

Heart Valvular Disease: Problems and its Types

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DESCRIPTION

A valvular heart disease is an injury or disease that refers to any of several conditions in which one or more valves in the heart does not function properly. A normal heart contains four chambers (right and left atria, right and left ventricles) and four valves. The mitral valve, also known as the bicuspid valve, allows the blood to flow from the left atrium to the left ventricle, and the tricuspid valve allows the blood to flow from the right atrium to the right ventricle. The aortic valve allows blood to flow from the left ventricle to the aorta, and the pulmonary valve allows blood to flow from the right ventricle to the pulmonary artery. The valves open and close to control or regulate the blood flow to and away from the heart. In some of the cases, one or more valves may not open and close properly, keeping blood flowing in one direction through the heart, this can interrupt the blood flow from the heart to the body. This limits quality of life and can even be life threatening. Valvular heart disease can develop prenatally or can develop later in life. Sometimes the cause of the valve disease is not known.

Three basic types of problems which heart valves can have are described as follows.

Regurgitation

It is also known as backflow. The valves do not close properly, allowing blood to leak back into the heart. This often occurs because the valve flaps bulging back, a condition called prolapse. Prolapse most commonly affects the mitral valve.

Stenosis

Generally occurs when the flaps of the valve become thick, stiff and may fuse together. This prevents the heart valve from opening completely. Not enough blood can pass through the valve. Aortic valve stenosis is a common type of stenosis. It affects the valves that control blood flow into the large artery, which carries blood from the heart to the body.

Atresia

It occurs when the heart valves have not formed properly and a hard layer of tissue blocks blood flow between the chambers of the heart and have no openings for blood flow.

Types of valvular heart disease

Valve stenosis: It occurs when the heart valve does not open completely because it has become stiff or fused. A narrowed opening can cause the heart to work very hard to pump blood through it. This can lead to heart failure and other conditions. Stenosis may develop in all the four valves. These conditions are called as tricuspid stenosis, pulmonary stenosis, mitral stenosis, or aortic stenosis.

Valvular insufficiency: Also known as regurgitation, inability or a "leak valve," this occurs when the valve does not close properly. If the valve is not sealed, some blood will flow back through it. As the leak worsens, the heart needs to work hard to make up for the leaky valve, causing less blood to flow to the rest of the body. Depending on which valve is affected, the condition is known as tricuspid regurgitation, pulmonary regurgitation, mitral regurgitation, or aortic regurgitation.

Congenital valve disease: This type of valve disease most commonly affects the aortic or pulmonic valves. The valve flaps may be of the wrong size, have malformed leaflets, or it may have leaflets that are not attached correctly.

Bicuspid aortic valve disease: This is a congenital valve disease which affects the aortic valve. The bicuspid aortic valve has only two leaflets or cusps instead of the normally having three. Without the third leaflet, the valve flap may be stiff (not able to open and close properly) or leaky (cannot close tightly).

Acquired valve disease: This includes problems developing with the valves that were previously normal. These include changes in valve structure due to various diseases and infections, including rheumatic fever and endocarditis.

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