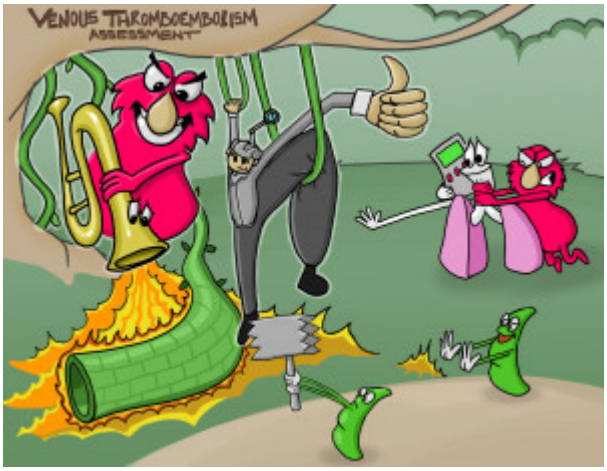
Venous Thromboembolism (DVT) Assessment

A venous thromboembolism can occur when there is damage to a blood vessel or when the flow of blood is interrupted, causing venous stasis. Pooling of blood, activation of platelets, and clotting factors can lead to platelet aggregation and thrombus formation, known as a deep vein thrombosis, or DVT. Patients with a DVT may experience tenderness, warmth, and swelling of the affected extremity, though some patients may also be asymptomatic. A patient with this condition is at risk for embolization of the clot and should be monitored closely for signs and symptoms of a pulmonary embolism including dyspnea, tachycardia, and chest pain.



PLAY PICMONIC

Mechanism

Venous Wall Inflammation caused by Thrombus

Vines at Vine Wall In-flames by Trombone

Thrombus formation can be attributed to three factors: venous stasis, endothelial damage, and blood hypercoagulability. When valves in the veins of the leg(s) do not function properly or when muscles of the leg are inactive for extended periods of time, pooling of blood in the lower legs can occur. This is called venous stasis. Direct or indirect injury a vessel, called endothelial damage, can stimulate the activation of platelets and clotting factors, which when combined with existing hypercoagulability of blood can lead to platelet aggregation. As clotting factors continue to make fibrin, more platelets and red and white blood cells will stick to the wall of the vein forming a clot.

Assessment

Tenderness

Tenderizer

Patients with a VTE will typically present with tenderness of the affected extremity.

Edema

Edamame

Edema of the affected extremity can occur. If edema or swelling is present, the skin covering the extremity will appear tight, smooth, and shiny.

Warmth

Warm-fire

A patient presenting with a VTE may also notice warmth of the affected area due to inflammation.

Asymmetry

Asymmetrical

Because a VTE typically affects one limb at a time, the patient's extremities will appear asymmetrical. For example, if the patient was experiencing a VTE in the lower left leg, tenderness, swelling and warmth would be present in that area, while the lower right leg would appear unaffected.

Considerations

Could be Asymptomatic

Thumbs-up

Keep in mind that although tenderness, swelling, and warmth are common signs of a VTE, patients with this condition may be asymptomatic.

Monitor for Pulmonary Embolism

Monitor for Lungs Elmo

Patients with a VTE should be placed on bedrest to prevent the thrombus from dislodging and becoming an embolus. If embolization does occur, the clot could travel to the pulmonary vasculature and become a pulmonary embolism (PE). Patients should be monitored closely for symptoms of a PE including dyspnea, tachycardia, and chest pain.