

ACTIVE LEARNING TEMPLATE: *Diagnostic Procedure*

STUDENT NAME _____

PROCEDURE NAME Lab Studies Ordered

REVIEW MODULE CHAPTER _____

Description of Procedure

Cardiac Biomarkers/Enzymes - Cardiac Troponin

These are measured at presentation in patients with suspected MI. The only biomarker that is recommended to be used for the diagnosis of acute MI at the time is cardiac troponin because of its superior sensitivity and accuracy. Troponin is a contractile protein that normally is not found in serum; it is released only when myocardial necrosis occurs. There are two variants of the protein that are measured; Troponin T and Troponin I. Troponin T measured on unspun heparinised blood. Troponin I is more cardiac specific than Troponin T but with similar time scales of increase and indications as for Troponin T.

Indications

Diagnosis of Myocardial Infarction (MI) especially after 24 hours.
Used as a prognostic indicator in Unstable Angina Pectoris.

Interpretation of Findings

Levels elevated early after MI - May be raised by 4 hours, almost certain to be raised by 15 hours, remains raised for 5+ days.
Also raised in patients with severe unstable angina pectoris indicating a much worse prognosis (likely to go on to develop a full-blown MI) as compared to those with a negative Troponin T.
False positive occur with renal failure, myositis, and sarcoidosis.

Potential Complications

Bleeding from site of injection
Infection at site of injection
Bruising at site of injection

CONSIDERATIONS

Nursing Interventions (pre, intra, post)

Pre-test:

Educate the patient on what the test is all about.

Ensure to acquire informed consent before beginning the procedure.

Assess the patient's clinical records to ensure that they are the right patient and that they are the patient that the test has been indicated for.

Learn about all the patient's medicines, herbs, vitamins, and supplements that are taking including OTC and any illicit drugs that they may have used.

Intra-test:

Explain to the patient the step to step procedure that you will be carrying out.

Ensure the procedure is conducted under aseptic conditions.

Use correctly the necessary personal protective gear.

Post-test:

Discard all disposable materials used.

Correctly document the patients' details on the sample container and the results thereafter indicating the time and date the test was performed.

Client Education

Instruct the patient on what to expect during the procedure.

Educate the patient on why they are receiving the test, what it entails, the risk and benefits of the tests, and what the results indicate.

Nursing Interventions

Arrest any bleeding that ensue from the site of injection.

Conduct procedure/phlebotomy under aseptic condition to avoid infections at site of injection or septicemia.

Should infection develop, give appropriate antibiotics. You can also give prophylactic antibiotics for immunosuppressed patients.