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Updated NLA Recommendations for African American Patients

Narrator:

Welcome to ReachMD. You are listening to **Lipid Luminations** produced in partnership with the National Lipid Association and supported by an educational grant from AstraZeneca. Your host is Dr. Alan Brown, Director of the Division of Cardiology at Advocate Lutheran General Hospital and Director of Midwest Heart Disease Prevention Center at Midwest Heart Specialists at Advocate Health Care.

Dr. Brown:

So, welcome to Lipid Luminations. I'm your host, Dr. Alan Brown. I have with me a fantastic professor and also just a great guy, Dr. Keith Ferdinand. He's professor at Tulane University School of Medicine in New Orleans, Louisiana. Keith is a world-renowned expert in the field of hypertension and also an expert in health, particularly in African-Americans, something very dear to his heart.

So, Keith, thank you very much for coming and helping educate all our listeners.

Dr. Ferdinand:

Oh, it's my pleasure. It's always good to see you.

Dr. Brown:

You too, you too, it's a pleasure. So, we were talking a little bit before the interview started, and you had mentioned that the new ASCVD Risk Calculator, which had come under some fire, I think some of that probably unfortunately, because certainly the data that they used to do their risk calculation is more modern studies and includes women and includes African-Americans and also includes the risk of stroke; and as you were discussing, there's a separate risk score for people of African-American heritage. Can you tell us a little bit about why that is, and what is the relative risk?

Dr. Ferdinand:

Yes, actually, I use the risk calculator at Tulane. As you know, New Orleans has a large African-American population, and we'll go back to why an increase in risk, but let's just talk about the methodology. They wanted to look at studies, not just Framingham, which has been present for the last 50-plus years, 1948, Framingham, then Framingham offspring; but unfortunately, it's a somewhat homogeneous population, mainly European descent, and does not have the same degree of African-Americans, Latinos, that you see in other parts of the country. So, what the new risk calculator does is take into account things like ARIC and CARDIA and the coronary heart disease programs of NHLBI where you have cohorts which are more mixed, and then calculate and add -- what you said, but many of the listeners may have missed it -- stroke as a major cardiovascular risk. Framingham risk calculators are based mainly on coronary

heart disease. There is an extended Framingham risk calculator now. But the main one when you said Framingham risk, it was coronary heart disease.

So, what happens? Because African-Americans have more hypertension, more severe hypertension, poorly controlled, more target organ damage, increase in stroke, premature stroke, nonfatal and fatal stroke, the risk calculator gives more points to being of African-American status, and somewhat appropriately so; because when you look at dead bodies at the side of the road, mortality, African-Americans die younger, and it's driven primarily by cardiovascular disease.

So, I think it is a good tool. It is appropriate. Now, the question that we need to discuss, does that translate, therefore, to using more statins? And if you just go purely by the risk calculator, it does, but maybe it's not that simple.

Dr. Brown:

So, that's a very interesting perspective, because if it's driven primarily by hypertension and the calculator gets us to put them all on statins, what do you think the major drivers of risk are? Is it hypertension, and what's the dyslipidemia profile of an African-American?

Dr. Ferdinand:

You know, when the guidelines were first released... Were you there at **HA* 3:36** and it was in a big ballroom?

Dr. Brown:

Yes, I was there.

Dr. Ferdinand:

I went to the mic and I asked one of these kind of mysterious questions and everybody got confused. They gave a case of a middle-aged woman who was African-American, she had very high risk, and all of them said high-risk statins and they put the risk calculator up on the screen. And I went to the mic and I said, "Maybe she needs her blood pressure controlled."

(Laughter)

Dr. Ferdinand:

Because to a large extent, the disparate risk is driven by hypertension, and if you look at the LDL levels in NHANES in most populations, the African-American LDL levels are not higher; they are very similar to the general population. Now, they may have more untreated LDL levels. They may have less adherence because of health-seeking behavior and the cost of care. But just purely based on numbers, it's not because African-Americans have higher LDLs. If anything, I think it's more hypertension. The HDL may actually be a little better, especially in men, and I know you practice in a heterogeneous population, you can see some guys who have had lots of disease. You have probably done procedures yourself and the HDL is 50.

Dr. Brown:

Yes.

Dr. Ferdinand:

So, obviously, there's something else going on that's causing the risk. I think that something else is hypertension. There's another part of the risk, which we don't discuss in detail in our patient-centered recommendations on African-Americans, which I chaired for the NLA, is the LP(a), and LP(a), whether you look at the cholesterol or the protein, appears to be higher in African-Americans and of people of ancestry, and this has been seen across the diaspora. So, maybe LP(a) is part of that. But of course, that's not in the risk calculator. And at one point we thought LP(a) was not as predictive of cardiovascular risk in blacks as in the general population, but we can talk

about that. I don't think that's true.

Dr. Brown:

Yes, I'd love to hear your perspective on that. I think one of the dangers of saying that African-Americans generally have higher LP(a) levels is that people dismiss it then and say, "Okay, well, it's because they're African-American the levels are high." What's your perspective on that, and what do you think the incremental risk of having elevated LP(a) level is?

