

Transcript Details

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Uncovering Cardiovascular Risk in Patients with Target Blood Pressure

Announcer:

You're listening to *Conversations in CV Risk Assessment* on ReachMD. Here's your host, Dr. Gates Colbert.

Dr. Colbert:

This is ReachMD, and I'm Dr. Gates Colbert. Joining me today to discuss how we can use albuminuria to uncover hidden cardiovascular risks in patients with controlled blood pressure are Drs. Michael Hall and Clyde Yancy. Dr. Hall is a Professor and Chair of the Department of Medicine, the Patrick H. Lehan Chair of Cardiovascular Research, and Director of Clinical and Population Studies at the Mississippi Center for Clinical and Translational Research at the University of Mississippi Medical Center. Dr. Hall, welcome to the program.

Dr. Hall:

Thank you very much for having me.

Dr. Colbert:

And Dr. Yancy is the Chief of Cardiology Medicine and a Professor of Cardiology at Northwestern University, Feinberg School of Medicine in Chicago. Dr. Yancy, thanks for being here today.

Dr. Yancy:

Dr. Colbert, I'm delighted to be here. I'm especially delighted to work with my peer and colleague, Dr. Hall from Mississippi. This should be a wonderful conversation.

Dr. Colbert:

So let's dive in, starting with you, Dr. Yancy. Why might hypertensive patients with target-range blood pressure still face hidden cardiovascular risk? And how does albuminuria help us detect that?

Dr. Yancy:

One of the things that is so fascinating about this conversation is that we're right at the beginning of what I'm defining as a renaissance in hypertension and antihypertensive therapy. For years, even decades, we treated blood pressure by the numbers, and we've used the very traditional drug classes. But now we have several new iterations in the field that have made this a much more engaging, much more sophisticated process, whether it's in risk assessment—vis-à-vis cardiovascular disease, renal-vascular disease, and stroke—or whether it's new therapeutics, including devices that help us better calibrate blood pressure control, not only to some threshold goal, but to a suite of medical therapies or a suite of interventions that the patient not only tolerates but accepts, is adherent to, and allows us to drive to the outcomes.

And then, most importantly, we now have very, very clear insight that we are profoundly capable of changing the burden of cardiovascular disease, especially through the control of blood pressure.

Now, all of those wonderful statements come back to this: because we are looking at hypertension in a much more clear and understandable format, more so than ever before, calibrating the risk and understanding the burden is essential. So we can't just look at the number. Even though the number drives most of the burden, we need to look at the number plus the other significant co-factors, if you will—the demographics of the patient, the comorbidities, and, yes, the biomarkers. That's where there's much enthusiasm. We can really more precisely understand who's at higher risk or lower risk, who is inexperienced, and whether it's risk enhancement, where it's not just the numbers, but additional markers—this makes it feel so much more engaging and interesting, and gives us so much more

potential to make a difference in the outcomes of patients with high blood pressure.

Dr. Colbert:

Turning to you now, Dr. Hall, can you walk us through the mechanisms that link albuminuria to cardiovascular events, even when eGFR and blood pressure are normal?

Dr. Hall:

Yeah. So albuminuria is one of the first signs of early kidney damage or kidney injury, oftentimes occurring before we see reductions in estimated GFR. It's associated with, of course, things that you just mentioned, like blood pressure and diabetes; however, oftentimes it can be a sign of more global endothelial damage, not just to the kidneys, but to the other blood vessels throughout the body, of course, which also affect organs like the heart or the brain. So there's activation of particularly abnormal systems, whether it be inflammatory pathways, oxidative stress, or neurohormonal activation that can occur as you get progressive kidney injury. Again, albuminuria is a sign of that early damage.

Dr. Colbert:

For those just tuning in, you're listening to ReachMD. I'm Dr. Gates Colbert, and I'm speaking with Drs. Michael Hall and Clyde Yancy about the connection between albuminuria and residual cardiovascular risk in patients with controlled blood pressure.

So Dr. Yancy, let's shift gears now and talk about management. How should an elevated uACR influence treatment decisions for a patient whose blood pressure is already at goal?

Dr. Yancy:

I love this conversation, because we're continuing to speak about how this is no longer the hypertension you learn to treat if you're a physician when you're in medical school or when you're a medical student—this is a much more sophisticated platform, up to and including new markers like the urinary albumin-creatinine ratio.

