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www.reachmd.com  
info@reachmd.com  
(866) 423-7849

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## Cardiology Considerations for Patients with Type 2 Diabetes

Announcer:

You're listening to ReachMD, and this episode of Heart Matters is sponsored by Novo Nordisk. Here's your host, Dr. Alan Brown.

Dr. Brown:

Welcome to Heart Matters on ReachMD. I'm Dr. Alan Brown, and here with me today to discuss cardiology considerations for patients with type 2 diabetes is my good friend, Dr. Nathan Wong, who's Director of the Heart Disease Prevention Program at the University of California in Irvine. Nathan, welcome to the program, it's good to talk with you.

Dr. Wong:

Great. Thank you so much, Dr. Brown. It's really a pleasure to participate with you on this ReachMD program and discuss and discuss this important topic.

Dr. Brown:

Yeah, so let's start. How about giving us some background into the risk of cardiovascular events in patients with type 2 diabetes?

Dr. Wong:

Yeah. So, that's a very important question and we really need to develop greater appreciation among both clinician and patient community about this. So, we certainly know from studies dating back to Framingham decades ago, as well as large meta-analyses that diabetes confers about a two to three-fold greater risk for most cardiovascular events including myocardial infarction and stroke. There's also evidence, in particular, and this is underappreciated that it's a stronger risk factor in women with a relative risk for certain events such as heart failure and peripheral arterial disease being more than six to seven-fold greater in women with versus without diabetes. And, we also don't appreciate that for example from a large registry in the U.K. that actually heart failure and peripheral arterial disease were the most common first cardiovascular disease manifestations occurring. So, this really warrants that we pay greater attention to trying to identify these cardiovascular conditions early in their course.

Dr. Brown:

With that in mind, let's take a moment to focus on the ACC 2020 Expert Consensus Decision Pathway on Novel Therapies for Cardiovascular Risk Reduction in Patients with Type 2 Diabetes. Can you go through for us what these guidelines recommend?

Dr. Wong:

Yeah, so this expert consensus decision pathway, is really meant to provide a practical guide for cardiovascular specialists for the initiation and monitoring of these newer therapies, the SGLT2 inhibitors and GLP1 receptor agonists on top of pre-existing standard of care therapies used for diabetes including very importantly lipid and as well as blood pressure and anti-platelet therapies. So what the consensus decision pathway recommends is that the clinician have a patient-clinician discussion about the use of one of these newer therapies and both classes have been demonstrated to have cardiovascular benefit. We know now from trials going back to empagliflozin, almost 6 years ago. And so these recommendations published by the ACC suggested an SGLT2 inhibitor with demonstrated cardiovascular benefit should be recommended for those with type 2 diabetes and heart failure and especially heart failure with reduced ejection fractions where most of the evidence remains. Although we know that there are trials underway, soon to be reported involving those with preserved EF, as well as people who are at high risk of developing heart failure or diabetic kidney disease given the mounting evidence that these therapies also prevent the progression of kidney disease. And are also likely to be and they already are seen by many experts as next greatest class of heart failure therapies.

Now, with GLP1 receptor agonists with demonstrated cardiovascular benefit is certainly recommended for people with established or who are at high risk of cardiovascular disease. And, numerous guidelines, other guidelines also recommend these for persons with diabetes who have multiple risk factors, so it's not just those who already have established cardiovascular disease.

Dr. Brown:

I want to ask you your thoughts about obviously there are a lot of gaps in treatment, I still see lots of patients with diabetes who are on TZDs sometimes with volume overload as is always the case, it takes a long time to catch up with the guidelines. I certainly have been sending any folks with ASCVD and diabetes back to their endocrinologists and try to get them on the more current therapies. The dilemma is that with atherosclerosis and diabetes, you could theoretically put these patients on nine drugs, right, based on clinical outcomes trials. So, how do you, kind of, sort that all out, and what do you think is still the biggest treatment gaps in these patients with diabetes, especially those with ASCVD?

Dr. Wong:

So, certainly, as you correctly point out it oftentimes takes ten or twenty years for clinical practice to catch up with newer guidelines. So, hopefully, we don't have to wait that long. And we really need to help educate the cardiovascular clinician community that diabetes really is a cardiovascular disease that needs to be integrated better into their practice in terms of care and management. And, and we shouldn't be thinking of the SGLT2 inhibitors and the GLP1 receptor agonists as just drugs for diabetes. These are really cardiovascular risk-reducing drugs. Just like we don't think of statins just as cholesterol-lowering drugs, but these are evidence-based, of course, and we think of these now as, as agents that reduce cardiovascular risk, which we know from numerous clinical trials.

But I think the other very important area that is extremely underappreciated in terms of treatment gaps is this issue of composite cardiovascular risk factor management, which we've done some work on and data that we've published, such as from NHANES and particular from the Diabetes Collaborative Registry, which was a national effort with the ACC, ADA, and numerous other organizations, is that we showed that while about 50 to 70 percent or so of people are at recommended individual targets for, say, A1C which, which we found 74 percent were at target for A1C, 69 percent at target for blood pressure, although only 40 percent if you use the less than 130 over 80 targets, and 49 percent at LDL targets. But, if you look at these in composite, we found only 25 percent, and this also corresponds nicely with other work we've done with NHANES were at target for A1C blood pressure and LDL. And if you use the more recent less than 130 over 80 targets for blood pressure, that composite rate drops to 15%. So, how on earth with all these sophisticated therapies we have here in United States, only 15% of people with diabetes are at composite target for A1C blood pressure and LDL?

