Title: Preventive Cardiology Highlights in 2023
Participants: Dr Michael Honigberg
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Dr Michael Honigberg

"Hi, I'm Dr. Michael Honigberg. I'm a cardiologist at Massachusetts General Hospital and Harvard Medical School in Boston, Massachusetts. Excited to recap some of the important trends in preventive cardiology in 2023. I think it's been a really amazing year in preventive cardiology and been amazing to see the advancements in the science in this space. Both presented at this weekend's meeting at the AHA, scientific sessions, but also over the past year, I think I'd be remiss not to start with arguably the most anticipated trial of this weekend, the select trial of semaglutide 2.4 milligrammes weekly in the secondary prevention population without type two diabetes and with overweight or obesity. Really exciting 20% reduction in the composite MACE outcome and I think meaningful reduction in all cause mortality I think really establishes obesity as a modifiable risk factor for cardiovascular disease. And also, I think even more squarely entrenches, the incretin analogue medications like the GLP-1 receptor agonists as not just diabetes medications and not just as weight management medications, but as cardiovascular medications. And I think we as cardiologists should really view this drug as being within our wheelhouse, feel comfortable prescribing and titrating these medications. And it takes some learning and there is a bit of a learning curve with that. So seeking out opportunities to get comfortable with this medication class I think is important. Also noting relatedly the recent FDA approval of tirzepatide for weight management, the dual GLP receptor agonist GIP analogue, the Cardiovascular Outcomes Trial of tirzepatide is ongoing and slated to report out in several years. But at least for now, we have another highly effective similar medication for obesity management.

The second thing I would highlight is advancements in lipid management. We know obviously that atherogenic lipids are a very strong modifiable risk factor for atherosclerotic cardiovascular disease. We know that statins are the cornerstone or the foundation of cardiovascular risk reduction for both primary and secondary prevention. We also know that many people who should be on statin therapy are not for a variety of

reasons, including in a subset statin intolerance and in other people they're on statin therapy. But that's not sufficient because of a variety of factors including genetic predisposition to high cholesterol. So we saw our evidence-based arsenal of lipid-lowering therapies expand earlier this year with the Clear Outcomes Trial of bempedoic acid in a population with statin intolerance secondary prevention or high risk primary prevention and showing a 14% reduction in cardiovascular outcomes with bempedoic acid. So, exciting addition to other evidence-based drugs for lipid management that have been shown to reduce cardiovascular outcomes, including the statins PCSK9 inhibitors, ezetimibe, now bempedoic acid and cardiovascular outcomes trials of other agents like inclisiran are ongoing.

The third, I think notable development this year is the FDA approval of colchicine for cardiovascular risk reduction. The CANTOS trial firmly established the inflammatory hypothesis of inflammation as a driver of atherosclerosis and we've now had two large and very compelling cardiovascular outcomes trials of colchicine in patients with coronary artery disease. But uptake of colchicine for cardiovascular risk reduction has been relatively low. We now have an FDA approved indication for colchicine at 0.5 milligrammes. And I think many cardiologists are still not prescribing this drug. And I think the way I'm using it in my own practice is trying to target it to patients who have obvious residual inflammatory risk after we've optimally controlled all our other modifiable risk factors. So I think that's an exciting evolving space as well.

The fourth trend or update from this year that I wanted to highlight was the paradigm of cardio, kidney and metabolic health. This growing recognition that cardiovascular health, that kidney health and that overall metabolically health are inextricably linked together and that therapies that modify one dimension of this axis reduce risk across the board. And so recognition sort of relates back to the initial point about obesity management. But recognising obesity is an important risk factor for all of these diseases and thinking really holistically about the patient's set of comorbidities in prescribing decisions, including recognising opportunities to preserve kidney health through RAAS inhibitor medications or SGLT2 inhibitors for appropriate patients. And as before, not ignoring obesity as a really critical driver of cardiovascular risk, thinking not only about

medications, but also about intensive lifestyle modification and for appropriate patients, weight loss surgery.

And I think related to all of these previous four points is just the fifth point that I wanted to highlight briefly, which is a growing recognition of the social determinants of health and health inequities as being such strong background structural drivers of cardiovascular outcomes. They influence whether we can prescribe drugs to our patients, whether our patients can afford these medications, whether they can adhere to these medications, and even more foundationally all of the upstream drivers and social determinants of health that influence these outcomes and drive health disparities in this country. And so I think as practicing cardiologists, it's important for us to be mindful of how these social determinants are interfacing with the patient in front of us, because that might actually drive decisions about prescribing more affordable rather than more expensive medications or finding other strategies to really help the patient sort of do what they need to to reduce their risk over the long term. And I think also at more a society level, doing the advocacy that we need to to promote healthy policies, create a healthy culture and a healthy environment for our patients."