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Improving Cardiovascular Care with Timely Chronic Kidney Disease Diagnosis

Announcer:
You're listening to *Conversations in CV Risk Assessment* on ReachMD. Here's your host, Dr. Jennifer Caudle.

Dr. Caudle:
Welcome to ReachMD. I'm your host, Dr. Jennifer Caudle, and joining me to discuss how delayed diagnosis of chronic kidney disease, or CKD for short, can impede cardiovascular risk detection, are Drs. Dustin Le and Niloo Nobakht.

Dr. Le is an Assistant Professor at Sidney Kimmel Medical College at Thomas Jefferson University in Philadelphia. Dr. Le, thank you for being here today.

Dr. Le:
Yeah, thank you so much. I'm excited to be here.

Dr. Caudle:
Of course. And Dr. Nobakht is an Associate Clinical Professor of Medicine in Nephrology at the David Geffen School of Medicine at the University of California, Los Angeles. Dr. Nobakht, it's great having you here as well.

Dr. Nobakht:
Thank you. It's a pleasure to be here today.

Dr. Caudle:
Of course. So, Dr. Nobakht, we're going to start with you. According to the Centers for Disease Control and Prevention, as many as 90 percent of adults who have CKD are not even aware they have it until complications arise. Now, with that being said, why are so many patients diagnosed so late in the disease course?

Dr. Nobakht:
In general, CKD is largely asymptomatic in earlier stages. Usually, kidney problems do not cause symptoms that you can feel. Patients or even clinicians might not recognize the need for screening until kidney function has already declined. That's the main problem.

Also, routine testing for eGFR, especially urine albumin, is often dropped out, and there is a strong clinical suspicion which delays this diagnosis. We like to bring the attention of our colleagues, healthcare providers, and the next generation of doctors to focus on uACR to detect this at the earliest stages possible.

Dr. Caudle:
Thank you for that. And Dr. Le, building off of that, how could missing early signs of CKD, especially albuminuria, impact cardiovascular risk detection and management?

Dr. Le:
Yeah, a really great question. And so I would take a step back. First we have to ask, what patients do we think are at high risk of having undiagnosed albuminuria or proteinuria? Because that actually ends up being the vast majority of patients—those who end up having proteinuria will be those with high blood pressure, hypertension, or diabetes.

And then really, the greatest strength of identifying the patients with proteinuria is you then actually give them a diagnosis of chronic kidney disease, since we should remember that having chronic kidney disease is not just having low kidney function, but can also be defined by having proteinuria, which implies a structural deficit in the kidney center. Essentially, how I describe it to patients, you're now

leaking protein into the urine.

And then once you have a diagnosis of chronic kidney disease, that should change how you think about pharmacologic management for both hypertension and diabetes. And so two examples: for patients with hypertension—and I used to do this a lot—I'd actually prescribe patients calcium channel blockers, and so we'll treat their hypertension. They don't need to have bloodwork checked after. You don't need to monitor it. It's an easy medication to use.

What actually winds up happening is the second you diagnose someone with both hypertension and chronic kidney disease, even if their eGFR is normal but they have the protein in the urine, using medications like ACEs and ARBs actually are much better, since not only will it treat the hypertension and address the protein in the urine, but also reduce their cardiovascular disease risk, which we've now identified by having this proteinuria number.

And then, sort of the same example for patients with diabetes—we'll sometimes use medications like metformin, or we'll use different sulfonylureas, things like that. But then the second they have a diagnosis of chronic kidney disease, you actually want to preferentially use things like SGLT2s, which will not only treat the diabetes, but also address the proteinuria, kidney disease, and cardiovascular disease risk.

But really at the end of the day, by measuring proteinuria, we identify patients at high risk of cardiovascular disease, and then we can think about using new medications that we have to treat their cardiovascular disease risk plus their underlying comorbidities.

Dr. Caudle:
Excellent. Now, Dr. Nobakht, let's take a closer look at albuminuria. When it's left unmeasured, how does that affect our ability to accurately stratify risk? And what does that mean for downstream cardiovascular care?

Dr. Nobakht:
As we mentioned earlier, albuminuria is one of the earliest markers of glomerular or kidney injury, and correlates strongly with cardiovascular outcomes, even before GFR decline. So when it stays unmeasured or not detectable on regular basis, we remove a very important key signal from risk assessment process.

This is in most—millions—of our population with CKM, which is cardiovascular-kidney-metabolic disease, such as diabetes, hypertension, and obesity. And if the risk assessment process leads to under-recognition of high-risk patients, as I just called them, the CKM, and missed treatment windows, it's going to delay the diagnosis and then prevention of further damage and end-organ failure in the future.

Dr. Caudle:
Thank you for that. And for those of you who are just tuning in, you're listening to ReachMD. I'm your host, Dr. Jennifer Caudle, and I'm speaking with Dr. Dustin Le and Dr. Niloo Nobakht about the importance of chronic kidney disease diagnosis and cardiovascular risk detection.

So Dr. Le, I'd like to shift gears now and talk about treatment. How does missing a CK diagnosis limit the use of disease-modifying therapies like SGLT2 inhibitors and RAS blockers?

