CASE 1
A 45-year-old male presents to the emergency department with a complaint of chest pain for the past two hours.

1. What additional information needs to be collected to properly treat this client?

2. The pain is to be considered cardiac origin. Identify four appropriate nursing actions prior to initiating thrombolytic therapy.

3. The physician orders initiation of thrombolytic therapy. What questions would you ask this client before initiating thrombolytic therapy?

Answers

1. Assess other symptoms the client may be having, SOB, Nausea, vomiting, epigastric pain, arm pain, or jaw pain. Syncope, headache, fatigue. Assess time of onset of symptoms (this is a priority). Obtain past and current history. Drug use, Etoh use, allergies, current medications including OTC and herbal remedies.

2. Maintain a patent airway. Initiate oxygen therapy via non-rebreather mask, give nitro, give aspirin, give morphine sulfate. Establish IV access, draw cardiac panel and coagulation studies.

3. Assess for recent surgery, stroke, bleeding disorders or recent trauma.
A 60-year-old woman presents to the ED with complaints of shortness of breath. She is pale, diaphoretic and coughing up pink frothy sputum. Her respiratory rate is 36 per min. And bilateral rales are noted. Pedal edema is present. Her past medical history reveals she had an MI four years ago.

- Bp: 150/88 mmHg
- HR: 100

1. Identify what symptoms indicate congestive heart failure
2. The goal of therapy is to decrease both preload and afterload. Why?
3. Explain how furosemide and nitroglycerin aid in achieving improved cardiac output.

**Answers**

1. DySpnea, sob, tachypnea, peripheral edema, hypertension, tachycardia, frothy sputum
2. The overall goal is to improve cardiac output,
   By decreasing preload you can increase contractility and decrease workload to the heart. This improves cardiac output.
   By decreasing afterload you decrease peripheral vascular resistance which decreases workload and will decrease the heart rate, thus causing the pump to pump more effectively.
3. Decreases blood volume to decrease bp which decreases preload and afterload. Thus causing improved cardiac output.
75 year-old male arrives to the emergency department via ambulance. He is alert and anxious. His skin is pink, warm and dry. He is complaining of persistent excruciating chest pain that radiates to his back. A CT scan reveals an abdominal aortic aneurysm.

- **Bp**: 180/100
- **HR**: 100
- **RR**: 28

1. **What are four appropriate nursing interventions for this client?**

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**Answers**

- High flow O2 via non-rebreather mask 12-15 L/min
- Nitroglycerine
- Aspirin
- Morphine
- Beta Blockers
45 year-old male arrives to the emergency department. His chief complaint is severe headache and blurry vision. He is alert and oriented. He is diagnosed with hypertensive crisis.

- Bp: 200/120
- HR: 80
- RR: 20

1. Identify findings that could indicate this client has end-organ damage.

2. If end-organ damage was not present, list four other factors that could have lead to the clients hypertensive crisis.

Answers

1. Severe headache and blurry vision
2. Beta blocker withdrawal, drug interactions, Guillain-Barre syndrome
CARDIOVASCULAR

CASE 5
An 85-year-old female is brought to the emergency department by her family members who state they believe “she took too many pills” over the past 3 days.

1. State five signs and symptoms that might indicate digitalis toxicity may be present in this client.

2. The most lethal complications of digitalis toxicity is the development of cardiac dysrhythmias. What rhythm changes would you monitor for with digitalis toxicity?

3. Identify four priority nursing actions specific for digitalis toxicity

ANSWERS

1. Nausea, vomiting, diarrhea, blurred vision, headache, yellow/green halos, muscle weakness, decreased LOC, disorientation, agitation, fatigue, diplopia.

2. Bradycardia, irregular HR, narrowed QRS complex, vfib, vtach, 2nd and 3rd degree heart block.

3. Administer digibind, prepare for cardiac pacing, prepare for ACLS, administer other antidysrhythmics, potential defibrillation.
CARDIOVASCULAR

CASE 5

A 39 year-old female is brought to the emergency department with a complaint of “passing out”. She has a pulse rate of 40 bpm. She is diagnosed with symptomatic bradycardia. After physician evaluation, the physician determines the need for a temporary pacemaker.

1. What is the difference between synchronous and asynchronous pacing?
2. Explain external and transverse pacing
3. The goal of temporary pacing is to improve cardiac output. Describe the concepts of capture and threshold.

Answers

1. Synchronous: demand pacing: pacer delivers a shock only when the heart rate falls below set rate or absence of QRS complex.
   Asynchronous: fixed pacing: pacer delivers a shock at a fixed interval regardless of presence of QRS complex.

2. External pacing: uses electrode pads applied to the anterior / posterior chest wall of the client.
   Transcutaneous pacing: a catheter is inserted into right atrium or ventricle via the jugular vein, subclavian, cephalic, basilic or femoral vein.

3. Electrical impulses are delivered causing the conduction pathways to depolarize which stimulates the heart to contact “capture”. The threshold is the minimum amount of energy needed to cause capture. It is variant and must adjust to the changing conditions of the body status and position.