

ATI MEDICAL SURGICAL FINAL EXAM 2023

What is normal range for troponin I? When are elevated levels first detectable after myocardial injury and what is expected duration of the elevated levels? - CORRECT ANSWER
Less than 0.03, three hours, 7 to 10 days

What is normal range for myoglobin? When are elevated levels first detectable after myocardial injury and what is expected duration of the elevated levels? - CORRECT ANSWER
Less than 90 mcg/L, two hours, 24 hours

While an echocardiogram is being performed what side should the patient lie on? - CORRECT ANSWER
Left side and remain still

What are indications for an echocardiogram - CORRECT ANSWER
Cardiomyopathy

Heart failure

Angina

Myocardial infarction

What are indications for stress test - CORRECT ANSWER

Dysrhythmias
HF

Angin

aMI

What are two medications that are prescribed for pharmacological stress test - CORRECT ANSWER
Dobutamine

Adenosine

What do you instruct the patient to do 2 to 4 hours before a stress test - CORRECT ANSWER
Avoid tobacco, alcohol and caffeine

Hemodynamic monitoring involves special indwelling catheters that provide information about blood volume and perfusion, fluid status and how well the heart is pumping. Arterial lines are placed in the radial (most common), brachial or femoral artery. What should you Monitor for? -

CORRECT ANSWER Monitor circulation in the limb with the arterial line. Such as capillary refill, temperature, color. Arterial lines are not used for IV fluid administration

The pulmonary artery (PA) catheter is inserted into a large vein (internal jugular, femoral, subclavian, brachial) and threaded through the right atria and ventricles into a branch of the pulmonary artery. PA catheters have multiple lumens, ports and components that allow for various hemodynamic measurements, blood sampling and - CORRECT ANSWER Infusion of IV fluids

What is the expected reference range for CVP (Central venous pressure) - CORRECT ANSWER 1 to 8 MM HG

What is the expected reference range for pulmonary artery systolic (PAS) - CORRECT ANSWER 15 to 26

What is the expected range for pulmonary artery diastolic (PAD) - CORRECT ANSWER 5 to 15

What is expected range for pulmonary artery wedge pressure (PAWP)? - CORRECT ANSWER 4 to 12

What is the expected range for cardiac output - CORRECT ANSWER 4 to 7 L/minute

What is expected range for mixed venous oxygen saturation - CORRECT ANSWER 60% to 80%

When should a nurse anticipate lower hemodynamic values? - CORRECT ANSWER In older patients especially if dehydration is a complication

What position should the patient be in with hemodynamic monitoring - CORRECT ANSWER Supine or Trendelenburg

What are post procedure nursing interventions for hemodynamic monitoring - CORRECT ANSWER 1. Obtain chest x-ray to confirm catheter placement

2. Continually monitor vitals
3. Compare NIBP to arterial blood pressure
4. Observe and document waveforms. Report changes in waveforms to the provider
5. Document catheter placement each shift and as needed
6. Place the patient in supine position prior to recording hemodynamic values (HOB can be elevated 15° to 30°)

What are nursing actions preprocedure before an angiography - CORRECT ANSWER 1. Patient is NPO for at least eight hours before

2. Assess for iodine/shellfish allergy
3. Assess renal function
4. Teach the client that the affected leg must remain straight after the procedure
5. The other normal stuff like ensure informed consent blah blah

What are post procedure nursing interventions for an angiography - CORRECT ANSWER 1. Assess vitals every 15 minutes for One hour, every 30 minutes for one hour, every hour for four hours and then every four hours

2. Assess the site for bleeding and hematoma with every vital sign check
3. Maintain bed rest for 4 to 6 hours after the procedure
4. Monitor urine output and administer IV fluids for hydration (contrast media acts as an osmotic diuretic)

How long do patients receive anticoagulation therapy that have stent placement - CORRECT ANSWER 6 to 8 weeks

What is cardiac tamponade - CORRECT ANSWER Fluid accumulation in the pericardial sac

What are manifestations of cardiac tamponade - CORRECT ANSWER hypotension

JVD

Muffled heart

sounds Paradoxical

pulse

What are nursing actions for cardiac tamponade - CORRECT ANSWER 1. Notify the provider immediately

2. Administer IV fluids to combat hypotension as prescribed
3. Obtain a chest x-ray or echocardiogram to confirm diagnosis
4. Prepare the client for pericardiocentesis