Dr. Ferdinand:

Sure, if you look at ATP³, it's mentioned, and it says the significance of that is unclear. The European guidelines say the same thing. The ARIC population, Christie Ballantyne worked on some of that, and Paul **Rickert*** did an editorial in *Circulation*, where you have a larger population, bigger numbers of African-Americans, it appears that the risk is similar to that of whites, and the higher the LP(a) the greater the risk. So, I think we should not overlook it. I'm really, really cautiously looking at the PCSK9 inhibitors since they lower LP(a), whether that's going to be an additional tool that might be beneficial in African-Americans. The studies we have thus far are not as robust that you can cut the data and make those types of assessments, but I would really like to see. I think we should look at LP(a), especially for a person who has very premature disease, very, very strong family history as an additional risk marker, but it clearly is not because African-Americans have such bad LDL levels. And the HDL levels can be fairly well preserved, and we can go further into the triglyceride levels, which are actually quite low even in very obese African-Americans. Again, I know you probably have some obese black females in your population, bad disease, and the triglycerides are 55. You know, you've seen that.

Dr. Brown:

Yeah, it's interesting though when you look at the sort of epidemiology data of populations, they say that African-American females have a very high prevalence of metabolic syndrome, as do Latino females, and you were telling me that actually that may not be true.

Dr. Ferdinand:

No, that's not actually...

Dr. Brown:

But maybe they have some components.

Dr. Ferdinand:

They have components. Remember, it's an arbitrary 3 out of 5. It's kind of a Wheel of Fortune game that's played with metabolic syndrome, so 3 out of 5. One of them is glucose intolerance. African-Americans have more glucose intolerance, both male and female. The other is HDL, which is not lower in African-Americans, especially men. The other is blood pressure, which is higher. The other is HDL and triglycerides. Triglycerides are actually lower. So, now you are losing some of the predictive power in patients who have abdominal obesity, increased cardiac risk, increased risk of diabetes. But if you look just at NHANES, African-Americans do have, in the female population, more metabolic syndrome than whites but not as high as what you predict, and in men it's only 16%, so something's wrong.

Dr. Brown:

Yes, so do you think, I mean, obviously, waist circumference in the European population is probably the most powerful predictor of metabolic syndrome. That may not be the case in African-Americans, right?

Dr. Ferdinand:

Yes, it's something called the African diaspora paradox, so the triglyceride paradox. There is a young lady named Anne Sumner. She's a physician out of NIDDK, and she's done a lot of research on this. Hepatic lipase levels may be different in persons of African descent.

Now, as you know, we're all heterogeneous. We're all Africans because all of us come from the same source, so to a large extent you can't take an individual patient and make an assessment of how they are based on self-identified race. Okay, we got that. That being the case, as a clinician, as you and I have been for 3 decades, you see these patients who are obese, have cardiovascular disease, you've done an angioplasty, put in a stent, and their triglyceride is 50. So, there must be something going on. You're not wishing that on the person. That's what the lab says.

Dr. Brown:

Right.

Dr. Ferdinand:

And what it's probably reflecting is some nuances in how hepatic lipase works and nuances in continent of ancestry. It's probably a better, more modern term than race, which is a social term. But continent of ancestry may predict not big differences but enough such that don't be misled by that person who has low triglycerides, good HDL, they're obese, have bad hypertension, family history, they smoke; but you tell the patient, "Well, your cholesterol looks good." No, don't do that.

Dr. Brown:

If you're just joining us, you're listening to Lipid Luminations on ReachMD. I'm your host, Dr. Alan Brown. I'm speaking with Dr. Keith Ferdinand, professor at Tulane University School of Medicine in New Orleans, Louisiana. Always entertaining and informative.

So, Keith, if you could -- you've got a broad audience here -- and actually, our listeners are an interesting group. We've got everything from OB/GYN to family practice. It's not all lipidologists who listen to this show.

Dr. Ferdinand:

Oh okay, great.

Dr. Brown:

So, if you were going to tell them, is there something they should focus on that would be different if an African-American patient comes in versus a Caucasian patient? What would be your words of wisdom?

Dr. Ferdinand:

My first thing you should do is look at the whole patient. And we're at the National Lipid Association so we've been doing a lot of lipid talk between you and I, but let's look at hypertension, let's look at weight, physical inactivity. And you know their data that even beyond weight and beyond the numbers, people who are physically active do better than people who are physically inactive.

Dr. Brown:

Right.

Dr. Ferdinand:

So, make sure you check or ask about physical activity. Family history, most of the risk calculators don't have family history. Why? Not

because it's not important, not because it's not real, but if you look at the original Framingham cohort, when you went through the case report forms, most people couldn't tell you what mom and daddy died from. What we used to say, natural causes was the term?

Dr. Brown:

That's right.

