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Are We Doing Too Many Bypass Surgeries and Angioplasties?

You are listening to ReachMD, the Channel for Medical Professionals. Welcome to our series Focus on the Heart on ReachMD. I am your host Dr. Matthew Sorrentino from the University of Chicago and with me today is Dr. Michael Ozner. Dr. Ozner is the medical director of Wellness and Prevention at Baptist Health, South Florida and the Medical Director of the Cardiovascular Prevention Institute of South Florida in Miami, Florida. Dr. Ozner just recently wrote a book and titled The Great American Heart Hoax. He also is the author of the Miami Mediterranean Diet. Thank you very much Dr. Ozner for joining us today.

DR. MICHAEL OZNER:

Thanks for having me.

DR. MATTHEW SORRENTINO:

So, the first question that comes to mind, of course, is why are we doing too many bypass surgeries and angioplasties.

DR. MICHAEL OZNER:

Well, I think that certainly bypass surgery, stent placement, cardiac intervention is not only important but can be life-saving in the unstable patient, the patient who presents with acute ischemic syndrome such as an acute evolving myocardial infarction. Certainly, we understand the importance of intervention in that setting. The problem is that when we extrapolate intervention into the stable population, people who have obstructive coronary artery disease yet are stable and in some cases asymptomatic. We really don't have clinical trial evidence to justify the intervention that we are doing in the United States.

DR. MATTHEW SORRENTINO:

Well, don't you think it makes sense though if there is a severe blockage that trying to open it or bypass it should down the road give benefit to a patient?

DR. MICHAEL OZNER:

You certainly would think that there is, the problem is when we started to look at clinical trials to see whether or not intervention was preferable to medical therapy. It did not support intervention. They were the catheter-based trials looking initially at balloon angioplasty, trials such as the AVERT trial and then the stent trials such as the COURAGE trial and these trials really did not show that catheter-





based intervention was superior to medical therapy and lifestyle changes in stable patients with obstructive coronary disease. The same can be said for the bypass surgical trials and VA trial, the coronary artery surgery trial, or the CAST trial and the European CAST trial, which is known as Euro-CAST, these studies really did not show in a vast majority of patients who again were stable, who had obstructive coronary disease that performing bypass surgery was better than conservative medical therapy.

DR. MATTHEW SORRENTINO:

Now, why do you think these trials fail to show superiority? I guess the question I am asking is are we treating the wrong thing when we are treating the obvious stenosis?

DR. MICHAEL OZNER:

I think we are and I think that what we have learned, especially over the last decade is that obstructive coronary artery disease and ischemic syndromes really are not what we thought they were and that it was a progressive buildup of atherosclerotic plaque until we basically occluded an artery and we had an event. We understand that really the process is much more dynamic than that. It's not a bland cholesterol storage disease, it's an active inflammatory disease and inflammation really is involved with all stages of atherosclerosis from the initiation of the atherosclerotic plaque to the progression of the plaque to the subsequent rupture of the plaque and then to the thrombosis or clot that forms that leads to sudden and catastrophic events.

DR. MATTHEW SORRENTINO:

So, we know in the stable patient when that patient gets into trouble it's inflammation and plaque rupture and our angioplasty may not be dealing directly with the precursor of that lesion down the road. So, what can we do to prevent this inflammation and prevent these plaques from rupturing in our patients?

DR. MICHAEL OZNER:

We understand that atherosclerosis is a metabolic disorder. It really requires a metabolic, not a surgical or intervention solution unless the plaque ruptures and we are in the setting of an acute ischemic event such as an evolving heart attack. Then, everything shifts to getting restoration of blood flow where intervention is of critical importance but in the stable population we need a metabolic solution, we need to not only lower cholesterol levels, we need to understand that the atherosclerotic plaque certainly involves inflammatory cells and inflammatory cytokines and what we understand today is that an unstable plaque, which is a plaque that not only has a large lipid pool but a plaque that has a rich, inflammatory milieu and a thin fibrous cap, is much more dangerous than a plaque that could be much larger yet is stable by virtue of a thick fibrous cap and a paucity of inflammatory cells. So, what we have learned is that it's the vulnerable unstable plaque that is the dangerous one that leads to acute myocardial infarction and sudden cardiac death, it's not simply a question of is the plaque an 80 or 90% plaque versus a 10 or 20% plaque. The question should be is it stable or unstable.

DR. MATTHEW SORRENTINO:

Now, in your recent book, you advocate a very aggressive prevention program to try to help prevent these clinical syndromes. Let's talk first about diet, what type of diet are you advocating your patients and I guess even more importantly how do you get your patients to stay on the diet?



DR. MICHAEL OZNER:

I have been an advocate of the Mediterranean diet for many years. If one looks at the clinical trial studies, a clinical trial evidence supporting a Mediterranean diet it's vast. Multiple trials, not only in the United States but around the world have shown that if you follow a Mediterranean diet, which of course is fresh fruits and vegetables, whole grains, cold water fish that brings omega-3 to the table, nuts, beans, essentially what we are taking about is nonprocessed food, certainly a decrease in the amount of red meat consumption what we have learned is that this type of dietary plan actually lowers inflammation and we know that inflammation is important and we know that a typical western or American diet raises inflammation if we look at for instance markers such as C-reactive protein, interleukin-6, we understand that one of the benefits of the Mediterranean diet is to lower inflammatory cytokines and inflammatory markers. In addition, we understand that the problem with a typical American or western is one of what we term postprandial dysmetabolism. We understand that the typical western diet is highly processed, calorie dense, and nutrient depleted as opposed to a Mediterranean diet again because it does not contain processed foods, certainly has a wealth of antioxidants that help to neutralize free radicals which we also understand lead to oxidation of LDL, lead to many other disease states and I think that this is why we have seen such a significant amount of data that has supported a Mediterranean diet for cardiovascular disease prevention.

