Women and Heart Disease

A Secret in the Heart of French Women

For those in search of the solution to the French paradox, Dr. Michel de Lorgeril has a suggestion: “Cherchez les femmes.”

The differences in the rates of heart disease between the residents of nations where the Mediterranean diet is followed and the rest of Europe and the United States are well known, said Dr. de Lorgeril, a researcher at Explorations Fonctionnelles Cardiorespiratoires et Metaboliques at the University of St. Etienne in France. However, the French are much more likely to eat like their northern European neighbors and yet experience heart disease rates more like people who live in nations to the south. For example, he said, mortality from coronary heart disease in British men aged 55 to 64 years was 487 per 100,000 in 1992; it was only 128 in French men. For women, the corresponding numbers were 128 in Britain and 27 in France. However, the two national groups reported similar risk factors, including an almost equal consumption of fat (Law M, Wald N. Why heart disease mortality is low in France: the time lag explanation. BMJ. 1999;318:1471–1476).

The Chaos of Vitamin E

The bottom line of the Cambridge Heart Antioxidant (CHAOS) trial, which sought to determine the effect of vitamin E on the risk of myocardial infarction and cardiovascular disease–related death, is that “we don’t know enough,” said Nigel Stephens, MD, a consultant in cardiology at the University of London who led the study.

Of the 2002 patients enrolled in the trial, 1035 took vitamin E in doses of either 800 or 400 IU, and 967 received a placebo. All had angiographically proven coronary atherosclerosis. The vitamin E groups experienced a 75% reduction in the risk of nonfatal myocardial infarctions but not in deaths from heart disease, said Dr. Stephens. “That’s a massive treatment effect.” However, the lack of effect on the mortality rate has him and others in the field puzzled.

Because vitamin E can be obtained over the counter, he knows that the public wants to know how to deal with these results. “One has to offer advice,” he said. “If you are healthy, take enough to meet the RDA (recommended daily allowance) of 30 to 50 mg. If you have heart disease, you may need to take more.” He estimated that therapeutic doses might range from 400 mg to 1 g.

However, he stressed that he is hesitant to make population-wide recommendations because the data are not sufficient for that as yet. “If patients come and want to know what to do to influence their health, I will come down in favor of vitamin E,” he said.

More questions remain than were answered by CHAOS. For example, what is the effect of vitamin E on smokers or diabetics, 2 groups at an increased risk of heart disease? According to Dr. Stephens, a second CHAOS study may look at the effect on diabetics.

Dr. Stephens also wonders if “we need vitamin C to make vitamin E work” because “vitamin C regenerates vitamin E in the body.” If a person is nutritionally deficient, he notes, he or she may need both vitamins C and E.

The Dilemma of the Pregnant Patient

When B.N.C. Prichard, MD, of the Centre of Clinical Pharmacology, University College London, found the room where he and others were to discuss drug therapy for cardiovascular problems during pregnancy during the 20th Congress of the European Society of Cardiology in Barcelona, he was surprised to find the room crammed with attendees. Although the topic was esoteric, obviously physicians wanted to know what to do when it happened.

Although cardiovascular disease is epidemic worldwide, “it is infrequent but potentially deleterious in pregnancy,” said Wener W. Klein, MD, head of the division of cardiology in the Department of Medicine at the University Hospital and Karl-Franzens University in Graz, Austria. According to Dr Klein, 10% of all pregnant women are hypertensive and three-quarters of these women have pregnancy-induced hypertension. Maternal mortality in eclampsia is, on average, 3.9%.

Worldwide, 50,000 deaths from eclampsia occur annually. The causes are many, but most often, they include cerebral bleeding or left heart failure. Fetal death is also a side effect of pre-eclampsia, he said, with 0.6% to 7% of fetuses dying in utero. Anywhere from 7.7% to 60% of fetuses die due to HELLP syndrome, which is characterized by hemolysis, elevated liver enzymes, and low platelets.

Other cardiovascular problems that arise during pregnancy include cardiomyopathy, heart failure, arrhythmias, and valve problems, said Dr Klein. “Many drugs such as ACE inhibitors, AT-1 blockers, cumarin, and statins are teratogenic and should not be given during pregnancy,” he warned. In some cases, the drugs can cross the placenta or occur in the mother’s milk, potentially harming the fetus or newborn. Thiazide-like drugs cross the placenta but have not been associated with teratogenic effects. However, these drugs can cause transient volume depletion, which results in placenta hyperperfusion. Diuretics should not be given to nursing mothers because they can contaminate milk.

According to Dr. Klein, β-adrenergic antagonists have not been associated with the induction of premature labor, neo-
natal hyperglycemia, or small birthweight in newborns, as had been earlier feared. He prefers selective β-blockers to the nonselective types. However, Dr Prichard said that β-blockers should be avoided in early pregnancy because of the risk of reduced birthweight.

α-Adrenergic antagonists should be avoided because no data exist on their use in pregnancy, said Dr Prichard. Calcium-blocking agents should also be avoided during pregnancy and lactation, if possible. ACE inhibitors and AT-I receptor blocks can cause fetal injury and death, and they also should not be used. Vasodilators such as hydralazine can be used, although caution should be taken during the first trimester. Dr Prichard also noted that methyldopa is the only drug for which long-term follow-up data exist.

Dr Prichard said women who have chronic high blood pressure should be warned that some increased risk of developing pre-eclampsia during pregnancy exists. However, nonpharmacological methods of controlling the problem are rarely valuable during pregnancy, with the exception of an increased attention to diet. However, he said, sodium restriction has little effect. The value of home blood pressure monitoring is important, but it is rarely used. The same goes for home urine monitoring. He advises physicians to counsel their patients to avoid alcohol and tobacco but not to tell them to reduce their weight, undertake vigorous exercise, or restrict sodium.

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