Dr. Ferdinand:

So, they really didn't have enough robust baseline data to make that assessment. Again, those of us, whether you're OB/G, family medicine, nurse practitioner, if you've been in this field long enough, when you see strong family histories of premature cardiovascular disease, you should pay more attention. My message probably would be, don't just draw a lab, look at lab and make pronouncements, "Your cholesterol looks good." Life is not that simple.

Dr. Brown:

And really focus on the blood pressure control. We talked a little bit before the interview about the stroke rate being so significant in terms of cardiovascular risk in the African-American population. Do you want to comment on that just a little?

Dr. Ferdinand:

Well, it's the increased stroke rate, premature stroke, fatal and nonfatal stroke that drives the increased cardiovascular risk in blacks, and I think the risk calculator, to a large extent, when you look at ARIC and you look at CARDIA, what they are reflecting is this higher risk of stroke, because now you've included risk in a risk calculator.

Stroke is driven in most cases by poorly controlled hypertension. Now, you can get stroke from atrial fibrillation with embolism; hence, we have the novel anticoagulants that are now being used; but that is not the most common cause of stroke. The most common cause of stroke is just bad blood pressure. So, if you're going to evaluate a patient, doing a blood pressure and doing it right, both arms on the first visit, 3, averaging the last 2 because the first one you're just getting the cuff to sit right, looking at the patient's risk overall, but treating the blood pressure is probably one of the best things you can do. And I'm certainly not adverse to looking at glucose and lipids and the other things that we do, but it's really important to control blood pressure, especially for an African American.

Dr. Brown:

We do say that family history traditionally is one much most potent risk factors, but something that has always troubled me is family history isn't always genetics. It's what the family eat on weekends, if they're a family who exercises, if they exercise together, if they're a sedentary family? So, there's a lot of things about how people live their lives, and I think we have to approach that with all of our patients. Do you have any words of wisdom on what happens in the family and maybe what are the drivers that help to get patients' families more compliant with therapy?

Dr. Ferdinand:

You're absolutely right. We talk about race. It's a social construct and not actually a scientific construct. And there are some genetic markers, for instance, some kidney disease is related to an apolipoprotein called APOL1, which may be toxic to the kidney. But when you look at family history, you might not just be looking at genetics, which are important. You're also looking at lifestyle and culture. Culture is not the same as genetics. Culture is what we do and how we do it. And if you look at culture, the environment, together those are called the social determinants of health. And that particular wording is used by the CDC to measure the environment where people live, their socioeconomic status, their health-seeking behavior, the availability of fresh foods. If you go into some inner-city areas, you don't have Whole Foods or even regular supermarkets. You have corner stores where they sell discarded animal parts and day-old vegetables and a lot of refined carbohydrates and the colored soft drinks with the purple drink and the blue drinks and yellow drinks. You've been in those stores before.

Dr. Brown:

I have.

Dr. Ferdinand:

You have to step in to get change or something, you say, "Wow, it's another world."

Dr. Brown:

I bought a couple of those blue drinks.

(Laughter)

Dr. Ferdinand:

So, those are markers of risk which are difficult to assess, certainly not measured in a risk calculator, but may be as predictive of disease as any one particular set of genes.

Dr. Brown:

Yes, so I don't think this is particularly an African-American issue. It's an issue for all of us with all our patients. How do you approach that? I mean, if you do have a family that you know has their habits of what they eat together and their exercise habits are less, what have you found is the best way to motivate those families?

Dr. Ferdinand:

The most important thing, and if you wanted one take-home message -- we had one before, and that was look at the whole patient and not just draw blood and look at numbers but check blood pressure, etc. -- the other take-home message is to sit down on the chair, eye level, talk to that patient. If it's an older person, find out who brought them to clinic that day. It's not a HIPAA violation if the patient says, "Yeah, my daughter, can she come in?" You often find out the daughter might be a nurse, an accountant, a teacher, someone who's very well educated and can help her mother or her father understand these complex conditions. Touch the patient. Do a physical exam. We put the stethoscope aside. I think that's bad. Patients actually feel an attachment to us when we examine them. And then discuss with the patient not just, "Are you taking your medicine? Did you get your blood drawn?" but ask them about their eating habits. If they're a diabetic, refer them to an educator. If you have the ability in your clinic or your hospital, refer them to a registered dietitian. And discuss with them the benefits of activity, 150 minutes-- most days a week 30, 40 minutes, most days of the week will get you 150 a week, because these are things which are probably not as easy and simple to do as drawing the blood and handing them the lab slip and saying, "Your cholesterol looks okay," but might overall long-term be as important.

Dr. Brown:

Well, Keith, I can't tell you how much I appreciate what you just described. As the son of two family practitioners, they are always told me, "There's a difference between a doctor and a healthcare provider," and you just described what a doctor ought to be. So, thank you very much for your all your insights today.

Dr. Ferdinand:

Thank you, Alan, my pleasure.

Dr. Brown:

I'm your host, Dr. Alan Brown. You've been listening to Lipid Luminations on ReachMD. Thank you for joining us.

Narrator:

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