

1: Mitral valve prolapse Disease Reference Guide - www.enganchecubano.com

Mitral valve prolapse is a condition in which the two valve flaps of the mitral valve do not close smoothly or evenly, but instead bulge (prolapse) upward into the left atrium. Mitral valve prolapse is also known as click-murmur syndrome, Barlow's syndrome or floppy valve syndrome.

Print Diagnosis Doctors may diagnose mitral valve prolapse at any age. Your doctor is most likely to diagnose mitral valve prolapse while listening to your heart with a stethoscope during a physical examination. If you have mitral valve prolapse, your doctor may hear a clicking sound, which is common with this condition. Your doctor may detect a heart murmur, which would be due to mitral regurgitation if it is present. Other tests that may be used to evaluate your heart may include: An echocardiogram is usually done to confirm the diagnosis and determine the severity of your condition. An echocardiogram is a noninvasive ultrasound evaluation of your heart. This test uses high-frequency sound waves to create images of your heart. It helps doctors see the flow of blood through your mitral valve and measure the amount of blood leakage regurgitation. You may have a transesophageal echocardiogram. In this test, your doctor inserts a flexible tube with a small device transducer attached into your throat and down into your esophagus – the tube that connects the back of your mouth to your stomach. From there, the transducer can be positioned to obtain more-detailed images of your heart. A chest X-ray shows a picture of your heart, lungs and blood vessels and can help your doctor make a diagnosis. It can help show if your heart is enlarged. In this noninvasive test, a technician will place probes on your chest that record the electrical impulses that make your heart beat. Your doctor may order a stress test to see if mitral valve regurgitation limits your ability to exercise. In a stress test, you exercise or take certain medications to increase your heart rate and make your heart work harder. You may also have a stress test if your doctor is trying to determine if you have another condition such as coronary artery disease. In some cases, your doctor may recommend a coronary angiogram and cardiac catheterization to gather more information about the severity of your condition. In a cardiac catheterization procedure, doctors insert a catheter in an artery in your groin femoral artery or in your wrist radial artery. The catheter is then threaded through your blood vessels to your heart. However, if you have symptoms and if a significant amount of blood is leaking through the mitral valve, your doctor may recommend medications or surgery, depending on the severity of your condition. Medications If you develop symptoms, your doctor might prescribe certain medications to treat mitral valve prolapse-related chest pain, heart rhythm abnormalities or other complications. Some medications you might be prescribed include: These drugs help prevent irregular heartbeats by making your heart beat more slowly and with less force, which reduces your blood pressure. Beta blockers also help blood vessels relax and open up to improve blood flow. Your doctor may prescribe water pills diuretics to drain fluid from your lungs. Your doctor may prescribe an antiarrhythmic medication, such as flecainide Tambacor , amiodarone Cordarone, Pacerone , and propafenone Rythmol, Rythmol SR. Antiarrhythmics help control your heart rhythm by normalizing electrical signals in heart tissue. If you have mitral valve prolapse and a history of strokes, your doctor might prescribe aspirin to reduce the risk of blood clots. Prescription anticoagulants blood thinners. These medications – such as warfarin Coumadin , heparin, dabigatran Pradaxa , rivaroxaban Xarelto , apixaban Eliquis and edoxaban Savaysa – prevent your blood from clotting if you have had irregular heart rhythms, such as atrial fibrillation. If you have atrial fibrillation, a history of heart failure or a history of strokes, your doctor may suggest these drugs. They can have dangerous side effects, however, and must be taken exactly as prescribed. Severe mitral valve regurgitation can eventually cause heart failure, preventing your heart from effectively pumping blood. If regurgitation goes on too long, your heart may be too weak for surgery. If your doctor suggests surgery, he or she may suggest repairing or replacing the mitral valve. Valve repair and replacement may be performed using open-heart surgery or minimally invasive surgery. Minimally invasive surgery involves smaller incisions and may have less blood loss and a quicker recovery time than open surgery. Mitral valve repair is a surgery that preserves your own valve. For most people with mitral valve prolapse, this is the preferred surgical treatment to correct the condition. Your mitral valve consists of two triangular-shaped flaps of tissue called leaflets. The leaflets of

