

Women and Heart Disease

What was once thought of as a health concern primarily for men, heart disease is now the leading cause of death among American women, accounting for more deaths each year than all cancers combined. In fact, 50,000 more women than men die of heart disease each year. At even greater risk are women with diabetes: 80% of diabetic women die from Coronary Artery Disease (CAD). Despite these dire statistics, women continue to be overlooked and under-diagnosed for CAD.

CAD results in narrowing of the blood vessels that supply blood to the heart. These blood vessels narrow when fatty deposits build up within the blood vessel wall. This is known as atherosclerosis. When the arteries become clogged, the blood flow to the heart muscle is reduced and a heart attack can occur.

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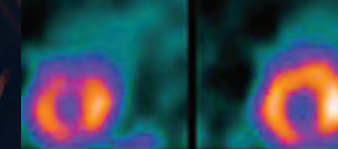


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PATIENT AWARENESS INITIATIVE

RISK FACTORS

Among women, an increased likelihood of CAD is associated with risk factors including being overweight, high cholesterol, high blood pressure, diabetes, age, race and family history. With the lifetime risk of heart disease in women, there is increasing emphasis on aggressive risk factor reduction in all women, especially those at high risk.

RISK REDUCTION

Because women often have fewer typical symptoms of heart disease than men, they may not seek medical help in a timely fashion. Early detection is key to reducing the risk of mortality among women. Gender differences in CAD symptoms include milder forms of heart attack symptoms, sudden weakness, shortness of breath, fatigue, and discomfort in the back, neck, arm, or jaw. Many women do not exhibit the “classic” heart attack symptom of chest pain.

SCREENING FOR HEART DISEASE

Under-diagnosis and under-treatment of heart disease in women contributes to excess mortality, making early and accurate diagnosis of great importance. Non-invasive testing was viewed as inaccurate until recently because so few women were included in the initial studies. When heart disease is suspected, further evaluation may include exercise electrocardiography, echocardiography, magnetic resonance imaging, or nuclear cardiology studies.

Nuclear cardiology studies use small doses of radioactive material (radiopharmaceuticals) to assess blood flow to the heart, evaluate the pumping function of the heart, and visualize the size and location of a heart attack. Among the types of nuclear cardiology studies, myocardial perfusion imaging is the most widely used.

MYOCARDIAL PERFUSION IMAGING (MPI)

Myocardial perfusion imaging (MPI) is a non-invasive nuclear imaging study to test for significant coronary stenosis: a moderate to severe narrowing of the coronary arteries due to CAD. This study is able to determine the degree and location of reduced blood flow to the heart as well as pumping function and the existence of scarred heart tissue. MPI is able to establish the need for invasive procedures, avoid unwarranted hospital admissions, and to assess for long-term prognosis. The MPI scan represents 94 percent of all cardiovascular procedures performed using nuclear imaging, allowing for an improved diagnostic accuracy for CAD over regular stress tests.

Many women who die suddenly of heart disease have had no previous symptoms. MPI is a highly accurate diagnostic test that results in early treatment and improved outcomes for at-risk women. A growing body of data supports the fact that non-invasive cardiac tests have different diagnostic accuracy in women. MPI has been shown to be accurate in the risk assessment and prediction of future cardiac events in the diabetic woman.

MPI is performed during stress and again at rest while monitoring blood pressure and heart rhythm. The patient’s arteries are subjected to a physiologic stress to maximize blood flow, usually through exercise. A pharmacologically-induced stress test may be performed when patients cannot exercise. In these patients, the heart is “stressed” with a medication infusion which dilates the arteries, eliminating the need for physical exercise.

A small dose of a radiopharmaceutical is injected into the bloodstream at maximum exercise. The patient then waits approximately 20-60 minutes before a scan is performed using a gamma camera to produce detailed images representing blood flow to the heart during stress. Healthy heart muscle, receiving normal blood flow, will accumulate more radiopharmaceutical than heart muscle supplied by diseased coronary arteries. Injection and scanning are also performed at rest, usually prior to the exercise or stress portion of the exam, with no significant changes appearing in healthy hearts during either study.

DIABETIC WOMEN

Diabetic women have a two to three times greater risk for heart disease. In addition, women who are at risk for diabetes also have an increased risk for heart disease. In diabetics, heart disease is often diagnosed at a more advanced stage with disease in more than one vessel. This results in 80% of diabetic women dying from some form of heart disease or stroke. Diabetes care is more than managing blood sugar; it also requires aggressive treatment of cardiovascular disease risk factors.

THE FIGHT CONTINUES

Although CAD remains a challenging and deadly disease for women, MPI is a highly accurate and clinically important non-invasive test for early identification and treatment.

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For more information on nuclear cardiology and heart disease in women, please go to the Web site of the American Society of Nuclear Cardiology: www.asnc.org