Cardiovascular Disease and the Gender Gap How Metabolic Syndrome Might be to Blame, and What to do About It

Recently, I had the pleasure of speaking with Regina Druz, MD, FACC, FASNC about the gender gap in cardiovascular disease — the differences in pathophysiology, presentation, and prognosis between men and women — and why so many clinicians struggle to adequately address it.

Dr. Druz is keenly interested in personalized prevention strategies that combine traditional medicine with functional and integrative therapies. She is a nationally recognized cardiac imaging expert with board certifications in cardiovascular disease and internal medicine. She also has subspecialty certifications in nuclear cardiology, adult echocardiography, and cardiac computed tomography.

Founder of the cutting-edge program known as Fit in Your GENES — which grounds cardiovascular care on a patient’s particular genome and environment, and includes nutrition, exercise, and supplements as interventions — she is committed to reducing the burden of heart disease, hypertension, hyperlipidemia, diabetes, metabolic syndrome, obesity, and inflammation.

Dr. Druz currently practices at the Integrative Cardiology Center of Long Island, and is a featured presenter at the 14th Annual Restorative Medicine Conference this September in Hilton Head, South Carolina. Here’s what she had to say about the topic:

JP: Dr. Druz, do you feel that there’s a gender gap in the diagnosis and care of cardiovascular diseases?

RD: Absolutely. Early trials in cardiology excluded women of childbearing age. As a practicing cardiologist, I learned that some of the very critical assumptions that shaped our clinical thinking had been developed in the absence of data on women. In 1979, Diamond and Forrester published a classic paper on risk estimates of obstructive coronary disease based on age, gender, and presenting symptoms. They relied on published studies, only to find that those had a bias toward women.

Ultimately, in order to make a gender comparison, they had to resort to autopsy studies to amass a larger volume of data.

In 2003, the National Institutes of Health (NIH) and the American Heart Association (AHA) embarked on a national campaign to educate women about heart disease. We are still struggling to understand gender-specific differences, and the pathophysiology, presentation of and prognosis for heart disease in women. But we have come a long way by raising awareness and openly acknowledging the fact that women indeed represent a
different patient group, have different disease patterns and disease drivers. Based on my functional medicine experience, women are more prone to the effects of inflammation and hormonal imbalances and those are the drivers for their vascular disease.

JP: Could you elaborate a little bit more about what those hormone influences are — and what kind of patterns you see — in order to help other clinicians learn how to predict, and accurately diagnose, cardiovascular disease in women?

RD: With respect to coronary artery disease specifically, or cardiovascular disease in general, the use of hormones continue to be very controversial. When the Women’s Health Initiative study [an NIH-funded study initiated in 1991] came out, instead of hearing the answers everyone was hoping for — that hormone replacement was beneficial for cardiovascular events — most of the answers were exactly the opposite: hormone replacement from equine sources was not really protective, and was actually harmful.

What I often see in perimenopause is that women develop insulin resistance that progresses over time — not necessarily to frank diabetes, but to obesity, hyperlipidemia, elevated blood pressure and the inability to lose weight. A lot of that insulin resistance is mediated hormonally on a local tissue level. Physically, the estrogen dominance that you see in perimenopause, before estrogen actually starts to decline, predisposes the formation of visceral fat tissue and results in overgrowth of breast tissue. That tissue overgrowth starts to compete with the thyroid for iodine supply, so women may begin to become hyperthyroid — if not by laboratory standards, then simply functionally. Since a lot of people in this country are iodine deficient, this exacerbates the problem.

Insulin resistance, estrogen excess and thyroid imbalance exerts a lot of stress on the body. Additionally, women at this stage in life may also have increased demands at work and home, as their kids get older and careers are more stressful. Together, all of these stresses cause the body to pump out additional cortisol, which just adds fuel to the fire. So for women, it’s a very complicated interplay of factors among insulin resistance, estrogen dominance, hypersecretion of cortisol and increased cholesterol levels. In effect, they land in a Bermuda Triangle where the end result is vascular inflammation, increased oxidative stress and immune vascular response — which, essentially, is the fast-track toward developing coronary artery disease.

JP: So basically what you’re saying is that women going through perimenopause or menopause are at a greater risk for metabolic syndrome — and that clinicians should be looking for those clues to predict if their patients might develop cardiovascular disease?

RD: Absolutely, and that’s where I think lifestyle interventions are so promising—because in these early stages, insulin resistance and estrogen dominance aren’t considered medical issues that require medication. But they are very significant inflammatory issues that will respond to appropriate nutrition, weight loss, exercise and, of course, appropriate supplementation. So there is a huge opportunity in the early stages of metabolic syndrome to really change the disease trajectory for both men and women—though I feel it’s even more important for women, because the problem is more complex.

We know that once these chronic diseases are fully identified, the vascular risk is always higher for women. When these risk factors are present, metabolic syndrome, diabetes or insulin resistance seem always to put women in a less advantageous prognostic category for any cardiovascular outcome. And that’s because the impact of the inflammation generated by these metabolic disturbances, and hormonal disturbances, continues to be higher for women than it is for men. In other words, it’s not an even playing field between men and women when they cross into chronic disease.

