

Editorial

Classification of valvular heart disease

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EDITORIAL

Any cardiovascular condition involving one or more of the heart's four valves is known as valvular heart disease. These problems are primarily caused by ageing, although they can also be caused by congenital anomalies, specific diseases, or physiologic processes such as rheumatic heart disease and pregnancy. The valves are responsible for regulating blood flow through the heart and major arteries and are anatomically part of the dense connective tissue of the heart known as the cardiac skeleton. Valve failure or malfunction can impair heart function, albeit the severity and type of valvular disease will determine the specific implications. Damaged valves can be treated with medicine alone, but surgical valve repair or replacement is more common.

Aortic and mitral valve disorders

Because of the higher pressures in the left heart, aortic and mitral valve abnormalities are more common than diseases of the pulmonary or tricuspid valves in the right heart. Aortic valve stenosis is defined as a thickening of the valvular annulus or leaflets that prevents blood from being evacuated from the left ventricle into the aorta. Stenosis is most commonly caused by valvular calcification; however it can also be caused by a congenitally deformed bicuspid aortic valve. The presence of only two valve leaflets distinguishes this abnormality. It can happen on its own or in combination with other cardiac abnormalities. Aortic insufficiency, also known as regurgitation, occurs when the valve leaflets fail to close properly at the conclusion of systole, enabling blood to flow backward into the left ventricle. The majority of cases of aortic insufficiency have unknown or idiopathic causes.

Mitral stenosis is most commonly caused by rheumatic heart disease, however it can also be caused by calcification. Vegetation forms on the mitral leaflets in some cases as a result

of endocarditis, a heart tissue disease. Mitral stenosis is a rare valve illness that is not as age-related as other types of valvular disease. Mitral insufficiency is caused by dilatation of the left ventricle, which is frequently a result of heart failure. The left ventricle of the heart enlarges in some circumstances, causing displacement of the associated papillary muscles that govern the mitral valve.

Pulmonary and tricuspid valve disorders

Right heart illnesses include pulmonary and tricuspid valve problems. Adults with pulmonary valve illnesses have the least prevalent heart valve condition. As in Tetralogy of Fallot, Noonan syndrome, and congenital rubella syndrome, pulmonary valve stenosis is commonly the outcome of congenital abnormalities and can occur alone or as part of a wider pathologic process. Individuals with pulmonary stenosis usually have great outcomes and treatment choices unless the stenosis is severe. As a result of calcification that happens with age, individuals frequently do not require intervention until later in adulthood. Pulmonary valve insufficiency is frequent in healthy people to a minor degree and does not require treatment. Damage to the valve as a result of cardiac catheterization, intra-aortic balloon pump implantation, or other surgical procedures is the most common cause of more noticeable insufficiency.

Tricuspid valve stenosis without co-occurrent regurgitation is extremely rare and usually occurs as a result of rheumatoid arthritis. Congenital anomalies, carcinoid disease, obstructive right atrial tumours, and hypereosinophilic syndromes are all possible causes. In healthy people, minor tricuspid insufficiency is frequent. It is caused by dilatation of the right ventricle, which causes displacement of the papillary muscles, which control the valve's capacity to close, in more severe cases.

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