

Pathophysiology and its Risk Factors Involved in Endocarditis

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DESCRIPTION

Endocarditis is a serious medical condition which involves inflammation of the inner lining of the heart, known as the endocardium. This condition is typically caused by bacterial or fungal infection [1-3]. If it is left untreated, it can lead to a serious complication including heart failure, stroke, and even can cause death. The endocardium is a smooth, thin layer of tissue that lines the interior of the heart chambers and valves. When the endocardium becomes inflamed, it can cause damage to the heart valves, leading to leakage or obstruction of blood flow. This can cause a variety of symptoms such as fever, fatigue, shortness of breath, chest pain, and swelling in the legs or abdomen, changes in heart rhythm, skin rash or small, less common endocarditis symptoms may include, unexpected weight loss in the person, loss of blood in the urine, Pain under the left rib cage (spleen), painless red, purple or brown flat spots under the bottom sole of the feet or on the palms of the hands, painful red or purple bumps or patches of darkened skin (hyperpigmentation) on the tips of the fingers or toes, tiny purple, red or brown round spots on the skin, in the whites of the eyes or inside of the mouth [4-6]. The most common cause of endocarditis is bacterial infection, with streptococcus and staphylococcus bacteria being the most common reason for the cause.

Endocarditis is usually caused by bacteria entering the bloodstream and attaching to damaged areas of the heart, such as heart valves or other areas where blood flow is disrupted [7,8]. This can occur as a result of a number of factors, including dental procedures, surgery, intravenous drug use, or even everyday activities like brushing teeth or flossing. Certain medical conditions, such as heart defects or a weakened immune system, can also increase the risk of developing endocarditis. In some cases, the bacteria can also spread from other parts of the body, such as the skin or urinary tract. Fungal endocarditis is less common than bacterial endocarditis but can still be a significant threat to patients. Fungal infections are typically seen in patients with weakened immune systems, such as those with HIV/AIDS or cancer, or those who have undergone organ transplantation.

Risk factors

Some of the risk factors of endocarditis are

Older age: Most often endocarditis occurs in adults moreover above 60 years of age.

Artificial heart valves: Germs mostly gets attached to an artificial (prosthetic) heart valve than a normal heart valve [9].

Damaged heart valves: Certain medical conditions, such as rheumatic fever or infection, can damage or wound one or more of the heart valves, increasing the risk of infection.

Congenital heart defects: Being born with certain types of heart defects, such as an irregular heartbeat or damaged heart valves, raises the risk of heart infections [10].

Implanted heart device: Bacteria can attach to the device which is placed, such as a pacemaker, causing an infection of the heart's lining.

CONCLUSION

For the diagnosis of endocarditis it involves a combination of medical history, physical examination, and various diagnostic tests. Blood cultures are often taken to identify the specific bacteria or fungi causing the infection. Imaging tests such as echocardiograms may also be used to assess the damage to the heart valves. Treatment for endocarditis typically involves a combination of antibiotics and sometimes surgery. The antibiotics are used to kill the bacteria causing the infection, while surgery may be necessary to repair or replace damaged heart valves. In some cases, the infection may be so severe that emergency surgery may also be required. Prevention of endocarditis is important, especially for those at higher risk.

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