What is retroperitoneal bleeding - CORRECT ANSWER Bleeding into the abdominal cavity behind the peritoneum can occur due to femoral artery puncture (after an angiography)

What are nursing actions for retroperitoneal bleeding - CORRECT ANSWER 1. Assess for flank pain and hypotension

2. Notify the provider immediately
3. Administer IV fluids and blood products as prescribed

What are central catheter's appropriate for - CORRECT ANSWER Any fluids due to rapid hemodilution in the superior vena cava

What should you do if there's an occlusion in the access device that impedes flow - CORRECT ANSWER 1. Flush the line at least every 12 hours to maintain patency (3 mL for peripheral & 10 mL for central lines)

2. Administer urokinase to lyse obstructions per facility protocol
3. Flush implanted port after every use and at least once a month while implanted

What are nursing actions for a catheter thrombosis/emboli - CORRECT ANSWER 1. Flush the line per facility protocol

2. Do not force fluid if resistance is encountered

3. Use a 10 mL or larger syringe to avoid excessive pressure

What is treatment for infiltration and extravasation - CORRECT ANSWER 1. Remove using direct pressure with gauze sponge until bleeding stops

2. Apply cool compress
3. Elevation is optional
4. Avoid starting a new IV site in the same extremity

What are nursing interventions to prevent an air embolism in a vascular access device - CORRECT ANSWER 1. Leave central lines clamped when not in use

2. Have the patient hold breath while the tubing is changed
3. If the patient has sudden SOB, place in Trendelenburg on left side, give oxygen and notify the provider

What are nursing interventions to prevent accidental dislodgment of a catheter - CORRECT ANSWER 1. Cover the extremity site with stretch netting

2. Wrap a washcloth folded into thirds around the arm before applying a needed restraint
3. When removing the dressing, pull from distal to proximal

Hemodynamic pressure lines should be calibrated to read atmospheric pressure as blank. -CORRECT ANSWER Zero. Zero transducer to room air

What kind of medication would you use for vasodilation secondary to sepsis - CORRECT ANSWER Dopamine (vasopressors)

What are medications/electrical management for bradycardia - CORRECT ANSWER 1. Atropine and isoproterenol (antiarrhythmic and bronchodilator)

2. Pacemaker

What are medications/electrical management for a fib, SVT or VT with pulse - CORRECT ANSWER 1. Amiodarone, adenosine, verapamil (CCB)

2. Synchronized cardioversion

What are medications/electrical management for VT without a pulse or ventricular fibrillation -
CORRECT ANSWER 1. Amiodarone, lidocaine and epinephrine

2. Defibrillation

What is cardioversion - CORRECT ANSWER Delivery of a direct countershock to the heart synchronized to the QRS complex

What is defibrillation - CORRECT ANSWER Delivery of an unsynchronized, direct countershock to the heart. Stops all electrical activity of the heart, allowing the SA node to take over and reestablish a perfusing rhythm

What is held 48 hours prior to elective cardioversion - CORRECT ANSWER Digoxin

What is indicative of an MI - CORRECT ANSWER Chest pain and ST segment depression or elevation

What is an atherectomy - CORRECT ANSWER Used to break up and remove plaques within cardiac vessels

What is a stent - CORRECT ANSWER Placement of a mesh wire device to hold an artery open and prevent restenosis

What is a percutaneous transluminal coronary angioplasty - CORRECT ANSWER Involves inflating a balloon to dilate the arterial lumen and the adhering plaque, therefore widening the arterial lumen

What are preprocedure nursing actions for a PCI (besides allergies, informed consent, blah blah) - CORRECT ANSWER 1. NPO at least eight hours if possible

2. Assess renal function prior to introduction of contrast dye
3. Administer antiplatelet medications as prescribed

What are two medications that are administered during the intraprocedure for PCI - CORRECT ANSWER Midazolam (Versed) and fentanyl

What is post procedure nursing actions after a PCI - CORRECT ANSWER 1. Assess vitals every 15 minutes for one hour, every 30 minutes for one hour, every hour for four hours and then every four hours.