the mitral valve connect to the heart muscle through a ring called the annulus. The surgeon can modify the original valve valvuloplasty to eliminate backward blood flow. Surgeons can also repair the valve by reconnecting valve leaflets or by removing excess valve tissue so that the leaflets can close tightly. Sometimes repairing the valve includes tightening or replacing the annulus. This is called an annuloplasty. It is important to ensure that your surgeon is experienced in performing mitral valve repair. In valve replacement surgery, the damaged mitral valve is replaced by an artificial prosthetic valve. Artificial valves are mechanical or tissue valves. Mechanical valves may last a long time. However, if you have a mechanical valve, you must use an anticoagulant medication, such as warfarin Coumadin , for the rest of your life to prevent blood clots from forming on the valve. If a blood clot forms on the valve and breaks free, it could travel to your brain and cause a stroke. Tissue valves are made from animal tissue such as a pig or cow valve. These kinds of valves are called bioprostheses. They may wear out over time and need replacement. Antibiotics seldom recommended Doctors used to recommend that some people with mitral valve prolapse take antibiotics before certain dental or medical procedures to prevent endocarditis but not anymore. According to the American Heart Association, antibiotics are no longer necessary in most cases for someone with mitral valve regurgitation or mitral valve prolapse. Potential future treatments Researchers are studying new techniques to repair or replace a valve using a tube catheter inserted in a blood vessel in your groin and guided to your heart. Request an Appointment at Mayo Clinic Clinical trials Explore Mayo Clinic studies testing new treatments, interventions and tests as a means to prevent, detect, treat or manage this disease. Lifestyle and home remedies Most people with mitral valve prolapse lead normal, productive and symptom-free lives. However, ask your doctor if he or she recommends any changes to your lifestyle. If you have severe mitral valve regurgitation, your doctor may recommend certain exercise limitations. Your doctor may recommend regular follow-up visits to evaluate your condition. What you can do Be aware of any pre-appointment restrictions. Write down key personal information, including a family history of heart disease, heart defects, genetic disorders, stroke, high blood pressure or diabetes, and any major stresses or recent life changes. Take a family member or friend along, if possible. Sometimes it can be difficult to remember all the information provided to you during an appointment. Someone who accompanies you may remember something that you missed or forgot. Be prepared to discuss your diet and exercise habits. Write down questions to ask your doctor. Your time with your doctor is limited, so preparing a list of questions will help you make the most of your time together. List your questions from most important to least important in case time runs out. For mitral valve prolapse, some basic questions to ask your doctor include: What is likely causing my symptoms or condition? What are other possible causes for my symptoms or condition? What kinds of tests will I need? Do I need treatment? I have other health conditions. How can I best manage them together? Are there any restrictions that I need to follow? Should I see a specialist? If I need surgery, which surgeon do you recommend for mitral valve repair? Are there any brochures or other printed material that I can take home with me? What websites do you recommend visiting? What to expect from your doctor Your doctor is likely to ask you a number of questions. Being ready to answer them may reserve time to go over any points you want to spend more time on. Your doctor may ask: When did you first begin experiencing symptoms? Have your symptoms been continuous or occasional? How severe are your symptoms? What, if anything, seems to improve your symptoms? What, if anything, appears to worsen your symptoms?

2: Mitral valve prolapse - Diagnosis and treatment - Mayo Clinic

Mitral valve prolapse is a common cause of a heart murmur caused by a "leaky" heart valve. Most cases of mitral valve prolapse are not serious and only need to be monitored. Mitral valve prolapse.

What is mitral valve prolapse? Mitral valve prolapse MVP is a weak or bulging mitral valve in your heart. Your mitral valve has 2 flaps that open and close. It allows blood to flow through your heart in one direction. MVP is a common heart condition that often has no signs or symptoms. What increases my risk for MVP? Most people who have MVP are born with it. The following may increase your risk for MVP: Family history of MVP Connective tissue disorders, such as Marfan syndrome Muscle or skeletal problems, such as some types of muscular dystrophy or scoliosis Heart disease or heart attack Autoimmune conditions such as Graves disease What signs and symptoms may I have with MVP? Many people do not have symptoms. You may have any of the following if MVP gets worse: A fast or pounding heartbeat, or heart flutters Feeling dizzy, lightheaded, or faint Fatigue or anxiety Chest pain How is MVP diagnosed? Your healthcare provider will examine you and listen to your heart. He or she will ask what medicines you take, and if you have other health conditions. You may also need any of the following: An echocardiogram is a type of ultrasound. Sound waves are used to show the structure, movement, and blood vessels of your heart. How is MVP treated? You may not need any treatment if you do not have any symptoms. If you have symptoms, you may need any of the following: Medicines may be given to help your heart beat more strongly or regularly. You may need blood thinning medicines to lower your risk of blood clots. You may instead be given medicines to make your blood vessels dilate open. Surgery may be needed if you have severe MVP that causes blood to flow back into your atrium. Your mitral valve may need to be repaired or replaced during surgery. How can I manage MVP? Heart-healthy foods include fresh fruits and vegetables, low-fat dairy products, chicken without skin, lean meats, and fish. Eat two 4-ounce servings of fish high in omega-3 fats each week. Examples are salmon, fresh tuna, and herring. Ask for more information on a heart-healthy diet. Maintain a healthy weight. Being overweight makes your heart work harder. Ask your healthcare provider how much you should weigh. Ask him or her to help you create a weight loss plan if you are overweight. Ask your healthcare provider which activities are best for you. Do not use caffeine. Caffeine can make your MVP symptoms worse. Nicotine and other chemicals in cigarettes and cigars can cause damage to your heart. Ask your healthcare provider for information if you currently smoke and need help to quit. E-cigarettes or smokeless tobacco still contain nicotine. Talk to your healthcare provider before you use these products. Call for any of the following: You have shortness of breath or chest pain. You have any of the following signs of a stroke: Part of your face droops or is numb Weakness in an arm or leg Confusion or difficulty speaking Dizziness, a severe headache, or vision loss When should I seek immediate care? You have new symptoms or your symptoms get worse. When should I contact my healthcare provider? Your heart beats faster than normal for you, or skips beats. You have questions or concerns about your condition or care. Care Agreement You have the right to help plan your care. Learn about your health condition and how it may be treated. Discuss treatment options with your healthcare providers to decide what care you want to receive. You always have the right to refuse treatment. The above information is an educational aid only. It is not intended as medical advice for individual conditions or treatments. Talk to your doctor, nurse or pharmacist before following any medical regimen to see if it is safe and effective for you.