Dr. Le:
Yeah, a great question. And I think really, by not checking albuminuria, chronic kidney disease is potentially either under-recognized or not identified. And so by giving patients a diagnosis of chronic kidney disease, you actually really can shape the pharmacologic management offered to patients.

But in the issue of patients also having chronic kidney disease—and especially having albuminuria that we keep talking about, and proteinuria—we know actually these patients are at higher risk of different cardiovascular outcomes in the long run. And so by shifting them to medications like ACEs and ARBs, you're reducing that risk long term and decreasing the proteinuria.

And then more so, also in the realm of diabetes, for patients without chronic kidney disease, you can use things like metformin, sulfonylureas, and other medications. But then the second the patients become diagnosed with chronic kidney disease, the guidelines actually change a lot. And they're—I'm not going to say forceful—but they give a lot more guidance in terms of metformin, and then actually SGLT2s for diabetes. And then in the background, remember, it also is decreasing that risk of chronic kidney disease, and more so cardiovascular disease and mortality.

And then similarly, with other medications—we know GLP-1s are a great medication. They have so many different indications. But in even having a diagnosis of chronic kidney disease, actually, what I found in my practice is that sometimes enables patients to actually get put on GLP-1s. What I've seen a lot of times, like for obesity or cardio-kidney-metabolic syndrome, sometimes they're no longer

covered, unfortunately. Then the second they have that chronic kidney disease diagnosis, sometimes they do become eligible.

And there are other medications, like MRAs, which I mentioned before, and really at that point, we probably need to refer to nephrology to help manage, remembering that these four—and stealing from cardiology—we call them the four pillars in nephrology. It's co-directed medical therapy now. Cardiologists have it. Nephrologists have it. And it's ACE/ARB, SGLT2, GLP-1, and MRAs.

Dr. Caudle:
Before we wrap up our program, there's one last point I'd like each of you to speak to. We'll start with you, Dr. Nobakht. In your view, what would a more proactive, integrative screening model look like for patients at cardiovascular risk?

Dr. Nobakht:
The model we can look into will be annual testing of both eGFR and uACR for patients with diabetes, hypertension, obesity, and CKM, which is cardiovascular-kidney-metabolic disease. These are all the populations with existing risk that can basically damage end-organ in the near future.

This is a foundational step. Embedding kidney markers into standard cardiometabolic panels for electronic health record alerts, they can easily make early detection part of their routine care. And this is critical and pivotal, not just an afterthought.

Dr. Caudle:
Great. Thank you so much. And Dr. Le, I'll ask the same question of you, what do you think is needed to improve our cardiovascular risk screening model?

Dr. Le:
Yeah, and so first I'll say I agree with everything Dr. Nobakht said—people need more screening. We need to educate, and honestly, it starts from top to bottom, just as a whole system, making everyone aware—primary care providers, cardiologists, endocrinologists, and subspecialists. Whenever we think about kidney health, we should be checking both the GFR and the urine protein. Right? Measured as urine albumin-to-creatinine ratio.

And then I'll kind of take a different spin on this question as well. In the larger perspective, outside of the individual physician, what do we really need to do to change the culture? Since these are things we've known now for, I'll say, several years. And when it comes to a lot of these newer research topics, new research initiatives, and new population health initiatives, everything takes time to sort of come from research to practice, and that's always been a larger gap in the realm of medicine.

And one of the things I recently learned when I was talking with a colleague—I know we've spent a lot of time talking about how we need to measure albuminuria, and that way, by identifying the problem, we can actually start thinking about treating it. But really one of the larger issues from, let's say, an insurance standpoint, or a payer or even a healthcare system standpoint, is within the medical EHRs right now—even though Dr. Nobakht and I can order urine albumin-to-creatinine ratio, and we can then select it as an ICD code and patients have X amount of albuminuria—what ends up actually happening is on the health system level, meaning, let's say Medicare or Medicaid, they actually don't see how much proteinuria your patients have, because all these insurance codes will default to just having albuminuria period.

And so even from a health system standpoint, just being able to better identify patients who actually end up having albuminuria—who are they, and then what therapies do they end up being on? Because even kind of just from a healthcare quality standpoint, we need to sort of catch up with how we measure it from a health system standpoint as well.

And then, on top of other things Dr. Nobakht mentioned, we just need more education for everyone. Just make it reflex that we're thinking kidney, so we're thinking eGFR and proteinuria. And then the only way to see their proteinuria is to measure it. And then if we can identify all these patients and track them, I think that'd just be a huge step forward to knowing who has this issue, and then we can start making slow strides into getting them on the right therapies, advancing their care, and giving them the state-of-the-art care that every patient deserves.

Dr. Caudle:
Excellent. Well, as those final insights bring us to the end of the program, I'd like to thank my guests, Drs. Dustin Le and Niloo Nobakht, for joining me to discuss the impact of delayed CKD diagnosis on identification of cardiovascular risk. Dr. Le and Dr. Nobakht, it was great having you both on the program. Thank you so much.

Dr. Le:
Yeah. Thank you so much for having us.

Dr. Nobakht:

Thank you very much for having me.

Announcer:
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