2. Assess the groin site at the same intervals for bleeding and hematoma formation
3. Assess for signs of thrombosis
4. Maintain bed rest in a supine position with the leg straight for 4 to 6 hours (or prescribedtime)
5. Monitor urine output

How long does a client with a stent replacement receive anticoagulation therapy - CORRECT ANSWER 6 to 8 weeks after

Perforation of an artery by the catheter may cause blank - CORRECT ANSWER Cardiac tamponade

What are clinical manifestations of anaphylaxis - CORRECT ANSWER chills

Fever

Rash

Wheezing

Tachycardi

a

Bradycardia

What are two medications that might be prescribed in the event of anaphylaxis - CORRECT ANSWER Diphenhydramine or epinephrine

A coronary artery bypass graft is most effective when a patient has sufficient ventricular function such as an EF greater then - CORRECT ANSWER 40% to 50%

What are preprocedure medications for a CABG - CORRECT ANSWER 1.

Anxiolytics:lorazepam and diazepam

2. Prophylactic antibiotics
3. Anticholinergic such as scopolamine

What are some important preprocedure teachings for a patient that is going to undergo a CABG - CORRECT ANSWER 1. Endotracheal tube and mechanical ventilator for airway management for several hours following the surgery

2. Inability to talk while endotracheal tube is in place
3. Sternal incision and possible leg incision
4. 1 to 2 mediastinal chest tubes
5. Indwelling urinary catheter
6. Pacemaker wires
7. Hemodynamic monitoring devices

What are two medications that are discontinued before a CABG - CORRECT ANSWER 1.

Diuretics 2 to 3 days before surgery

2. Aspirin and other anticoagulants one week before surgery

What are medications that are often continued for CABG - CORRECT ANSWER

Potassiumsupplements

Antidysrhythmic'

s

Antihypertensive

sInsulin

Post procedure: what should you do with the patient within two hours following extubation

-CORRECT ANSWER Dangle and turn the client from side to side as tolerated

What should you do within 24 hours after CABG - CORRECT ANSWER Assist the patient to a chair. Ambulate the patient 25 to 100 feet by first postoperative day

How often should you assess neurological status after CABG - CORRECT ANSWER Every 30 to 60 minutes until the client awakens from anesthesia, then every 2 to 4 hours or per facility policy

Monitor chest tube patency and drainage. Measure drainage at least once an hour. Volume exceeding blank could be a sign of possible hemorrhage and should be reported to the surgeon - CORRECT ANSWER 150 mL/hour

What kind of manifestations of pain might an older female patient show instead of chest pain - CORRECT ANSWER Dyspnea, indigestion

What is a heart healthy diet - CORRECT ANSWER Low-fat, low cholesterol, high-fiber, low-salt

What should the patient's activity level be after a CABG - CORRECT ANSWER

What can hypothermia cause - CORRECT ANSWER Vasoconstriction, metabolic acidosis and hypertension

What are indications of cardiac tamponade after a CABG - CORRECT ANSWER 1. Sudden decrease of chest tube drainage following heavy drainage

2. JVD with clear lung sounds
3. Equal PAWP & CVP values

Treatment of cardiac tamponade after a CABG involves - CORRECT ANSWER 1. Volume expansion

2. Emergency sternotomy (Pericardiocentesis is avoided because blood may have clotted)

What is maximum potassium administration rate IV - CORRECT ANSWER 10 to 20 mEq/hour

How long should a patient remain NPO before a peripheral bypass graft - CORRECT ANSWER Eight hours

What are two client education points for a peripheral bypass graft - CORRECT ANSWER 1. Advise the patient not to cross legs

2. Explain that pedal pulses will be checked frequently

What are post procedure nursing interventions for a peripheral bypass graft - CORRECT ANSWER 1. Assess vitals every 15 minutes for one hour and then every hour after the first hour

2. Administer anticoagulant therapy/antiplatelet therapy

3. Maintain bed rest for 18 to 24 hours. The leg should be kept straight during this time

What are teaching points for foot inspection and care - CORRECT ANSWER

The graft may occlude due to reduced blood flow and clot formation. This occurs primarily in the first - CORRECT ANSWER 24 hours post operative

What kind of procedure is used for graft occlusion - CORRECT ANSWER Thrombectomy or thrombolytic therapy

What procedure is used for compartment syndrome - CORRECT ANSWER Fasciotomy

Chapter 35 - CORRECT ANSWER

What are physical assessment findings for peripheral artery disease - CORRECT ANSWER 1. Bruit over femoral and aortic artery's

