

"Thank you for allowing UCVA to participate in the care of your patients. It is our goal to not only meet, but to exceed your expectations as a service oriented practice. In order to continually provide the best possible medical care and service, it is important to know your thoughts.

As Practice Liaison, I will see that any requests or concerns are addressed promptly. Please do not hesitate to contact me directly at (585) 784-8106."



~ Nicolé Fogarty, Practice Liaison

Echocardiogram, Stress Echocardiogram, Dobutamine Echocardiogram What does it all mean?

With so many different cardiac test available it is difficult to know which is the best one to chose for a patient. Here is a brief description of an echocardiogram, a stress echocardiogram and a dobutamine echocardiogram. UCVA will continue to provide articles such as this which will assist you in the management of some of the more common cardiovascular conditions experienced by your patients.

Echocardiogram: This test should be obtained for evaluation of potential structural heart disease. It establishes LV systolic function and wall motion analysis helps to determine the presence or absence of cardiomyopathy or prior infarction. It is the primary mode for assessing valvular heart disease such as mitral or aortic disease. End organ damage from hypertension resulting in LVH can also

be quantified. A full resting echo should also be considered in addition to a stress echo if the patient has significant unexplained dyspnea or there are murmurs of unclear etiology.

Top 20 indications recognized by the Center for Medicare/Medicaid for Transthoracic Echocardiography:

- Assessment of ventricular function
- Cardiomyopathy
- Heart failure
- Hypertensive cardiovascular disease
- Acute myocardial infarction
- Coronary insufficiency
- Native valvular heart disease
- Prosthetic heart valves
- Endocarditis
- Pericardial disease
- Aortic disease
- Congenital heart disease
- Suspected cardiac thrombi
- Embolic sources
- Cardiac tumors, and masses
- Arrhythmias
- Palpitations
- Syncope
- Pulmonary heart disease
- Abnormalities of the great vessels

Stress Echocardiogram: This test should be obtained for the evaluation of potential ischemic cardiac disease. In the patient who is capable of exercising to a diagnostic workload (85% or greater of their age predicted heart rate) it has a high sensitivity and specificity for the evaluation of cardiac chest pain and CAD. Information obtained includes exercise capacity, potential for provokable arrhythmia, reproduction or absence of symptoms under stress. The test is ideal for the evaluation of younger patients with unexplained chest pain who do not have orthopedic limitations that will limit reaching the desired level of exercise. The test does not typically involve a full evaluation of the patient's heart valves.

Dobutamine Echo: This test should be obtained for the evaluation of ischemic heart disease in the patient who is unable to exercise to a diagnostic level on the treadmill. This study takes about an hour. It can be obtained for the evaluation of chest pain or unexplained dyspnea. It is useful in the preoperative assessment of patients unable to exercise such as those planning for joint replacement. Prior arrhythmia such as atrial fibrillation is a relative contraindication and the test should not be utilized in patients with poorly controlled hypertension or significantly large aneurysms.

The most common indications recognized by the Center for Medicare/Medicaid for stress echocardiography include:

- To detect coronary disease in patients presenting with chest pain, atypical chest pains and exertional shortness of breath when the suspicion of coronary disease is high.
- To assess prognosis and functional capacity following an acute myocardial infarction.
- To evaluate the extent of exercise-induced ischemia in patients who have had PCI or bypass surgery or with known coronary disease.
- To evaluate a prior nondiagnostic or abnormal electrocardiographic response on the standard stress test.
- To evaluate patients with the high risk for myocardial infarction prior to scheduled major surgical procedure.
- To evaluate patients presenting with various atrial or ventricular arrhythmias, or syncope, when the suspicion of occult coronary disease is significant.
- To assess myocardial viability.
- If combined with Doppler a stress echocardiogram can be used in assessment of the hemodynamic significance of mitral stenosis, mitral regurgitation, pulmonary hypertension, aortic stenosis, aortic regurgitation, and prosthetic valve function.

In women, due to the poor sensitivity and specificity of standard stress testing, stress imaging has been recommended as the "initial test" by many authors.

For Dobutamine Echocardiography Medicare references the same indications as used for Stress Echocardiography, the only difference being that a patient needing Dobutamine must be one who is unable to exercise to a diagnostic level.

*~ Keep an eye out for our next newsletter and feel free to submit suggestions to
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