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CVD Risk Reduction in Patients with Type 2 Diabetes: Practical Updates for Cardiologists

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 joining me today to talk about the latest recommendations for reducing the risk of cardiovascular disease in patients with type 2 diabetes is Dr. Erin Michos. Erin an Associate Professor of Medicine and Director of the Women's Cardiovascular Health Center, as well as an Associate Director of Preventative Cardiology at Johns Hopkins Medicine. Dr. Michos, thank you very much for joining us, today.

Dr. Michos:

Thank you so much for having me on your program.

Dr. Brown:

So, Dr. Michos having had a chance to talk with you briefly before today's interview, I can tell that you have a strong passion for patients with diabetes and a link between diabetes and cardiovascular disease. Could you give our audience a little bit of insight into the risk of cardiovascular disease in diabetic patients?

Dr. Michos:

Right. So, as, you know, this is a real problem, we have an epidemic of cardiometabolic diseases. There's currently over 30 million Americans living with diabetes and it's estimated by the year 2030, it's gonna be about 55 million. So, we know that adults with diabetes are a two to four-fold times higher rate of having heart disease compared to their non-diabetic counterparts. And men and women over the age of 50 with diabetes are estimated to have an eight year shorter survival compared to individuals without diabetes with the leading cause of death among patients with diabetes being heart disease. So, you really need a multi-faceted, multi-pronged approach to reduce this residual risk. So caring for patients with diabetes, we need to focus on traditional cardiovascular risk factors, controlling lipids, with, statin therapy, controlling blood pressure, smoking cessation, diet, and lifestyle, and now I'm very excited to talk to you today about new options that we have these new, medications these diabetes medications SGL2 inhibitors and GLP1 receptor agonists that actually have a meaningful, cardiovascular outcome reduction.

Dr. Brown:

So, let me tweak you a little bit before we get into the newer, anti-hyperglycemic therapies. Do you think the epidemic of diabetes is tied to the obesity epidemic or are there other factors that are increasing the prevalence of diabetes in the population?

Dr. Michos:

Certainly, I think that obesity is a large driver, we're as a population just becoming much more heavier and more sedentary, and so, also the quality of food, there's high intake of, highly processed foods, combined with less physical activity, and it's really just setting the stage for this insulin resistance in cardiometabolic diseases.

Dr. Brown:

So, we're gonna have to have some sort of population health strategy as well as the best we can do with medicines, correct? I mean some people have predicted that our children's generation will be the first generation in history to have shorter life expectancies than their parents. So have you thought about in addition to the medications we're gonna talk what we might have to consider for population health strategy and how we're going to look at this huge bubble of folks with diabetes and try and reduce their risk for cardiovascular

disease?

Dr. Michos:

Yes, absolutely. We really need to focus on primordial prevention. We know that cardiovascular health in mothers is associated with cardiovascular health of their offspring. Cardiovascular health in youth and adolescents, young adulthood, tracks into middle and older ages. And so, how we spend, you know, the first half of our life really impacts our freedom from morbidity and mortality in the second half of our lives. So, we really need to shift the whole population health, you know, at younger stages. And really this is beyond the individual. I think we've put a lot of fault on the individual but there's a lot of barriers stacked against individuals and so we really need to restructure everything in our society. You know, how we commute to work the availability of healthy foods and produce, having safe places to exercise, this really needs a populational-wide, societal, and policies, rather than just putting on all the fault on the individual for eating too much and not exercising.

Dr. Brown:

Yes, that was very well said it's a big challenge for us in the next several decades obviously prevention is a critical component of this discussion and our population health strategies are going to take years to implement though I certainly hope we're going to focus on them because of the increasing amount of diabetes in the population.

Let's talk a little bit about the therapies that are been laid out in the 2020 ACC Expert Consensus Decision Pathway and, can you tell us a little bit about what's recommended for cardiovascular risk reduction in the diabetic patients?

Dr. Michos:

Yeah. So, I'm so excited now because we have two classes of medications: the SGL2 inhibitors and the GLP1 receptor agonists that were initially developed for treatment of diabetes but subsequently shown in a number of large outcome trials to have meaningful reductions in major cardiovascular events, heart failure hospitalization, particularly with the SGL2 inhibitors, and reduction in progression of diabetic kidney disease. I think it's important to note that SGL2 inhibitors have been shown to reduce heart failure events in patients with HFrEF with and without diabetes. And actually, SGL2 inhibitors offer both kidney and cardiovascular protection in both patients with diabetic and non-diabetic chronic kidney disease. And GLP1 receptor agonists, not only can they reduce ASCVD, but they can reduce macroalbuminuria and they're being studied for their kidney protection, as well.