3: Mitral valve prolapse Information | Mount Sinai - New York

Mitral valve prolapse (MVP) occurs when one of your heart's valves doesn't work properly. The flaps of the valve are "floppy" and don't close tightly. Most people who have the condition are born with it.

How is Mitral Valve Prolapse treated? In most cases mitral valve prolapse is treated with: Reassurance If you have symptoms with mitral valve prolapse, it can cause anxiety about your heart and the severity of your valve disease. However, most people with MVP need only endocarditis prevention and yearly follow-up appointments. No further treatment is needed. Endocarditis Prevention If you have MVP, you are at low risk for getting endocarditis, an infection that causes damage to the heart valves, but you should follow these guidelines: Tell your doctors and dentist you have valve disease. You may want to carry a card with this information. Call your doctor if you have symptoms of an infection sore throat, general body achiness, and fever. Colds and flus do not cause endocarditis. But, infections, which may have the same symptoms, do. So, to be safe, call your doctor. Practice good oral hygiene habits every day. Good oral health is generally more effective in reducing your risk of bacterial endocarditis than is taking preventive antibiotics before certain procedures. Take good care of your teeth and gums by: If you have questions about endocarditis, please see our information about Bacterial Endocarditis prevention. Learn more about oral health and cardiovascular disease. Regular Follow-up Visits Your doctor will want to monitor the progress of your valve disease with regular appointments. They may be spaced once a year or more often, if your doctor feels you need to be followed more closely. Your appointment will include a medical exam. Diagnostic studies may be repeated at regular intervals. In this case, valve surgery will be performed to repair the mitral valve. Learn more about valve surgery. Chordal transfer for repair of anterior leaflet prolapse. Multimedia Manual of Cardiothoracic Surg, Current status of mitral valve repair. Am Heart Hosp J, ;1: Repair versus replacement for degenerative mitral valve disease with coexisting ischemic heart disease. J Thorac Cardiovasc Surg, ; Hemisternotomy approach for aortic and mitral valve surgery. J Card Surg, ; Is minimally invasive heart valve surgery a paradigm for the future? Curr Cardiol Rep, ;1: Durability of mitral valve repair for degenerative disease.

4: Mitral valve - Wikipedia

Mitral valve prolapse and regurgitation. The mitral valve separates the two chambers (atrium and ventricle) of the left side of the heart. In mitral valve prolapse, the leaflets of the mitral valve bulge (prolapse) into the left atrium like a parachute during the heart's contraction.