There are actually some specific cardiac issues for women that are hardly ever found in men; for example, the so-called “broken heart syndrome,” or takotsubo cardiomyopathy, has an international registry of nearly a thousand people at this point—and about 90 percent of them are women. A recent publication in The New
England Journal of Medicine showed prognosis for the syndrome is not very good, and that it’s comparable to other types of structural heart disease with a poor response to medication. The hypothesis is that takotsubo cardiomyopathy comprises two “parts” — an acute, inflammation-inducing stimulus superimposed on other pre-existing issues, either psychological or physical. This then elicits a very severe structural heart defect; it’s a type of a cardiomyopathy that under most circumstances is reversible, but sometimes is not. There is a huge inflammatory component that drives takotsubo cardiomyopathy, and without a doubt, it happens mostly in pre- and post-menopausal women. I believe this is due to the metabolic disturbances that occur at this stage.

JP: Do you believe this poor clinical outcome is due to the fact that many doctors don’t understand that the root causes of cardiovascular disease are different for women? And that they either don’t know, or don’t acknowledge, that it starts with this hormonal imbalance and therefore they aren’t treating it properly?

RD: I think so. There was a lot of controversy generated by the Women’s Health Initiative, and the medical community focused on the negative outcomes that were specifically related to prescription medications (equine estrogen). So it became easier for physicians to tell women that they couldn’t take hormones because the study showed they were harmful. They stopped short of seeking the next step, or looking at other options, because I think they’re either ignorant of those options, or they don’t wish to pursue the controversial subject of bio-identical hormones. Plus, it takes a lot more time and effort to really address the root causes.

JP: The Women’s Health Initiative study looked at synthetic hormones such as Premarin and progestin; do you suspect that bio-identical hormones would be a safer alternative — and could offer a solution to reduce this kind of vascular risk?

RD: You know, I think so. I certainly use bio-identical hormones myself, in a very controlled fashion, for women who present with early coronary artery disease that is not obstructive, and who are without clinical cardiac events. I find that I usually stay away from estrogen unless I’m absolutely certain there are actually good estrogen alternatives that are bio-identical, or that deliver a good amount of medication in a very reasonable and controlled fashion.

I think this is a discussion that a lot of women should be having with their doctors, including their gynecologists, in addition to an assessment of their breast cancer history and any genetic markers. I use bio-identical progesterone with very good results, sometimes with DHEA [dehydroepiandrosterone ] topically as well, and I find it very valuable. I know that one can potentially use estrogen, particularly in a topical preparation, but I certainly would not use it in the pill form. It’s much harder to use estrogen once a woman has a dual diagnosis of coronary artery disease; but if she hasn’t been diagnosed, and is at risk in addition to developing a lot of inflammation, I would certainly use it to try to balance hormones first.

JP: You hinted at the fact that there is some resistance from mainstream medicine — either through ignorance of the alternatives or just being uncomfortable with them — and therefore there is less acceptance that women are at high risk for cardiovascular disease. What about patients’ perceptions? Do you find that they are stuck in that old mentality that cardiovascular disease is a man’s disease?

RD: Well, I find that women are becoming more aware — partly because of the efforts on my part, and also because organizations such as the American Heart Association are focused on educating women about how coronary artery disease plays a huge role in their mortality and morbidity.

Although most physicians would at least consider cardiovascular disease in women, the issue that we have is that symptoms tend to be atypical, and our understanding of how it presents has been influenced by older studies. Sometimes, when I give medical presentations about women and heart disease, a physician in the audience will ask in astonishment if he or she should consider coronary disease or a heart attack every time a woman presents with profound fatigue. And the answer to this is yes. But this is not necessarily what doctors
want to hear, because it takes them outside of their comfort zone.

JP: You mentioned previously how your practice has changed, how you’ve transformed from being a very traditional cardiologist to now being more of an integrated practitioner — and that you enjoy sharing ideas with other types of practitioners such as nutritionists, naturopaths, and acupuncturists. Can you just talk a little bit more about how you see that integration working best, and how it can benefit patients?

RD: I find that my traditional medical training is most vivid, even to this day. In the inpatient environment, we are presented with either a very acute, or a late-stage type of medical problem which requires my traditional training to address. But, when I have the opportunity to interact with nutritionists or naturopaths, I find I adopt a more holistic, comprehensive point of view — because they see patients through a different lens. That is very helpful, because this holistic approach and the ability to really personalize care helps me break away from the “one size fits all” acute-care approach, which is primarily influenced by the medical guidelines and test results. The acute medicine model is all about numbers, putting out more procedures, seeing more patients and generating a sustainable revenue stream. Unfortunately, in its current iteration, it’s incompatible with having a holistic team effort.

JP: That is the million-dollar problem isn’t it — how to integrate all these forms of medicine and also keep it affordable and efficient for the patient.

RD: I happen to be of the mindset that they probably should not be integrated in all cases. Functional medicine can be helpful to a degree, but not in a very acute or very complicated situation. But in a preventive care setting or in early disease, I think that functional medicine can absolutely be a phenomenal tool, and I think it’s time for us to stop allowing the early disease stage from going into an acute end-stage model.

To learn more about Dr. Druz — and how you can use her integrative approach to effectively prevent and treat cardiovascular disease in women utilizing lifestyle changes, nutrition, botanicals, and natural hormones — consider joining us at the 14th Annual Restorative Medicine Conference. You may also read more about her program Fit in Your GENES at www.iccli.com/fit-in-your-genes.html.

Categories: Restorative Medicine Digest