So, I think we need to move beyond thinking of these as diabetes drugs. It's really clear that the benefit of these medications go well beyond their A1C lowering and that we really should think of these as organ protection drugs, cardiovascular prevention drugs. And this is why I've been urging cardiologists like myself and like you, we're part of the choir but trying to get our colleagues in cardiology on board and comfortable with prescribing these medications because this is our wheelhouse. This is cardiovascular prevention drugs. And I think cardiologists are very comfortable when you have a cardiovascular outcome trial data. You know, we like our trials. And so I think we can, you know, get cardiologists on board.

Dr. Brown:

So, looking at the algorithm for treatment using SGLT2 inhibitors or GLP1 agonists I noticed that there's, sort of, a bias towards if you have a patient with heart failure patient you would use an SGLT2, where if you've had a patient without heart failure, where you needed weight loss, for example, you might choose a GLP1 can you tell us a little bit about these options and whether that makes sense and when you are thinking about risk reduction how might you choose one potential therapy over the other?

Dr. Michos:

Right. I think certain patients may be more suited for one or the other. As you mentioned, you know, patients with heart failure at high risk of heart failure and patients who also have chronic kidney disease may benefit from SGL2 inhibitors, the GLP1 receptor agonist reducing ASCVD so they're really good for patients who have a history of ASCVD or at high risk for ASCVD. And the weight loss, although seen with both classes of medications, weight loss seems to be greater with the GLP1 receptor agonist. In fact, I've had a lot of my patients, you know, have atherosclerotic cardiovascular disease and are interested in losing weight and I've seen meaningful weight loss reduction with GLP1 receptor agonist, so that might be particular at use for those patients. And, you know, there might be some individual preferences related to whether an oral medication versus an injectable there maybe also as we'll talk about some of the side effect profiles that, you know, we're not using. SGL2 inhibitors for GFRs, you know, less than 25 where you could you GLP1 receptor agonist, some of them down to an EGFR as low as 15. And so there may be, patients specific factors that you would pick one class over the other.

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. Erin Michos about recommendations from the 2020 ACC Expert Consensus Decision Pathway on reducing the risk of cardiovascular disease among patients with type 2 diabetes.

So, Dr. Michos, we've obviously discussed these therapies for cardiovascular risk reduction as well as reducing some of the side effects for those having diabetes alone. We talked a little bit about the role of cardiologists. Can we just spend just a few seconds discussing actually the recommendations and the pathway and how you would approach these patients and appropriate choices of therapies?

Dr. Michos:

Yeah, so I think it comes up a lot about whether patients need to be on metformin or not and when you, kind of, start them. So again, I think of these drugs as organ protection drugs and not really for their glucose-lowering. So, although the pivotal trials, generally the majority of patients were taking metformin you know data suggests that you know they benefit even if they are not on metformin, there's no reason to think that these drugs, preferentially work or don't work based on, baseline, other medications used. So, a lot of the guidelines now, including the European guidelines and, the recent, KDIGO guidelines have really suggested using these medications first line. You can use metformin for glucose control but really SGL2 inhibitors and GLP1 receptor agonists for organ protection.

And then we alluded to before about choosing which one or the other really, sort of, depends on their comorbidities so they have heart failure, ASCVD, kidney disease and whether they're at risk, particular risk for one of the side effects.

Dr. Brown:

I obviously share your passion for engaging cardiologists in this process of choosing appropriate treatment for diabetic patient with atherosclerosis. I'm gonna ask you to give us some final thoughts on what we can do as a specialty and what you think our role might be in managing patients with diabetes and atherosclerosis?

Dr. Michos:

Yes, so as I mentioned in the beginning and as, you know, it really takes a multi-pronged approach. So, we need all hands on deck. So, certainly with cardiologists, we need to collaborate with our team members in endocrinology and primary care, with nutrition or exercise physiologists, our pharmacists are really very helpful here, also, individuals who have expertise in pre-auths and helping us with some of the paperwork related to that. You know, we need all hands on deck aboard. And so, we're moving a lot of specialties are moving to having a dedicated cardiometabolic clinic where you can really integrate all of this in one place where patients can get the counseling on the diet and the lifestyle they need; they can be taught how to use these, give themselves these injections, as well as not only getting them on these important, diabetes medications but also managing their comprehensive cardiovascular risk. So, as, you know, patients with diabetes should be at least on a moderate-intensity statin, and those who have a high risk or of, ASCVD or secondary prevention should be on a high-intensity statin to lower LDL by 50 percent or more. They should have their blood pressures controlled, less than 130/80. If they have any, macroalbuminuria they should, be on an ACE or an ARB, and of course, lifestyles, smoking cessation, as well as the diet and exercise. So, it really needs a multi-pronged approach. These are high-risk patients, and we need to reduce the risk through all these different approaches.

Dr. Brown:

Well, considering the high risk of cardiovascular disease among our patients with type 2 diabetes, I'd really want to thank Dr. Erin Michos for sharing her new insights on managing risk and providing valuable information for cardiologists everywhere it was great speaking with you today Dr. Michos.

Dr. Michos:

Thank you. and I enjoyed talking with you today.

Announcer:

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