

Aortic regurgitation

Aortic regurgitation is leakage from the aortic valve, which is the valve that separates the aorta, the large blood vessels that takes blood from the heart to the body, and the left ventricle, which is the heart's primary pumping chamber. This leakage occurs when the valve does not close completely. When this happens, the heart has to make more effort to pump blood to the body, since part of the blood flows backward through the valve when the heart rests instead of continuing to flow forward through the aorta to the body's organs and tissues. Over time, the extra effort that the heart must make can make it be enlarged, which finally causes heart failure (a condition in which the heart muscle weakens and does not pump very well). Some patients with mild regurgitation never have symptoms or problems related to the heart valve leakage. Patients with serious leakages may have symptoms that appear suddenly and worsen very quickly.

Most people with aortic regurgitation have no symptoms. As the heart muscle weakens, symptoms begin to appear. The most common symptoms are: fatigue, shortness of breath, especially when doing exercise or vigorous activities, and swelling of the feet and ankles. Some patients develop angina pectoris, which is chest pain that occurs when the heart muscle does not receive enough oxygen. Arrhythmia may also appear, that is, an irregular heart rate, which occurs when the heart muscle weakens on account of the chronic leakage from the aortic valve.

Aortic regurgitation may be congenital (you are born with it) or acquired (it appears as the result of a disease). A bicuspid aortic valve is the most common cause of congenital aortic regurgitation. This case appears when the aortic valve has only two valves or parts instead of three, which is what is normal. Valves with only two valves tend to have more leaks due to their shape.

The aortic valve may be affected by infections such as rheumatic fever, which is caused by the bacteria that causes angina (pharyngitis). Other bacteria or infectious organisms can also damage the aortic valve and make it leak. High blood pressure can make the aorta stretch or dilate over time and, when this happens, the valve no longer closes tightly. Some people may have calcium deposits as they age, which makes it become more rigid. When this happens, the valve no longer closes tightly and leaks.

Aortic regurgitation often causes a heart murmur, an extra sound that the doctor can hear upon examining you. There is a test called echocardiogram, in which images are taken of the heart using sound waves. It is used to confirm the diagnosis and to determine how severe the aortic valve leakage is. Depending on the severity of the leakage, a medication may be used to delay the progression of the damage to the heart muscle. Medications may also be used to treat the symptoms of shortness of breath and to reduce swelling. Patients with aortic

regurgitation or any other damage in a heart valve run the risk of the damaged valve becoming infected. This risk increases during procedures in which bacteria can enter the blood stream and adhere to the valve, which in turn can make the valve become infected. Dental procedures (including a professional dental cleaning) and certain surgical procedures may introduce bacteria into the blood. Patients with damaged heart valves must take antibiotics before having any of these procedures performed.

Your doctor must check your heart periodically and ask you if any change in your symptoms has occurred. Often echocardiograms are done to monitor whether the valve leakage has worsened. Once the valve leakage reaches a critical degree, surgical treatment is indicated. In some cases, the valve can be repaired, but in others it is necessary to use an artificial valve to replace the leaking one.

The aorta is the large artery that receives blood from the heart's left ventricle and distributes it to the body. Regurgitation means that the valve does not close well, and that the blood can flow backwards through it. This makes the left ventricle pump more blood than normal, and gradually it becomes enlarged due to this additional effort. People with aortic regurgitation may not have symptoms for years. However, as the problem worsens, symptoms will begin appearing. These symptoms may include fatigue, shortness of breath, liquid retention (edema), irregular heart rhythm (arrhythmia) and chest pain.

Aortic regurgitation occurs when there is an abnormality in the aortic valve. Certain congenital valve deformities or heart infections, such as rheumatic fever or infectious endocarditis (infection of the valve), may make the valve acquire an abnormal shape and have leakage.

Patients with mild aortic regurgitation who have little or no symptoms still need to go to the doctor regularly. If the problem gets worse, medications may be used. These medications may help regulate the heart rhythm, eliminate liquid from the body to control edema and/or help the heart ventricle pump better.

Severe cases may require surgical treatment. This consists of replacing the affected valve with an artificial one.

People with aortic valve disease are at greater risk of contracting a valve infection. It is necessary to administer antibiotics before any dental or surgical procedure to prevent the damaged valve from becoming infected.