2. Decreased capillary refill of toes

3. Decreased or non-palpable pulses

4. Loss hair on lower calf, ankle and foot

5. Dry, scaly, mottled skin

6. Thick toenails

7. Cold/cyanotic extremity

8. Pallor of extremity with elevation

9. Dependent Rubor

10. Muscle atrophy

11. Ulcers and possible gangrene

What are nursing actions for arteriography - CORRECT ANSWER 1. Observe for bleeding and hemorrhage

2. Palpate pedal pulses to identify possible occlusions

How does a plethysmography diagnose PAD - CORRECT ANSWER A decrease in pulse pressure of the lower extremity indicates a possible blockage in the leg

A Doppler probe is used to take various blood pressure measurements for comparison. In the absence of peripheral arterial disease, pressures in the lower extremities are - CORRECT ANSWER Higher than those in the upper extremities

What is nursing care for a patient with PAD - CORRECT ANSWER 1. Encourage collateral circulation

2. Avoid crossing legs

3. Avoid restrictive garments

4. Elevate the leg to reduce swelling, but not to elevate them above the level of the heart

5. Provide a warm environment

6. Avoid exposure to cold

7. Avoid stress, caffeine and nicotine and anything that causes vasoconstriction

What are medications for PAD - CORRECT ANSWER 1. Antiplatelet medications - aspirin, Plavix, trental

2. Statins - can relieve manifestations associated with PAD such as intermittent claudication

What are two surgical procedures for PAD - CORRECT ANSWER 1. Percutaneous transluminal angioplasty

2. Laser assisted angioplasty

What are nursing interventions for these two procedures - CORRECT ANSWER 1. Observe for bleeding/vitals

2. Keep client on bed rest with limb straight for 6 to 8 hours before ambulation

3. Antiplatelet therapy for 1 to 3 months

What is arterial revascularization surgery used for - CORRECT ANSWER Patients who have severe claudication and/or limb pain at rest, or patients who are at risk for losing a limb due to poor arterial circulation

What are nursing actions for arterial revascularization surgery - CORRECT ANSWER 1. Maintain adequate circulation in the repaired artery. The location of the pedal or dorsalis pulse should be marked and its strength compared with the contralateral leg on a scheduled basis using a Doppler

2. Assess color, temperature, sensation and capillary refill compared with the contralateral extremity on a scheduled basis
3. Monitor BP!!!!
4. No bending of the hip and knee

One complication of graft is compartment syndrome what are manifestations of it - CORRECT ANSWER Tingling

Numbness

Worsening

painEdema

Pain on passive

movementUnequal pulses

(prepare patient for Fasciotomy)

What are risk factors for peripheral venous disease - CORRECT ANSWER 1. Venous thromboembolism associated with Virchow triad

2. Hip surgery, total knee replacement, open prostate surgery
3. Heart failure
4. Immobility
5. Pregnancy
6. Oral contraceptives
7. Family history

Patients with venous disease most often complain of limb pain that feels like - CORRECT ANSWER Aching pain and feeling of fullness or heaviness in the legs after standing

What are signs of DVT and thrombophlebitis - CORRECT ANSWER

What are signs of Venous insufficiency - CORRECT ANSWER 1. Stasis dermatitis is a brown discoloration on the ankles that extends at the calf relative to the level of insufficiency

2. Edema
3. Stasis ulcers (typically found around ankles)

What are clinical manifestation of varicose veins - CORRECT ANSWER 1. Distended, superficial veins that are visible just below the skin and are torturous in nature

2. Patients often report muscle cramping and aches, pain after sitting and pruritus

What are laboratory tests for PVD - CORRECT ANSWER D dimer test measures fibrin degradation products present in the blood produced from fibrinolysis. A positive test indicates that thrombus formation has possibly occurred

What are diagnostic procedures for DVT and thrombophlebitis - CORRECT ANSWER 1. Venous duplex ultrasonography

2. Impedance plethysmography
3. If the above test are negative for a DVT, but one is still suspected a venogram, which uses contrast material or MRI may be needed for accurate diagnosis

For varicose veins Trendelenburg test is used. What are the nursing actions for this test - CORRECT ANSWER 1. Place the patient in the supine position with legs elevated

2. When the patient sits up, the veins will fill from the proximal and if varicosities are present

What should you encourage the patient to do if they have DVT or thrombophlebitis - CORRECT ANSWER