DR. MATTHEW SORRENTINO:

If you are just joining us, you are listening to Focus on the Heart from ReachMD, The Channel for Medical Professionals. I am Dr. Matt Sorrentino and with me today is Dr. Michael Ozner. He is a preventive cardiologist from Miami, Florida. We have been taking about his recent book called The Great American Heart Hoax and how we can hopefully reduce the likelihood of patients having bypass surgery or angioplasty. So, I guess one of the problems that I have had is trying to get patients to stay with a good prevention treatment plan. Certainly, the Mediterranean diet, DASH diet, and others have been well studied and well proven but what type of advice do you give your patients to stay on this type of diet and avoid the fast-food restaurants?

DR. MICHAEL OZNER:

Well, the Mediterranean diet has been around for 7000 years. Unfortunately, what patients want is a diet that not only is palatable but leads to satiety or feeling satisfied after a meal and Mediterranean diet would not have been around as long as it has if it was not palatable and I truly believe that this diet and it has been shown in studies is one that people can follow for a lifetime and it could be the young, middle ages, and the elderly. We understand that some of the diets that have been out there have failed because they are either too complicated for people to follow, most people for instance if you tell somebody to reduce their saturated fat intake to less than 7% they don't understand what that means. I have found in my own practice that it's much easier to tell people to eat fresh whole foods, foods that are not processed with transfats, not processed with high fructose orange syrup, reduce the amount of sodium in their diets and people tend to understand that and there is a number of different recipes that people can enjoy whether it's breakfast, lunch, dinner, snacks and I have found that a vast majority of my patients have not only followed the Mediterranean diet but they have enjoyed it.

DR. MATTHEW SORRENTINO:

One of the preventive modalities you discussed in your book is stress reduction. How important you think stress is in causing plaque rupture and leading to coronary events?

DR. MICHAEL OZNER:

Well, I think it is very important. In fact, I think it is forgotten risk factor. In fact, it was a recent European study that showed that people that are under regular stress have a significant increase in myocardial infarction. It has been well chronicled over the years that chronic stress whether it be job-related stress, marital stress, whatever the type of stress is we understand that its effect on our sympathetic





nervous system, on glucocorticoid leads to our blood more likely to clot. It leads to an increased likelihood of lethal cardiac arrhythmias that elevates the blood pressure. It has a deleterious effect on our serum lipids. So, we understand that stress management techniques are very important and interestingly they are actually very easy to implement in our patient population. These are techniques like the relaxation response that Dr. Herb Benson introduced years ago, the yoga, meditation, self-hypnosis. There is a lot of very simple and easy types of relaxation response meditation training that patients can do, they can implement in their daily lives and it will reduce their likelihood of having a cardiovascular event.

DR. MATTHEW SORRENTINO:

You also mentioned the problem with oxidative stress. Are there any type of antioxidant therapies that you advise your patients to take?

DR. MICHAEL OZNER:

Well, that's a good point because when a lot of my patients think about antioxidants, they are thinking about supplements and pills. When I think about antioxidants, I am thinking about food because the best approach is a wide variety of fresh fruits and vegetables of all different color. All the different colors bring different antioxidants to the table and what we have also learned is that a single antioxidant in very high doses really doesn't result in cardiovascular benefit, in fact it's just the opposite. If you look at the vitamin E trial and some of these other trials looking at trying to tease out a single antioxidant and given it in very high doses, that's not effective. What is effective is telling patients to have a diet again of a wide variety of fresh fruits and vegetables of all different color, whole grains. This brings thousands upon thousands of antioxidants to the table and these antioxidants help to neutralize free radicals that are formed in our body on a daily basis. So in realty what we have is an ongoing battle, an ongoing struggle that is played out on a microscopic battlefield that pits free radicals that lead to all types of disease states against antioxidants. If our antioxidant defenses are able to neutralize these disease-causing free radicals, we are healthier, we certainly enjoy not only better health but I think that the studies have shown that this is a way that we can have our patients stay healthy and avoid cardiovascular disease, avoid cancer, avoid a lot of different disease states.

DR. MATTHEW SORRENTINO:

So, I guess I'm going to be a little skeptical here and ask the question how successful do you think all these modalities can be in reducing the need for angioplasty or reducing the need for bypass surgery? Can we really make an impact on reducing these type of procedures?

DR. MICHAEL OZNER:

Well, I think we can if all physicians want to practice evidence-based medicine. The problem is that when a patient comes in for a workup, they are told that they have a significant obstruction in one of their arteries and they are told that we can fix you with a stent or with bypass surgery. I don't believe that we have clinical trial evidence to support this. There are mounds of evidence in the literature an aggressive prevention approach in this type of patient population.

DR. MATTHEW SORRENTINO:

Well, I want to thank Dr. Michael Ozner who is the medical director of the Cardiovascular Prevention Institute of South Florida. We have been discussing prevention modalities in our patients with chronic coronary disease as a way of not only reducing events but hopefully reducing the number of bypass surgeries and angioplasties. You can read more about his prevention program in his recent book The





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