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Diagnostic Studies Online Content (1H)

In order to receive full credit (1H class time) for this assignment, it must be completed in its entirety by 2/13/2023 at 0800. Any assignment not completed in its entirety will result in missed class time.

What blood laboratory studies might be altered in an individual with a venous thromboembolism (VTE)?

Lab values that may be altered in an individual with VTE might include the ACT, aPTT, Hgb, Hct, and platelet counts. These lab values might also be altered in patients that have blood conditions such as thrombocytopenia, polycythemia, leukopenia, etc. You could also preform a venous compression ultrasound. If the veins do not collapse when pressure is applied, it can be a sign of a thrombus. You can also do a duplex ultrasound, which is the most likely test to be done if a VTE is suspected. This test basically shows the blood flow in the legs and/or arms through the main arteries. The test utilizes ultrasonography, which means you can also hear the blood flow while seeing it.

What does an elevated D-dimer suggest?

An elevated D-dimer suggests a pulmonary embolism or VTE/DVT. The elevation is a result of fibrin, which is a byproduct of the breakdown of blood clots.

A peripheral arteriography and/or venography can be used to detect and visualize what?

A peripheral arteriography/venography can be used to detect and visualize blood flow abnormalities such as aneurysms, occlusions, atherosclerosis, trauma, and venous abnormalities. It can be visualized with the contrast media that is injected to these vessels.

What problems can a transesophageal echocardiogram (TEE) detect?

A transesophageal echocardiogram can detect mitral valve disease, endocarditis growths, and a possible thrombus, especially before a cardioversion.

If you are the nurse assisting with a TEE, what are your responsibilities?

My responsibilities as a nurse would include ensuring the patient is NPO, maintaining IV access for sedation medications (propofol), monitoring vitals, especially blood pressure and

oxygen. Supplemental oxygen might also be required. I would be responsible for oral suctioning as needed. I would also be responsible for holding the bite block in place. If the physician needs saline agitation, or bubbles, we would also be in charge of instilling that through the IV. We want to monitor for any complications and continue to keep the patient NPO until their gag reflex returns.

What is a Lexiscan stress test and why is it performed? What must you, as the nurse, ask the patient prior to performing the test?

A Lexiscan stress test is where nuclear medicine is used due to the patient not being able to perform the test via treadmill. The patient is injected with a nuclear agent, which simulates the response of the heart to exercise. This allows the physician to visualize perfusion to the heart and diagnose possible coronary artery disease. The patient should not have caffeine for 12 hours prior to the procedure or theophylline 24 hours prior to the procedure.

If you are conducting a stress test on a patient, what are some reasons to conclude or terminate the test?

- 1. Chest pain**
- 2. EKG shows cardiac ischemia**
- 3. Peak heart rate is achieved**
- 4. Peak tolerance achieved**
- 5. Changes in vital signs that are significantly different from baseline**

What are some things we can identify from a 12-lead ECG?

- 1. Conduction problems**
- 2. Dysrhythmias**
- 3. Hypertrophy**
- 4. Pericarditis**
- 5. Ischemia/Infarction**
- 6. Drug effectiveness**

A BNP of 775 would be diagnostic for what?

This would be a diagnostic for heart failure.

There are two substances released in the blood when cardiac tissue damage occurs. Name them:

- 1. Cardio-specific isoenzyme**
- 2. Troponin**

View the following 3-minute TEE video:

<https://www.youtube.com/watch?v=9Us9mXXILSk>

In this particular case they are looking for the presence of what inside the heart?

They are looking for the presence of blood clots inside the heart to make sure the patient is safe to have a cardioversion to hopefully get them out of atrial fibrillation and into normal sinus rhythm.

Optional question: When the cardiac rhythms shows on the bottom of the TEE screen, what tells you the patient is in A-fib (atrial fibrillation)?

Absence of a P wave.