Most people who have the condition are born with it. MVP tends to run in families. In people who have MVP, the mitral valve may be abnormal in the following ways: The valve flaps may be too large and thick. The valve flaps may be "floppy". The opening of the valve may stretch. These problems can keep the valve from making a tight seal. Risk Factors Mitral valve prolapse MVP affects people of all ages and both sexes; however, aging raises the risk of developing the disease. Certain conditions have been associated with MVP, including: Complications from MVP, such as arrhythmias irregular heartbeats and infective endocarditis IE, are rare. IE is an infection of the inner lining of your heart chambers and valves. People at high risk for IE may be given antibiotics before some types of surgery and dental work. Antibiotics can help prevent IE. Your doctor will tell you whether you need this type of treatment. When MVP does cause signs and symptoms, they may include: Palpitations feelings that your heart is skipping a beat, fluttering, or beating too hard or too fast Shortness of breath Fatigue tiredness, dizziness, or anxiety Migraine headaches Chest discomfort MVP symptoms can vary from one person to another. They tend to be mild but can worsen over time, mainly when complications occur. Mitral valve backflow is most common among men and people who have high blood pressure. People who have severe backflow may need valve surgery to prevent complications. Mitral valve backflow causes blood to flow from the left ventricle back into the left atrium. Blood can even back up from the atrium into the lungs, causing shortness of breath. The backflow of blood strains the muscles of both the atrium and the ventricle. Over time, the strain can lead to arrhythmias. Backflow also increases the risk of infective endocarditis IE. Arrhythmias Arrhythmias are problems with the rate or rhythm of the heartbeat. The most common types of arrhythmias are harmless. Other arrhythmias can be serious or even life threatening, such as ventricular arrhythmias. If the heart rate is too slow, too fast, or irregular, the heart may not be able to pump enough blood to the body. Lack of blood flow can damage the brain, heart, and other organs. In AF, the walls of the atria quiver instead of beating normally. AF is bothersome but rarely life threatening, unless the atria contract very fast or blood clots form in the atria. Blood clots can occur because some blood "pools" in the atria instead of flowing into the ventricles. If a blood clot breaks off and travels through the bloodstream, it can reach the brain and cause a stroke. Infection of the Mitral Valve A deformed mitral valve flap can attract bacteria in the bloodstream. The bacteria attach to the valve and can cause a serious infection called infective endocarditis IE. Signs and symptoms of a bacterial infection include fever, chills, body aches, and headaches. MVP is the most common heart condition that puts people at risk for this infection. Floss and brush your teeth regularly. Gum infections and tooth decay can cause IE. Diagnosis Mitral valve prolapse MVP most often is detected during a routine physical exam. During the exam, your doctor will listen to your heart with a stethoscope. Stretched valve flaps can make a clicking sound as they shut. If the mitral valve is leaking blood back into the left atrium, your doctor may hear a heart murmur or whooshing sound. However, these abnormal heart sounds may come and go. Your doctor may not hear them at the time of an exam, even if you have MVP. Thus, you also may have tests and procedures to diagnose MVP. This painless test uses sound waves to create a moving picture of your heart. Echo shows the size and shape of your heart and how well your heart chambers and valves are working. Echo can show prolapse of the mitral valve flaps and backflow of blood through the leaky valve. There are several types of echo, including stress echo. Stress echo is done before and after a stress test. During a stress test, you exercise or take medicine given by your doctor to make your heart work hard and beat fast. You may have stress echo to find out whether you have decreased blood flow to your heart a sign of coronary heart disease. Echo also can be done by placing a tiny probe in your esophagus to get a closer look at the mitral valve. The esophagus is the passage leading from your mouth to your stomach. The probe uses sound waves to create pictures of your heart. Doppler Ultrasound A Doppler ultrasound is part of an echo test. A Doppler ultrasound shows the speed and direction of blood flow through the mitral valve. A

chest x ray. This test is used to look for fluid in your lungs or to show whether your heart is enlarged. An EKG can show how fast your heart is beating and whether its rhythm is steady or irregular. This test also records the strength and timing of electrical signals as they pass through your heart. Even people who do have symptoms may not need treatment. People who have MVP and troublesome mitral valve backflow may be treated with medicines, surgery, or both. The goals of treating MVP include: If you have significant backflow and symptoms, your doctor may prescribe: Digoxin to strengthen your heartbeat. Medicines such as flecainide and procainamide to regulate your heart rhythms. Examples of vasodilators are isosorbide dinitrate and hydralazine. Take all medicines regularly, as your doctor prescribes. Surgery Surgery is done only if the mitral valve is very abnormal and blood is flowing back into the atrium. The timing of the surgery is important. Surgical Approaches Traditionally, heart surgeons repair or replace a mitral valve by making an incision cut in the breastbone and exposing the heart. A small but growing number of surgeons are using another approach that involves one or more small cuts through the side of the chest wall. This results in less cutting, reduced blood loss, and a shorter hospital stay. However, not all hospitals offer this method. Valve Repair and Valve Replacement In mitral valve surgery, the valve is repaired or replaced. Valve repair is preferred when possible. Repair is less likely than replacement to weaken the heart. Repair also lowers the risk of infection and decreases the need for lifelong use of blood-thinning medicines. Mechanical and biological valves are used as replacement valves. Mechanical valves are man-made and can last a lifetime. People who have mechanical valves must take blood-thinning medicines for the rest of their lives. Biological valves are taken from cows or pigs or made from human tissue. The major drawback of biological valves is that they weaken over time and often last only about 10 years. Overall, most people who have mitral valve surgery spend about 1 to 2 weeks in the hospital. Complete recovery takes a few weeks to several months, depending on your health before surgery. These procedures can allow bacteria to enter your bloodstream. Antibiotics can help prevent infective endocarditis, a serious heart valve infection. Discuss with your doctor whether you need to take antibiotics before such procedures. Transcatheter Valve Therapy Interventional cardiologists may be able to repair leaky mitral valves by implanting a device using a catheter tube inserted through a large blood vessel. At present, the device is only approved for people with severe mitral regurgitation who cannot undergo surgery. Living With Most people who have mitral valve prolapse MVP have no symptoms or related problems, do not need treatment, and are able to lead normal, active lives. If symptoms and complications do occur, most often you can control them with medicines. However, some people may need transcatheter valve therapy or heart valve surgery to relieve their symptoms and prevent complications. Rarely, mitral valve prolapse can cause arrhythmias and other problems. Ask your doctor how often you should schedule follow-up visits. See your doctor if your symptoms worsen. You should talk to your doctor about:

5: Mitral Valve Prolapse - What You Need to Know

Mitral valve prolapse (MVP; a.k.a. floppy mitral valve syndrome, systolic click murmur syndrome or billowing mitral leaflet) is a valvular heart disease characterized by the displacement of an abnormally thickened mitral valve leaflet into the left atrium during systole.

