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The Role of Thrombosis in Cardiovascular Diseases: Prevention and Treatment

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INTRODUCTION

Certain types of cancer, such as pancreatic, lung, and ovarian cancer, increase the risk of thrombosis. Cancer can cause an inflammatory response that promotes blood clot formation and also influences blood coagulation factors. Pregnancy leads to changes in the blood's clotting factors, as well as increased pressure on the veins of the legs and pelvis, raising the risk of thrombosis. This risk persists for several weeks after childbirth. Being overweight or obese increases pressure on the veins, particularly in the lower limbs, and contributes to slower blood flow, raising the likelihood of clot formation. Older adults, especially those over 60, are more likely to develop thrombosis due to a combination of factors like reduced mobility, slower circulation, and changes in the blood's clotting mechanisms. Hormonal therapies, such as oral contraceptives or hormone replacement therapy, can increase the risk of thrombosis, particularly in women who smoke or have other risk factors. Inherited blood clotting disorders, such as factor V Leiden mutation, prothrombin gene mutation, or anti-thrombin deficiency, significantly raise the risk of thrombosis. The buildup of fatty plaques in the arteries (atherosclerosis) can cause the vessel walls to become stiff and narrow, increasing the chances of clot formation. The rupture of these plaques often leads to thrombosis and subsequent cardiovascular events.

DESCRIPTION

Chronic high blood pressure can damage the inner lining of blood vessels, making them more susceptible to clot formation. Smoking damages blood vessels and promotes clotting by increasing the production of clotting factors. It also accelerates atherosclerosis, contributing to a higher risk of arterial thrombosis. Poorly controlled diabetes can lead to vascular damage and a tendency to form blood clots. High blood sugar levels also increase inflammation and promote the development of plaques in arteries. A family history of heart disease or stroke can indicate an inherited predisposition to arterial thrombosis. Symptoms of DVT can include swelling, pain, redness, and warmth in the affected leg. The skin may appear shiny, and veins may become more visible. If a clot from a DVT breaks off and travels to the lungs, symptoms of a pulmonary embolism may occur. These can include sudden shortness of breath, chest pain, rapid heartbeat, dizziness, and coughing up blood. A blood clot in the coronary arteries can lead to a heart attack. Symptoms include chest pain or discomfort, shortness of breath, nausea, and sweating. A clot blocking blood flow to the brain can result in a stroke. Symptoms include sudden numbness or weakness (especially on one side of the body), difficulty speaking or understanding speech, sudden vision loss, or trouble walking.

CONCLUSION

Arterial thrombosis in the limbs can cause pain, numbness, or cramping in the legs, particularly during physical activity. To diagnose thrombosis, healthcare providers rely on a combination of patient history, physical examination, and diagnostic tests. A non-invasive imaging test often used to diagnose DVT. It uses sound waves to create an image of the veins and detect the presence of blood clots. For detecting pulmonary embolism or arterial thrombosis, imaging tests like CT scans and MRIs may be used to visualize the blood vessels and identify clots. A blood test that measures the presence of fragments of fibrin, a protein involved in clot formation.

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CONFLICT OF INTEREST

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