RK: And are visits with podiatrist usually covered as far as you know, by most major insurance health plans?

NM: By most major insurance health plans and Medicare, yes.

RK: Is there any special type of way to wash the feet that you recommend for people at home that have diabetes versus those that don't? Or is that not something that usually people need to be concerned about?

NM: So I think that's a very important question is how to appropriately clean and dry your feet. So I typically will recommend a patient wash their feet with just a gentle soap and water. And I like the idea of exfoliating because unfortunately, dry skin is always an uphill battle especially when you have diabetes. Getting some of those dead skin cells off, cleaning really well can be very effective. Just do not be too aggressive with that because you want to be careful with your skin. Drying the feet really well particularly between the toes because moisture can breed things like fungus and athlete's foot or toenail fungus. And once you've dried using a high-quality moisturizer so that you can lock in some of the moisture in the foot so you can prevent dry skin.

Dry skin can become very brittle and is more likely to break down, while moisturized skin has a higher degree of elasticity, so it's less likely to cause an ulcer. So I think that combating dry skin, though it sometimes seems futile because the skin likes to eat up that moisturizer, is a very important practice to get into.

RK: What if someone has a malodor or it doesn't smell as good as it did? Is that something to be concerned about? Or is that just usual, you've been active and that can happen at times.

NM: Odor isn't always concerning, but odor should always be checked out by a professional. Odor can come from a variety of different things such as excess moisture, bacterial growth, or fungal growth or sometimes a combination of these things. Sometimes, people will get a bacterial or fungal growth between the toes and it appears as like a white scaly skin almost like you've been in the pool for too long, that kind of white skin appearance and that can have a strong odor to it, but it hides between the toes. So people don't always acknowledge that and it is important to treat those things where they can get worse with time.

RK: Thanks. That's really good to know and a question that sometimes people don't want to talk about but it is important because it can be the first sign sometimes that people have that something needs to be checked out.

NM: And also, if there's any excess sweating that's involved, which is not uncommon in the palms and the soles, there can be treatments available to help to prevent that. And there are some certain measures you can take to prevent that from causing any odors.

RK: What about people that are very active, perhaps athletes or people that may be exercising for long periods of time and do sweat in their feet or maybe have moisture that accumulates there? Are there any special precautions that you recommend for those individuals?

NM: I usually recommend using a type of moisture wicking material in your sock or using a simple cotton or a wool. I always recommend also keeping an extra pair of socks on hand if you know that your feet are going to sweat so that you can change out of a wet sock and into a dry sock to help to limit that amount of moisture that's exposed to the feet. In terms of the shoes, using just a simple over-the-counter antifungal spray in the shoe can help to prevent the growth of these things. If your shoe is a moist environment, which commonly shoes can be.

RK: So do people who are very active or athletic, you know who work out a lot, are they more prone to develop injuries in the foot because of diabetes? And I wonder if you could briefly talk about Charcot foot as well since we haven't really talked about that.

NM: So yes tendinitis… tendinopathies, essentially any kind of disease of the tendon or disorder of the tendon that can cause you pain, discomfort or affect your ability to go about your daily life can be more common, and can be worsened, by diabetes. It can cause stiffening of the collagen materials that form the tendons in the first place. And also the decreased circulation to the tendons, which is so important in their ability to heal and to stay healthy can affect all of those

things and can lead to pain in certain large tendons and small tendons and can lead to sometimes disability as a result of that. So really, if you experience something like that, it's very important to see your provider rapidly so that you can start treatment before this progresses to something that could be as severe as a tendon rupture and someone like a weakened athlete such as the Achilles tendon rupture, which is not uncommon in weekend athletes without diabetes. And seeking good treatment as soon as you get a degree of pain in your foot is a really good important management measure that you can take. Sometimes, just getting you into physical therapy nice and early, you're putting together a therapeutic regimen for you can help to get that better quickly. But these things do respond a little bit more slowly in patients with diabetes for the same reasons.

RK: And Charcot foot… is that something that's more common in people with diabetes?

NM: Charcot foot is an unfortunate and fortunately not as common complication of diabetes. In the literature, it's reported anywhere from less than 1% of the population all the way up to roughly 9%. It does vary based on geography and demographics slightly. Charcot foot is essentially breakdown of the architecture of the foot of the normal bony arch that you normally are used to seeing when you look at a foot as a result of either neuropathy, circulation, or a little bit of both that causes those joints to collapse and fall apart a little bit. And it can lead to deformity of the foot in such a way that you can get very serious ulcers on the bottom of the feet that often lead to surgery and possibly amputation on occasion. So Charcot foot is not as common as something like a foot ulcer or a foot infection, but can be very debilitating when it happened.

RK: Well, Dr. Maniscalco, thank you so much for sharing your expertise today. I know that I learned a lot and I'm sure this is very educational for our listeners as well. So thank you so much for your time and your expertise today.

NM: Thank you very much for having me. It's a pleasure as always.

RK: I'm Dr. Rita Kalyani, and you've been listening to ***Diabetes Deconstructed***. We developed this podcast as a companion to our ***Patient Guide to Diabetes*** website. Our vision is to provide a trusted and reliable resource, based on the latest evidence, that people affected by diabetes can use to live healthier lives. For more information, visit ***Hopkins diabetes info dot org***.

We love to hear from our listeners. The email address is ***Hopkins Diabetes Info at JHMI dot edu***. Thanks for listening. Be well, and see you next time