

Diagnostic Studies

Online Content (1H)

Lindsey Steele

Unit Objectives:

- **Interpret results of diagnostic tests in relation to patient symptoms and assessment findings. (1,2)***
(*Course Objectives)

In order to receive full credit (1H class time) for this assignment, it must be completed in its entirety and submitted to the Unit 4- Diagnostic Studies Dropbox by 2/12/2024 at 0800. Any assignment not completed in its entirety will result in missed class time, and must be made up before the end of the semester.

What blood laboratory studies might be altered in an individual with a venous thromboembolism (VTE)? A patient's ACT, aPTT, INR, Hgb, Hct, and platelet count may be altered if a patient has a venous thromboembolism. If a patient has polycythemia, they may have an increased Hgb and Hct.

What does an elevated D-dimer suggest? An elevated D-dimer suggests a VTE, normal results are <250 ng/ml.

A peripheral arteriography and/or venography can be used to detect and visualize what? Peripheral Arteriography and Venography are used to assess blood flow using contrast media injected into arteries or veins. Serial x-rays taken to detect and visualize are atherosclerotic plaques, occlusions, aneurysms, venous abnormalities, and traumatic injuries.

What problems can a transesophageal echocardiogram (TEE) detect? In a transesophageal echocardiogram, a flexible probe is passed through the esophagus to image the heart and great vessels. It requires sedation and is frequently used to detect mitral valve disease, endocarditis vegetation, and a thrombus prior to cardioversion.

If you are the nurse assisting with a TEE, what are your responsibilities? My responsibilities as a nurse include ensuring the patient is NPO for at least 6 hours, ensuring IV access for sedation, and assessing the patient's vital signs and need for suctioning. In addition, a nurse should monitor for complications such as esophageal tears, aspiration, or vasovagal reactions. The patient may resume eating and drinking when a 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 a chemical stress test done when a patient is unable to exercise on a treadmill. The agent will be injected through an IV, and the patient must hold all caffeine products for 12 hours. Lexiscan simulates the effects of exercise. The nurse must also ensure theophylline is held for at least 24 hours because it will diminish the effects of Lexiscan.

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

1. ___Chest pain_____
2. ___Significant changes in vital signs from baseline_____
3. ___ECG changes indicating cardiac ischemia_____
4. ___Patient unable to handle the effect of exercise_____
5. ___If peak HR is achieved or peak tolerance is achieved _____

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

1. ___Conduction problems_____
2. ___Dysrhythmias_____
3. ___Hypertrophy_____
4. ___Pericarditis_____
5. ___Ischemia or Infarction_____
6. ___Drug effectiveness _____

A BNP of 775 would be diagnostic for what? ___Heart Failure because it is >100.

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

1. _Troponin_____
2. _CK-MB_____

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 blood clots or abnormalities. The patient was at risk for blood clots in the heart due to his A-fib.

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)? The patient is in A-fib due to the irregular rhythm, the no distinct P wave. There was total disorganization of the atrial electrical activity.