What should you teach the patient to do if they have venous insufficiency - CORRECT ANSWER

What are medications for DVT and thrombophlebitis - CORRECT ANSWER Anticoagulants

How long does it take for warfarin to take affect - CORRECT ANSWER 3 to 4 days

DVT and thrombophlebitis both can use thrombolytic therapy. What are the details of this therapy? - CORRECT ANSWER

For varicose veins, sclerotherapy may be performed. What are the details of this therapy? - CORRECT ANSWER

What should the nurse monitor for postoperatively after varicose veins - vein stripping - CORRECT ANSWER

What are two other surgical interventions that can be performed for varicose veins - CORRECT ANSWER 1. Endovenous laser treatment

2. Application of radiofrequency energy

Venous stasis ulcers often form over the medial malleolus. Venous ulcers are chronic, hard to heal and often recur. They can lead to amputation and/or death. What are nursing interventions for venous ulcers - CORRECT ANSWER

What are patient teachings for patients that have venous ulcers (diet and DVT prevention) - CORRECT ANSWER 1. Recommend a diet high in zinc, protein, iron and vitamins A & C

2. Instruct patient on the use of compression stockings

A pulmonary embolism occurs when a thrombus is dislodged, becomes an embolus and lodges into a pulmonary vessels. What are manifestations of a pulmonary embolism's - CORRECT ANSWER 1. Sudden onset of dyspnea, pleuritic chest pain, restlessness and apprehension, feelings of impending doom, cough and hemoptysis

What are clinical findings of a pulmonary embolism's - CORRECT ANSWER Tachypnea

Crackles

plural friction

rubTachycardia

S3 or S4 heart

soundsDiaphoresis

Low-grade fever

Petechia over chest and

axillaeDecreased arterial O₂

sat

What should you do if you suspect that a patient has a pulmonary embolism - CORRECT ANSWER 1. Notify the health care provider immediately, reassure the client, and assist with position of comfort with the head of the bed elevated.

2. Prepare for oxygen therapy and ABGs while continuing to monitor and assess the patient for other manifestations

When should Venous compression stockings be removed - CORRECT ANSWER Before going to bed. Legs should be elevated before the stockings are reapplied

Chapter 36 - CORRECT ANSWER

What is secondary hypertension caused by - CORRECT ANSWER Certain disease states or medications

How does hypertrophy of the left ventricle develop - CORRECT ANSWER As the heart pumps against resistance caused by the hypertension

What is the maximum BMI a person should have in regards to health promotion and disease prevention for hypertension - CORRECT ANSWER 30

What are risk factors for secondary hypertension - CORRECT ANSWER

Constipation, can occur with verapamil hydrochloride, so encourage intake of foods that are high in fiber - CORRECT ANSWER Constipation

What kind of juice should not be taken with CCB medications - CORRECT ANSWER Grapefruit juice

What are two side effects of ARBs - CORRECT ANSWER Angioedema, hyperkalemia

Aldosterone receptor antagonists such as spironolone, block aldosterone action. They promote the retention of potassium and excretion of sodium and water - CORRECT ANSWER Eplerenone

What are Side effects of aldosterone receptor antagonists - CORRECT ANSWER
Hypertriglyceridemia, hyponatremia, hyperkalemia

What should you teach the patient that is taking aldosterone receptor antagonists -
CORRECT ANSWER No grapefruit juice or St. John's wort. Do not take salt substitutes with potassium or foods rich in potassium

What do central alpha antagonist such as clonidine do - CORRECT ANSWER Reduce peripheral vascular resistance and decrease blood pressure by inhibiting the reuptake of norepinephrine

What are side effects of central alpha antagonist - CORRECT ANSWER Sedation, orthostatic hypotension, impotence

Alpha adrenergic antagonist, such as prazosin, reduce blood pressure by causing vasodilation -CORRECT ANSWER Prazosin

When is prazosin given - CORRECT ANSWER Usually at Night and Monitor BP for two hours after initiation of treatment

What are dietary approaches to stop hypertension - CORRECT ANSWER 1. Diet high in fruits, vegetables, and low-fat dairy

2. Avoid foods high in sodium and fat

3. Consume foods rich in potassium, calcium and magnesium

What are clinical manifestations of a hypertensive crisis - CORRECT ANSWER 1. Severe headache

2. Extremely high blood pressure - greater than 240/120