ECG may show arrhythmias such as atrial fibrillation MRI of the heart Treatment Most of the time, there are few or no symptoms and treatment is not needed. In the past, most people with heart valve problems were given antibiotics before dental work or procedures such as colonoscopy to prevent an infection in the heart. However, antibiotics are now used much less often. Check with your provider to see if you need antibiotics. There are many heart medicines that may be used to treat aspects of this condition. However, most people will not need any treatment. You may need surgery to repair or replace your mitral valve if it becomes very leaky regurgitation , and if the leakiness also causes symptoms. However, this may not occur. You may need mitral valve repair or replacement if: Your symptoms get worse. The left ventricle of your heart is enlarged. Your heart function gets worse. Outlook Prognosis Most of the time, mitral valve prolapse is harmless and does not cause symptoms. Symptoms that do occur can be treated and controlled with medicine or surgery. Some abnormal heartbeats arrhythmias in people with mitral valve prolapse can be life threatening. If the valve leakage becomes severe, your outlook may be similar to that of people who have mitral regurgitation from any other cause. When to Contact a Medical Professional Call your provider if you have: Chest discomfort, palpitations, or fainting spells that get worse Long-term illnesses with fevers References Carabello BA. Goldman L, Schafer AI, eds. A Textbook of Cardiovascular Medicine. Version Info Last reviewed on:

6: Mitral Valve Prolapse Syndrome - NORD (National Organization for Rare Disorders)

Mitral valve prolapse is the most common abnormality of the heart valve. Most people with mitral valve prolapse do not have symptoms or signs, and do not require treatment. However, when symptoms of mitral valve prolapse or complications do occur, they include anxiety, sharp chest pain, palpitations, and migraines.

Heart valve The mitral valve is typically 4 to 6 square centimetres. The opening of the mitral valve is surrounded by a fibrous ring known as the mitral annulus. The anterior cusp covers approximately two-thirds of the valve imagine a crescent moon within the circle, where the crescent represents the posterior cusp. Although the anterior leaflet takes up a larger part of the ring and rises higher, the posterior leaflet has a larger surface area. Chordae tendineae [edit] The left side of the heart. The mitral valve, as well as the chordae tendinae are visible as white strings. These connect to the papillary muscles visible attaching to the muscular ventricle. The valve leaflets are prevented from prolapsing into the left atrium by the action of chordae tendineae. The chordae tendineae are inelastic tendons attached at one end to papillary muscles in the left ventricle, and at the other to the valve cusps. Papillary muscles are finger-like projections from the wall of the left ventricle. When the left ventricle contracts, the pressure in the ventricle forces the valve to close, while the tendons keep the leaflets coapting together and prevent the valve from opening in the wrong direction thus preventing blood to flow back to the left atrium. Each chord has a different thickness. The thinnest ones are attached to the free leaflet margin, whereas thickest ones strut chords are attached quite away from the free margin. This disposition has important effects on systolic stress distribution physiology [1] Annulus [edit] Mitral annulus The mitral annulus is a fibrous ring that is attached to the mitral valve leaflets. Unlike prosthetic valves , it is not continuous. The mitral annulus is saddle shaped and changes in shape throughout the cardiac cycle. Expansion of the annulus can result in leaflets that do not join soundly together, leading to functional mitral regurgitation. Microscopically, there is no evidence of an annular structure anteriorly, where the mitral valve leaflet is contiguous with the posterior aortic root. Heart valves During left ventricular diastole , after the pressure drops in the left ventricle due to relaxation of the ventricular myocardium , the mitral valve opens, and blood travels from the left atrium to the left ventricle. This early filling phase is due to active relaxation of the ventricular myocardium, causing a pressure gradient that allows a rapid flow of blood from the left atrium, across the mitral valve. This early filling across the mitral valve is seen on doppler echocardiography of the mitral valve as the E wave. After the E wave, there is a period of slow filling of the ventricle. Left atrial contraction left atrial systole during left ventricular diastole causes added blood to flow across the mitral valve immediately before left ventricular systole. This late flow across the open mitral valve is seen on doppler echocardiography of the mitral valve as the A wave. The mitral annulus changes in shape and size during the cardiac cycle. It is smaller at the end of atrial systole due to the contraction of the left atrium around it, like a sphincter. This reduction in annulus size at the end of atrial systole may be important for the proper coapting of the leaflets of the mitral valve when the left ventricle contracts and pumps blood. Disease [edit] There are some valvular heart diseases that affect the mitral valve. Mitral stenosis is a narrowing of the valve. This can be heard as an opening snap in a heart sound which is not normally present. Classic mitral valve prolapse is caused by an excess of connective tissue that thickens the spongiosa layer of the cusp and separates collagen bundles in the fibrosa. This weakens the cusps and adjacent tissue, resulting in an increased cuspal area and lengthening of the chordae tendineae. Elongation of the chordae tendineae often causes rupture, commonly to the chordae attached to the posterior cusp. Advanced lesions also commonly involving the posterior leaflet lead to leaflet folding, inversion, and displacement toward the left atrium. Rheumatic heart disease often affects the mitral valve. The valve may also be affected by infective endocarditis Surgery can be performed to replace or repair a damaged valve. A less invasive method is that of mitral valvuloplasty which uses a balloon catheter to open up a stenotic valve. Rarely there can be a severe form known as caseous calcification of the mitral valve that can be mistaken for intracardiac mass or thrombus. It is not the valve closure itself which produces the sound but the sudden cessation of blood flow, when the mitral and tricuspid valves close. Abnormalities associated with the mitral valve can often be heard

