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Mitral Valve Prolapse By: James L. Holly, MD

The most common cardiac problem and the most common heart valve abnormality is called mitral valve prolapse (MVP), which affects between 5 and 20 percent of the population. It is more commonly found in women than men and can go undetected for years, as symptoms usually do not begin before the early teenage years (approximately age 14 in girls and in 15 in boys); however, people of any age may be affected. MVP has a strong hereditary tendency and is thought to be inherited as a dominant gene. The mitral valve prolapse syndrome is sometimes called dysautonomia.

The mitral valve is a two-flapped valve between the left atrium and left ventricle. In MVP, one or both of the valve flaps are too large, and the mitral valve does not close evenly with each heartbeat. Because of this imperfect closing, the valve itself slightly balloons back into the left atrium, sometimes causing what is known as a "click". With the flap there may sometimes be a slight backward leaking of blood (regurgitation) as well, resulting in a heart murmur. The heart function is entirely normal. The heart still pumps and receives an adequate blood supply. Prolapsing mitral valves do not tend to degenerate over time.

If proper precautions are taken, MVP will not affect life expectancy, and generally has no impact on normal activities. Approximately 60 percent of individuals with MVP never exhibit any symptoms. Generally, a stressful situation (childbirth, change in job situation, viral illness) brings on symptoms which ordinarily would not be present. Some of these symptoms include the following:

- Irregular heartbeat or palpitations, particularly when lying on the left side
- Tachycardia, increased heartbeats or pounding of the chest, often after exertion
- Non-specific chest pain lasting from a few seconds to several hours, occurring at rest rather than during exertion
- Panic attack, a sudden feeling of anxiety or doom
- Fatigue and weakness, even after slight exertion (including minor housework); sometimes misdiagnosed as Chronic Fatigue Syndrome
- Migraine headaches, resulting from abnormal nervous system control of blood flow

As noted, many people with MVP never exhibit any of the above symptoms. The condition can be detected during a routine check-up with a simple stethoscope. After the ventricle begins to contract, a clicking sound can be heard. Apparently, this sound is created by the abnormal valve fighting the pressure of the left ventricle. The diagnosis can be confirmed with an echocardiogram, which can also determine the level of severity of the prolapse and the degree of regurgitation.

Most patients can be monitored simply, with a follow-up checkup every few years. Patients with pronounced regurgitation problems (blood leaking backward) may be monitored more closely.

What are the risks and problems associated with MVP?

Just as many MVP patients exhibit no symptoms, very few patients ever experience any complications arising from this syndrome. Rare complications include chest pain (angina pectoris) and irregular heart beat (arrhythmia), both of which can be treated with medication, usually a beta-blocker. Another rare complication involves formation of blood clots on the valve, making an MVP patient vulnerable to strokes; this problem requires treatment with an anticoagulant (blood thinner) medication.

The most common and serious MVP-related problem, endocarditis, involves bacterial infection of the mitral valve. Although it can be fatal if left untreated, endocarditis can be easily prevented. MVP patients are most commonly vulnerable to introduction of bacteria into the bloodstream (and endocarditis) when they are undergoing certain medical procedures, particularly dental work or minor surgery. Because of this, patients should inform their doctor or dentist that they have MVP, and be given antibiotic prophylaxis (preventative treatment) before the procedure.

When does a patient require antibiotics?

The American Heart Association has released recommendations for surgical and dental treatments in patients who have MVP and other heart disorders. The use of antibiotics is important for preventing bacterial endocarditis, a rare but potentially fatal infection that causes inflammation of the heart's valves, or its inner lining. The use of antibiotics for individuals who have MVP has been somewhat controversial.

The new guidelines suggest that for many procedures, most MVP patients do not need antibiotics; antibiotics are only required for those individuals who have valve leakage (mitral regurgitation) either detected as a heart murmur or through an ultrasound, or people with greatly thickened valve tissues.

The rare exception

Although most MVP patients do very well with the treatments and preventive measures outlined above, there is sometimes need for heart surgery to either repair or replace the

mitral valve. This occurs only among patients who experience severe mitral regurgitation, which can result in progressive heart enlargement, and ultimately, heart failure. Surgeons are more likely to perform corrective surgery rather than replace the valve with an artificial one, mainly because the introduction of an artificial valve requires lifelong use of blood thinners to prevent clotting. If a patient is found to have regurgitation problems, surgery is recommended and performed at as young an age as possible, reducing the risk of further damage to the heart.

Treatment of MVP consists of several different parts, all of which are important. To reach the goal of relieving MVP symptoms you must give attention to all of these. Failure to do so may result in less improvement in symptoms than you like.

Diet:

It is very important that everyone receive a nutritionally complete, well balanced diet, especially individuals with mitral valve prolapse. Mitral valve prolapse patients often tend to have very low energy levels, and inadequate diets can further aggravate this problem. Patients should totally eliminate caffeine from their diet. Caffeine is a drug, a stimulant. It tends to stimulate the autonomic nervous system and produce an unstable state which can further aggravate fatigue. The second major recommendation for mitral valve prolapse patients is the reduction of sugar in the diet. Although sugar is frequently used by patients for energy, many people are truly addicted to it, especially sugar in chocolate. A surge in blood sugar stimulates the autonomic nervous system. It is recommended that mitral valve prolapse patients have a mid-afternoon high protein snack such as cheese or peanut butter crackers.

Fad and crash diets are not a good idea. IF you feel you would like to lose weight, talk with your physician, set a goal, and work out a plan. "Diet pills" are an absolute "no-no." They are guaranteed to make MVP worse. (For more information on dieting see the article entitled, "Weight Reduction," by James L. Holly, MD published in the February 15, 2001, Examiner)

Fluids: Adequate fluid intake is also very important. Many of the symptoms of MVP, including dizziness, weakness, feeling faint, etc. are due to low blood pressure and low blood volume. It is recommended that you drink a minimum of 64 ounces of water or non-caffeine liquid per day.

Exercise:

Patients with MVP are usually very out of shape. Regular exercise to get "reconditioned" is a must, not only to feel better, but to aid in relieving the symptoms of MVP. Symptoms of MVP will clear more quickly in patients who exercise regularly. Exercise should be of an aerobic type. Examples include walking, running, bicycling, swimming, etc. (For more information on cardiac conditioning by exercise see the article "Managing Cardiac Risk Factors," by Dr. Mark A, Wilson, published in the December 14, 2000, Examiner.)

Medication:

Medication may be required to completely clear symptoms related to mitral valve prolapse. It is important to take the medication as directed. Be patient! It generally takes two or more weeks before you notice any change in MVP symptoms. DO not stop or change your dose of medication without checking with your physician.

If you think you may have MVP or if a member of your family has it and you are concerned, as your doctor. He/she can often exclude the diagnosis with a simple physical examination and certainly can do so with a painless and simple test, the echocardiogram.

Remember, it's your life and it's your health.