Now remember, any treatment decision starts with a discussion about lifestyle, and it starts with an awareness that we have to understand the cost of therapies. However, we realize that there are a number of factors—in this case, urinary albumin-creatinine ratio—that really help us better focus our attention on highest-risk patients.

Let's understand this. The urinary albumin-creatinine ratio isn't just a random biomarker, it is a precise indicator of the integrity of the endothelium. Endothelial dysfunction is really the disease process that we're trying to mitigate. Because there's endothelial dysfunction, there is damage to the glomerular basement membrane and thus, leakage of albumin, and we can make that measurement. So when we are assessing the urinary albumin-creatinine ratio, it's not just another biomarker, it is a precise indicator of endothelial dysfunction and the integrity of the kidney.

And once there is established and concomitant renal disease plus hypertension, especially in the setting of diabetes, that's a very different pathologic milieu. No matter what the blood pressure is, that milieu with blood pressures that are equivalent to someone without that milieu, infers greater risk. So the urinary albumin-creatinine ratio is a new way that we should think about hypertension and understanding the burden of risk.

Dr. Colbert:

And from a practical standpoint, Dr. Hall, how can primary care and cardiology teams better incorporate uACR screening into routine hypertension care?

Dr. Hall:

Well, it's a very easy test. There are several tests, but the easiest one is the uACR, which can be obtained easily in almost every clinical setting.

Some of the challenges are that in many practices, if you look broadly across the United States at least, only about 50 percent of patients, say, with diabetes, actually get screened with uACR. It's even more problematic in patients with hypertension—less than about 5 percent of people get this very easy, cheap, simple test that can be done at most labs without any real issues to the patient.

Dr. Colbert:

Before we wrap up our program, I'd love for each of you to share some key takeaways with our audience. Dr. Yancy, let's start with you.

Dr. Yancy:

Let's get excited about high blood pressure here; let's not just relegate this to an exercise in managing the numbers. Let's think much more intensively. Let's understand that what we're really trying to do when we treat high blood pressure is to manage the risk of hypertension. That's an entirely different frame. That risk is predicated on the phenotype of the patient, the comorbidities that are active,

particularly diabetes, and especially these important biomarkers. In some scenarios, it may be easy to take the simplest, most inexpensive therapy there is to just simply lower the blood pressure and clearly reduce the risk of stroke.

But in other scenarios where there are concomitant other comorbidities and positive biomarkers that infer additional risk, let's be smart about the way we approach our blood pressure. Let's engage in this excitement. Think about the new therapies—the entire portfolio of drugs and devices and the contemporary drugs. Let's make this as sophisticated a process as it's been for other parameters and other spaces in cardiovascular disease, not because we want to make it more obtuse and more difficult, but because we want to have a greater impact.

And if we're thinking about having greater impact, let's become more precise. Let's get excited about hypertension. This is not hypertension as it used to be, not by any stretch. It's a new day here at hypertension, and that's good news.

Dr. Colbert:

And Dr. Hall, I'll give you the final word.

Dr. Hall:

To me, albuminuria is one of the simplest detectors of early kidney disease. There's a reason that all the guidelines—whether it's the KDIGO kidney guidelines, the diabetes guidelines, or the ACC/AHA blood pressure guidelines—recommend checking albuminuria in patients with hypertension, diabetes, or at risk for chronic kidney disease.

So it's clear that this is something we should be doing clinically. It's clear from data that we don't do it as routinely as we should. Again, kidney damage that can be detected at least early by albuminuria can cause a vicious cycle where you get worsening high blood pressure, more kidney injury, and more heart and brain injury as well. So it's a very important thing we should be checking more for in routine practice.

Dr. Colbert:

Those are great comments for us to think on as we come to the end of today's program. And I want to thank my guests, Drs. Michael Hall and Clyde Yancy, for joining me to discuss the role of albuminuria in detecting overlooked cardiovascular risk in patients with target blood pressure levels. Dr. Hall, Dr. Yancy, it was great having you both on the program.

Dr. Hall:

Thank you for having me.

Dr. Yancy:

It was even better to be here, because I think this message, I think what we're trying to accomplish is so very important. So thank you for the opportunity to participate.

Announcer:

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