when listening with a stethoscope. The mitral valve is often also investigated using an ultrasound scan , which can reveal the size and flow of blood through the valve. The word bicuspid uses combining forms of bi- , from Latin, meaning "double", and cusp , meaning "point", reflecting the dual-flap shape of the valve. Gallery[edit] The human heart, viewed from the front. The mitral valve is visible on the right as the "bicuspid valve" The chest, showing surface relations of bones , lungs purple , pleura blue , and heart red. Heart valves are labeled with " B " , " T " , " A " , and " P " . Mitral valve, viewed in a cadaver specimen from within the left atrium. A structural mechanical theoretical analysis". J Cardiovasc Surg Torino. An Intraoperative Echocardiographic Perspective". Journal of Cardiothoracic and Vascular Anesthesia. Functional anatomy of mitral regurgitation". The Journal of Heart Valve Disease. Reviews in Cardiovascular Medicine.

7: Mitral Valve Prolapse | MVP | MedlinePlus

Mitral valve prolapse (MVP) is a condition in which the heart's mitral valve doesn't work well. The flaps of the valve are "floppy" and may not close tightly. These flaps normally help seal or open the valve.

Systolic Click-Murmur Syndrome General Discussion The mitral valve is the valve between the left upper and left lower chambers left atrium and left ventricle of the heart. Mitral valve prolapse syndrome MVP is a common condition in which one or both of the flaps cusps of the mitral valve bulge or collapse backward prolapse into the left atrium during ventricular contraction systole. In some cases, this may allow leakage or the backward flow of blood from the left ventricle back into the left atrium mitral regurgitation. The exact underlying mechanism responsible for MVP remains unknown. In many affected individuals, the condition appears to occur in the absence of an associated disorder or syndrome idiopathic. Evidence indicates that the condition is sometimes familial, suggesting autosomal dominant inheritance. In other cases, MVP occurs in association with certain inherited connective tissue diseases, other heart abnormalities, or other underlying conditions, disorders, or syndromes. In many individuals with MVP, no associated symptoms are apparent asymptomatic. TIAs are characterized by temporary impairment of brain function due to brief interruptions of blood supply. A stroke refers to localized death of brain tissue [cerebral infarction] due to lack of blood flow and insufficient oxygen supply to the brain. Individuals with MVP associated with mitral regurgitation may have an increased risk of developing bacterial infections of the heart lining and valves bacterial endocarditis.

Causes The specific underlying mechanism responsible for mitral valve prolapse syndrome MVP is unknown. However, evidence indicates that various changes of the mitral valve or the lower left chamber of the heart left ventricle may lead to MVP. In many affected individuals, MVP appears to occur as an isolated condition in the absence of an associated disorder or syndrome idiopathic. In addition, according to experts, there appears to be an increased frequency of the condition in some families, suggesting an autosomal dominant mode of inheritance. Human traits, including the classic genetic diseases, are the product of the interaction of two genes, one received from the father and one from the mother. The risk of transmitting the disorder from affected parent to offspring is 50 percent for each pregnancy regardless of the sex of the resulting child. The risk is the same for each pregnancy. In other affected individuals, the changes associated with MVP may occur with various underlying conditions or syndromes, including certain inherited connective tissue disorders, such as Marfan syndrome, Ehlers-Danlos syndrome EDS , or osteogenesis imperfecta OI ; particular heart cardiac abnormalities; or other disorders. Marfan syndrome, an autosomal dominant disorder, may be characterized by cardiac, blood vessel, musculoskeletal, and eye abnormalities. OI is an autosomal dominant disorder in which defective development of connective tissue may result in abnormally brittle, fragile bones; recurrent fractures; abnormal thinness of the white outer coat of the eyes, causing them to appear blue blue sclerae ; and other associated findings. Cardiac abnormalities potentially associated with MVP may include disease of heart muscle cardiomyopathy ; heart malfunction or damage due to narrowing or blockage of the arteries supplying heart muscle coronary artery disease ; an abnormal opening in the fibrous partition septum that normally separates the two upper heart chambers i. Rheumatic heart disease is damage to heart muscle and heart valves caused by acute rheumatic fever, an inflammatory disease that may occur as a delayed reaction to infection with streptococcal bacteria i. Affected Populations Although mitral valve prolapse syndrome MVP has been reported in individuals of various ages, it is most commonly noted in young adults. Estimates indicate that MVP affects approximately four to eight percent of young adults in the general population, with females affected more commonly than males.

