Heart Valve Disease

There are four valves in the heart. Each valve consists of two or three flaps or cusps of tissue that open to let the blood through then seal shut to prevent backflow allowing a one-way flow of blood through the heart. The tricuspid and mitral valves are positioned between the upper and lower chambers and are attached to the heart walls by fibrous strands. The pulmonary and aortic valves are in the arteries leaving the heart and they are situated at the exits from the ventricles.
TYPES OF VALVE CONDITIONS

Valve stenosis or narrowing is when the valve does not open fully, restricting or obstructing the flow of blood. It can put a strain on the heart, making it pump harder to push the blood past in the narrowing. Calcification (deposits of calcium) is the most common cause of aortic stenosis in older people.

Leaking valves is when a valve fails to close properly and it allows blood to flow backwards. This is called valve incompetence or regurgitation or a leaky valve. The heart can be put under pressure as it has to work hard to pump the required volume of blood.

Causes of Heart Valve Disease

- Congenital heart disease – a condition or defect that develops in the womb before the baby is born. The baby’s heart valves may not be properly formed or there may be holes between the chambers in the heart.
- Having had rheumatic fever
- Deposits of calcium (calcification) in parts of the valve
- Cardiomyopathy – a disease of the heart muscle that can run in families.
- Damage to the heart muscle from a heart attack – commonly caused by coronary heart disease
- Growing older
- Previous infection with Endocarditis – a life threatening condition in which the inner lining of one of the heart valves becomes infected.

Symptoms of heart valve disease

Common symptoms include:

- Shortness of breath, mainly on exertion at first but may occur at rest if more severe
- Swelling of the ankles and feet due to fluid congestion
- Tiredness, dizziness or fainting episodes
- Abnormal heart rhythms which may cause palpitations and other problems
- Chest pain or angina

Heart valve replacements include:

Prosthetic (mechanical) valves which are made of synthetic materials that are designed to last for many years. If you have an artificial heart valve you will need anticoagulation therapy for the rest of your lifetime to prevent clots forming on the valve. Anticoagulation is effective in preventing clot formation on the artificial surfaces of the valve.
Prosthetic valves make a slight clicking sound as they close and most patients will be able to hear this from time to time.

Biological valves or tissue valves are made from animal tissue or taken from the human tissue of a donated heart (homograph). Sometimes, your own tissue can be used for the valve replacement. Biological valves normally only require you to take anticoagulants for the first few months.

There are different types and makes of valves. You should discuss with your doctor which one is the best for you.

Medication

Anticoagulant therapy is recommended to prevent blood clots forming on the mechanical valve. Warfarin is prescribed, as other oral anticoagulants are not yet licenced for use with replacement heart valves.