So, we really need to make sure that people are not forgetting, in particular, about these big 3 and that patients realize that diabetes is not just a blood sugar issue, it's very much a blood pressure and a lipid issue, as well, when it comes to prevention of cardiovascular disease, which is, of course, the leading cause of death in people with diabetes. And we need to get clinicians to remember, don't forget if you're treating the A1C, well, don't forget about the blood pressure and the lipids. Or if you're treating the lipids, well don't forget about the blood pressure.

Dr. Brown:

For those of you just tuning in, you're listening to Heart Matters on ReachMD. I'm Dr. Alan Brown and today I'm speaking with Dr. Nathan Wong about what cardiologists need to know when it comes to managing CV risks in patients with type 2 diabetes.

So, Nate, it seems based on what you so eloquently just pointed out that this is going to be a systems approach to these patients who are going to need decision support with EMR and other systems. We're going to need to attend to all the risk factors if we want good outcomes. And that brings up the question of the role of the cardiologist. And there's more and more discussion of having cardiometabolic clinics where you have cardiologists working with an endocrinologist to try to optimize all the risk factors for these patients. So, I think you went through what we need to know about managing those patients in terms of blood pressure control, lipids, and A1C. What do you think about these discussions about cardiometabolic clinics?

Dr. Wong:

Yeah, well I think it's certainly something that should be considered in the future. And again to, sort of, expanding what preventive cardiology programs are already doing. But as far as diabetes and pre-diabetes the cardiologist needs to understand that roughly two-thirds of their patients have abnormalities in glucose tolerance, right? Either pre-diabetes or diabetes. And it's really how they take care of dyslipidemia and hypertension; diabetes also needs to be in their realm of their responsibility. If they're going to provide the best evidence-based care cardiologists are used to. Statins, just, remember, used to be cholesterol management, used to be mostly in the domain of endocrinologists and obviously, endocrinologists are great experts at managing these problems, but we know that cardiologists have now embraced using statins and they understand that they're much more than cholesterol-lowering drugs.

And the same way with the SGLT2 inhibitors and the GLP1 receptor agonists, they need to understand that these are not just diabetes therapies, they're cardiovascular risk-reducing therapies, and certainly in the case of SGLT2s, these are also heart failure and therapies

to prevent progression of chronic kidney disease. And that GLP1 receptor agonists also have benefits in terms of atherosclerosis and weight management that need to be better understood by the cardiovascular community.

And we know that patients with diabetes, despite being on current traditional therapies, substantial residual risk remains, particularly in those who already have established cardiovascular disease. And now with the advent of things such as icosapent ethyl and newer lipid-lowering therapies, like the PCSK9 inhibitors for those at very high risk. And, of course, the newer SGLT2s and GLP1 receptor agonists we have really have a lot available to us to help address this remaining residual risk problem that we especially see in our diabetes patients with established ASCVD.

Dr. Brown:

Well, I think that's very well said.

I think you outlined beautifully, you know, that the cardiologists need to be a major part of the solution and I personally believe that endocrinology and cardiology area marriage made in heaven. Traditionally now that cardiologists are doing more with lipids and there are drugs that are very effective for lowering LDL, the cardiologists focus on that, and they don't pay a lot of attention to A1C. Whereas endocrinologists focus a lot on A1C and don't always think about some of the preventive therapies for cardiovascular disease. So, hopefully together we can come up with a solution that will deal with this epidemic and population health-based issue of obesity and type 2 diabetes.

So, Nathan, unfortunately, we're getting close to out of time but are there any pieces of advice that you'd like to share with our audience regarding managing these patients with type 2 diabetes and reducing their CV risk? I know you covered a lot of material during the discussion, but any pearls of wisdom you wanna share as final words of advice?

Dr. Wong:

I think you mentioned some of the points very eloquently and it all begins with lifestyle management and we need to better integrate our lifestyle interventionists, such as registered dietitians, nutritionists, as well as exercise physiologists into the cardio-diabetes care team. And as you said, this really involves also a close collaboration not only between the cardiologists and the endocrinologists but also the primary care physician, takes care of the majority of people with diabetes and many times is responsible for the follow-up of cardiovascular patients. So, we really need to have a close working relationship with these groups.

I think finally, as far as cardiovascular clinicians, they really need to be both champions and what we call change agents and strongly advocate for better care of these conditions and their patients. And so I think, it's great to see all the efforts that various societies such as the American College of Cardiology and American Society for Preventive Cardiology and National Lipid Association, and American Heart Association these organizations have really done a lot to increase the awareness and importance of improving the management of type 2 diabetes and cardiovascular disease.

Dr. Brown:

Thanks, very much, Dr. Wong, Nathan for coming on to share your perspective. It's always great to hear your thoughts and particularly to get your perspective on cardiovascular risk in patients with type 2 diabetes. It was really good to have you on the program.

Dr. Wong:

Thank you, so much. It's really been a great pleasure participating with you on today's, program.

Announcer:

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