Related Disorders As noted above, mitral valve prolapse syndrome may occur as an isolated condition or in association with various underlying disorders or syndromes.

Diagnosis Mitral valve prolapse syndrome MVP may be diagnosed based upon thorough clinical examination, a complete patient and family history, and various tests. The diagnosis may be confirmed based upon specialized imaging techniques, particularly echocardiography, during which sound waves are directed toward the heart, enabling physicians to identify abnormal positioning and prolapse of the mitral valve flaps. In some cases, additional cardiac and other diagnostic studies may be recommended to help confirm and assess the

severity of potentially associated abnormalities, such as accompanying regurgitation. Most individuals with MVP have no associated symptoms and require no treatment. However, as mentioned above, those with associated mitral regurgitation may have an increased risk of developing bacterial infections of the heart lining and valves bacterial endocarditis. Therefore, appropriate antibiotic therapy antibiotic prophylaxis is required prior to dental procedures, surgical procedures, and certain diagnostic techniques to help prevent such infection. In some cases, treatment with certain medications e. In addition, antiarrhythmic agents may be administered for those with symptoms due to abnormal heart rhythms. In rare cases, if affected individuals have severe mitral regurgitation, surgical mitral valve repair or replacement may be required. For those who experience transient ischemic attacks, disease management may include the use of aspirin or appropriate anticoagulant agents. Other treatment for this disorder is symptomatic and supportive. Investigational Therapies Information on current clinical trials is posted on the Internet at www.clinicaltrials.gov. All studies receiving U.S.

8: Mitral Valve Prolapse | National Heart, Lung, and Blood Institute (NHLBI)

Mitral Valve Prolapse or MVP is a valvular heart condition whereby the leaflets of the mitral valve are abnormally thickened and bulge into the left atrium during systole. Simply put, mitral valve prolapse signifies that the valve between the heart's upper left chamber and the lower left chamber does not shut correctly.

What is mitral valve prolapse? You have two chambers on the left side of your heart: Your mitral valve , which is located between the two, is designed to allow blood flow from the left atrium into the left ventricle, but not back the other way. Instead, the valve bulges into the atrium. This can lead to mitral valve regurgitation, which means that blood leaks back into the left atrium through the prolapsed valve. Only about 2 percent of Americans have mitral valve prolapse, according to the American Heart Association. And among these cases, serious complications are uncommon. What are risk factors for mitral valve prolapse? Most people are born with abnormalities that cause the condition. These may include mitral valve flaps that are too big, thick, or stretchy. MVP often runs in families, so you may be more likely to have it if your parents or other relatives do. Certain conditions may lead to mitral valve prolapse. Because mitral valve prolapse often causes no symptoms, most people with this condition are unaware that they have heart problems. If you do develop symptoms, they will generally be mild. The onset of symptoms is typically slow and gradual rather than abrupt. When symptoms do occur, they may include: This pain is not caused by heart muscle blood flow seen with heart attacks. Your heartbeat might feel fast or irregular. How is mitral valve prolapse diagnosed? Your doctor will generally perform several tests to better understand your heart before making a diagnosis. In most cases, your doctor will initially detect MVP when using a stethoscope to listen to your heart. If you have the condition, your heart may make a clicking sound when it beats. This sound is usually more noticeable when you are standing. Hearing this click might lead your doctor to order further tests. Your doctor may order an X-ray or an echocardiogram. Both of these tests provide images of your heart, but the echocardiogram shows more structural details. Your doctor can check the images to see if you have MVP or regurgitation. Depending on your condition, your doctor may also perform a cardiac catheterization. In this procedure, dye which is visible on X-rays is injected into the arteries of your heart using a catheter tube that has been threaded through a blood vessel in your neck, arm, or upper thigh. Your doctor might ask you to exercise on a treadmill or perform some other physical activity to see how your heart responds. This is called a stress test. An electrocardiogram ECG is a way to check your heartbeat for irregularities. This can help your doctor diagnose mitral valve prolapse or other heart conditions. How is mitral valve prolapse treated? However, if you have noticeable symptoms, your doctor might choose to treat your condition. Possible medications your doctor might prescribe include: There are two basic types of surgery for this issue: Your doctor will generally opt to repair the valve if possible. There are pros and cons to both kinds of valves, so your doctor will discuss your options with you before the procedure.

