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#### Medical Case 4: Carl Shapiro

1. Document Carl Shapiro's cardiac rhythms that occurred in the scenario.
  - The cardiac rhythms that occurred during Carl Shapiro's scenario included initial sinus rhythm and an ST elevation indicating a myocardial infarction. A few minutes later, the ECG reading showed the patient experiencing ventricular fibrillation.
2. Document the changes in Carl Shapiro's vital signs throughout the scenario.
  - a. Prior to Mr. Shapiro's cardiac arrest, his vital signs presented the following:
    - Respiratory rate: 12
    - Oxygen saturation: 96% on 2L nasal cannula
    - Heart rate: 82, sinus rhythm with PVCs
    - Blood pressure: 125/75 mmHg
    - Temperature: 98.6F
  - b. Following ROSC, Mr. Shapiro's vital signs were:
    - Respiratory rate: 22
    - Oxygen saturation: 95% on 4L nasal cannula
    - Heart rate: 90 sinus rhythm with PVCs
    - Blood pressure: 105/60 mmHg
    - Temperature: 98.6F
2. Identify and document key nursing diagnoses for Carl Shapiro.
  - a. Key nursing diagnoses related to Mr. Shapiro's case are the following:
    - Acute pain related to myocardial infarction.
    - Risk for decreased cardiac output.
    - Risk for ineffective tissue perfusion
3. Referring to your feedback log, document the assessment findings and nursing care you provided.
  - A thorough review of Mr. Shapiro's chart was completed prior to introducing myself. An initial assessment of Mr. Shapiro's ECG rhythm showed sinus rhythm with ventricular premature beats. Vital signs were stable, and the patient was alert and oriented times three. Mr. Shapiro's medical history shows that he smokes half a pack a day and is prescribed blood pressure medication. Mr. Shapiro clarified that he had chest discomfort which comes and goes but was not in pain at that moment. Normal S1 and S2 sounds were elicited without murmurs and lung

sounds were clear and equal bilaterally. A few minutes passed, and the patient informed me that he was experiencing tightness in his chest. The pain was rated between 2-3 out of 10 however, it was getting worse. The patient experienced ventricular fibrillation without a pulse. I shouted for help and activated code blue. CPR was initiated at a rate of 30:2 while preparing for the defibrillator. Shock pads were placed on the patient and the defibrillator was activated. CPR was stopped for a moment as I shocked the patient. After the shock was delivered, I resumed CPR at a ratio of 30:2 and the patient obtained a return of spontaneous circulation. Mr. Shapiro's heart rate was 92 with a weak pulse, blood pressure of 84/50 mmHg, respirations at 8 breaths per minute, and oxygen saturation of 97%. Report handoff was delivered after assisting the code team.

## Guided Reflection Questions for Medical Case 4: Carl Shapiro

How did the scenario make you feel?

- This scenario initially took me by surprise as to how quickly the patient deteriorated. This case scenario allowed me to understand that cases as Mr. Shapiro's happen in real life as well. I understood the importance of initiating CPR and monitoring the patient's status frequently to prevent them from deteriorating rapidly. Calling for help and having a team of healthcare professionals work alongside is valuable in sustaining a patient's life. I can only imagine how this could be in a real setting.
- What could have been the causes of Carl Shapiro's ventricular fibrillation?
  - Mr. Shapiro experienced ventricular fibrillation which could have been caused by heart disease and smoking which can lead to narrowed coronary arteries. These possibilities could have led to his cardiac arrest.

When performing CPR for Carl Shapiro, what are the quality indicators you are performing resuscitation correctly?

- Quality indicators of CPR include compressions that are hard and fast which allow for complete recoil after each compression. Additionally, it's important to minimize interruptions during compressions and switch every 2 minutes. This method prevents excessive ventilation to the patient.

If Carl Shapiro would have had return of spontaneous circulation (ROSC), what would your next interventions be?

- If Carl Shapiro would have had return of spontaneous circulation, my next intervention would be to verify ROSC, maintain his airway through an endotracheal tube placement, and provide oxygenation through an ambu bag. It's important to monitor and maintain his oxygen saturation above 92%.

What key elements would you include in the handoff report for this patient? Consider the SBAR (situation, background, assessment, recommendation) format.

- Mr. Shapiro experienced a cardiac arrest during my care but now has a return of spontaneous circulation. He is a 54-year-old male admitted from the Emergency department with a diagnosis of non-ST elevation acute coronary syndrome. He was treated with nitroglycerin in the emergency department and developed witnessed ventricular fibrillation.
- Mr. Shapiro has a history of hypertension and does not have previously known allergies. He complained of chest tightness and quickly developed ventricular fibrillation and went into cardiac arrest. Code blue was activated, and CPR was initiated. The defibrillator successfully converted his ventricular fibrillation to sinus rhythm.

- My assessment revealed that he was alert and orientated times four prior to his arrest and required 2 liters of oxygen via nasal cannula. His heart rate was 82 with premature ventricular contraction and had an infusion of normal saline running at 100ml per hour.
- My recommendation is for vital signs to be obtained every 15 minutes along with neurological checks. It would be best for Mr. Shapiro to follow up with his provider and his family can discuss his care with the provider as well.

If Carl Shapiro's family members had been present at the bedside during the arrest, describe what you could have done to support them during this crisis.

- If Mr. Shapiro's family were present at his bedside during his arrest, I would encourage them to step out of the room while his healthcare team performed CPR to revive him. Though it may be tough for them to leave his side, I would encourage them to stand close by so they can see everything that is being done to save him. It is also important to explain what is going on, so family members feel comfortable and at ease.

What would you do differently if you were to repeat this scenario? How would your patient care change?

- It took me a few tries to understand what I did wrong initially. After my first attempt, I learned to call for help prior to pressing the code blue button and asking everyone to stand clear prior to initiating shock. Calling for help is important because every moment counts towards saving a patient's life.

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\* *The Scenario Analysis Questions are correlated to the Quality and Safety Education for Nurses (QSEN) competencies: Patient-Centered Care (PCC), Teamwork and Collaboration (T&C), Evidence-Based Practice (EBP), Quality Improvement (QI), Safety (S), and Informatics (I). Find more information at: <http://qsen.org/>*