9: Mitral valve surgery - minimally invasive: MedlinePlus Medical Encyclopedia

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Murmur[edit] Upon auscultation of an individual with mitral valve prolapse, a mid-systolic click, followed by a late systolic murmur heard best at the apex is common. The length of the murmur signifies the time period over which blood is leaking back into the left atrium, known as regurgitation. A murmur that lasts throughout the whole of systole is known as a holo-systolic murmur. A murmur that is mid to late systolic, although typically associated with less regurgitation, can still be associated with significant hemodynamic consequences. The only other heart murmur that follows this pattern is the murmur of hypertrophic cardiomyopathy. A MVP murmur can be distinguished from a hypertrophic cardiomyopathy murmur by the presence of a mid-systolic click which is virtually diagnostic of MVP. The handgrip maneuver diminishes the murmur of an MVP and the murmur of hypertrophic cardiomyopathy. The handgrip maneuver also diminishes the duration of the murmur and delays the timing of the mid-systolic click. This allows the mitral valve to prolapse earlier in systole, leading to an earlier systolic click i. Mitral valve prolapse syndrome[edit] Mitral regurgitation[edit] Mitral valve prolapse can result in mitral regurgitation, shown here, in which blood abnormally flows from the left ventricle back into the left atrium. Mitral regurgitation Mitral valve prolapse is frequently associated with mild mitral regurgitation, [6] where blood aberrantly flows from the left ventricle into the left atrium during systole. Chronic rheumatic heart disease is characterized by repeated inflammation with fibrinous resolution. The cardinal anatomic changes of the valve include leaflet thickening, commissural fusion, and shortening and thickening of the tendinous cords. Heart complications may be long-term and severe, particularly if valves are involved. Rheumatic fever, since the advent of routine penicillin administration for Strep throat, has become less common in developed countries. In the older generation and in much of the less-developed world, valvular disease including mitral valve prolapse, reinfection in the form of valvular endocarditis, and valve rupture from undertreated rheumatic fever continues to be a problem. All had rheumatic heart disease RHD and presented with prolonged fever. All had severe eccentric mitral regurgitation MR. One had severe aortic regurgitation AR also. One had flail posterior mitral leaflet PML. Zenon of Verona wearing a mitre. Micrograph demonstrating thickening of the spongiosa layer blue in myxomatous degeneration of the aortic valve. It is composed of two leaflets, one anterior and one posterior, that close when the left ventricle contracts. Each leaflet is composed of three layers of tissue: Patients with classic mitral valve prolapse have excess connective tissue that thickens the spongiosa and separates collagen bundles in the fibrosa. This is due to an excess of dermatan sulfate, a glycosaminoglycan. This weakens the leaflets and adjacent tissue, resulting in increased leaflet area and elongation of the chordae tendineae. Elongation of the chordae tendineae often causes rupture, commonly to the chordae attached to the posterior leaflet. Advanced lesions also commonly involving the posterior leaflet lead to leaflet folding, inversion, and displacement toward the left atrium. Diagnosis of mitral valve prolapse is based on modern echocardiographic techniques which can pinpoint abnormal leaflet thickening and other related pathology. Echocardiography is the most useful method of diagnosing a prolapsed mitral valve. Two- and three-dimensional echocardiography are particularly valuable as they allow visualization of the mitral leaflets relative to the mitral annulus. This allows measurement of the leaflet thickness and their displacement relative to the annulus. Subtypes can be described as classic, nonclassic, symmetric, asymmetric, flail, or non-flail. Classic versus nonclassic[edit] Prolapse occurs when the mitral valve leaflets are displaced more than 2 mm above the mitral annulus high points. The condition can be further divided into classic and nonclassic subtypes based on the thickness of the mitral valve leaflets: In symmetric coaptation, leaflet tips meet at a common point on the annulus. Asymmetric coaptation is marked by one leaflet displaced toward the atrium with respect to the other. Patients with asymmetric prolapse are susceptible to severe deterioration of the mitral valve, with the possible rupture of the chordae tendineae and the development of a flail leaflet. Flail prolapse occurs when a leaflet tip turns outward, becoming concave toward the left atrium, causing the deterioration of the mitral

valve. The severity of flail leaflet varies, ranging from tip eversion to chordal rupture. Dissociation of leaflet and chordae tendineae provides for unrestricted motion of the leaflet hence "flail leaflet". Thus patients with flail leaflets have a higher prevalence of mitral regurgitation than those with the non-flail subtype. In rare instances when mitral valve prolapse is associated with severe mitral regurgitation, mitral valve repair or surgical replacement may be necessary. Mitral valve repair is generally considered preferable to replacement. Symptomatic patients, those with evidence of diminished left ventricular function, or those with left ventricular dilatation need urgent attention. Prevention of infective endocarditis[edit] Individuals with MVP are at higher risk of bacterial infection of the heart, called infective endocarditis. This risk is approximately three- to eightfold the risk of infective endocarditis in the general population. Thereafter, they concluded that "prophylaxis for dental procedures should be recommended only for patients with underlying cardiac conditions associated with the highest risk of adverse outcome from infective endocarditis. It is important when considering endocarditis to keep these organisms in mind. Prognosis[edit] Generally, MVP is benign. There was a near-even split between classic and nonclassic MVP, with no significant age or sex discrimination. Michael Criley in and gained acceptance over the other descriptor of "billowing" of the mitral valve, as described by John Brereton Barlow.

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