Nursing Assessment and Care Planning for Coronary Artery Disease

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The case study demonstrates a sixty-nine-year-old patient named Mr. Jones. His history reveals several symptoms related to CAD (coronary artery disease) along with hypertension and abdominal problems. Upon checkup, several steps and stages are presented for diagnosing and treating the ailment. These may go as follows:

What initial nursing assessments need to be performed for MR. Jones?

The initial nursing assessment of the patient under consideration, i.e., Mr. Jones, encompasses several aspects. The respiratory and cardiac assessment comprises issues related to heartbeat, respiratory rate, and blood pressure as vital signs. Monitoring of ECG reveals ischemic events. Meanwhile, monitoring lung sounds, oxygen saturation, and shortness of breath helps detect complications in the respiratory system. In addition, the evaluation of abdominal pain demonstrates gastrointestinal discomfort in conjunction with skin conditions. The skin conditions present signs of reduced oxygenation and pallor. Further, fluid intake and output elaborate the fluid balance of the body, which can reveal signs of dehydration. Finally, cognitive and neurological features present the mental status of the patient, which ultimately relates to cardiac discomfort.

What diagnostic tests do you anticipate being ordered by the provider?

For diagnostic purposes in the given condition of Mr. Jones, various tests may be proposed for better and more efficient treatment. The foremost needed test is ECG (Electrocardiogram) for the assessment of cardiac ischemia. Another test is a Chest X-ray for a complete status and current picture of the lung and heart condition to identify any complexity or seriousness in the respiratory or cardiac system of the body. Similarly, another test is Troponin (Cardiac Enzyme Levels) to estimate the damage level of the myocardial framework. Additionally, complete blood test screening, including a lipid panel, blood count, metabolic framework, and cholesterol level, is mandatory. These blood tests also demonstrate the cholesterol level and liver-functioning features of Mr. Jones' body. Moreover, an Echocardiogram along with Angiography is ordered for evaluating the coronary arteries

and finding any type of blockage.

What is the significance of Mr. Jones' weight gain?

The weight gain by Mr. Jones is a crucial indicator of worsening cardiac status as a result of fluid retention, as it represents a three-kilogram increase in only three days. It usually indicates the accumulation of fluid that puts pressure on cardiac muscles and functioning. Besides cardiac aspects, the weight gain also points to excessive fluid presence around the lungs. It impairs breathing ability while causing potential respiratory discomfort. Results other than the chest X-ray can also be deduced from his history of atrial fibrillation in conjunction with past records of cardiac distress. Moreover, bilateral crackles demonstrate pulmonary edema and malfunctioning of the respiratory system due to weight gain. Finally, it indicates the urgency of his health condition and needs immediate intervention by a medical expert to stop any worsening situation and future complications.

What medications do you anticipate the provider ordering for Mr. Jones? Why?

Based on the history and clinical presentation in Mr. Jones' case, medications may be prescribed individually or in combination. These may include furosemide (Diuretics), Beta-Blockers, nitroglycerin (Vasodilators), amiodarone (Antiarrhythmics), ACE Inhibitors or ARBs, and Anticoagulants or Antiplatelet Agents. In addition, oxygen therapy should be administered to supply oxygen and alleviate respiratory discomfort. These medication approaches may lower fluid retention while managing heart and lung functioning.

What nursing interventions should you perform right away for MR. Jones?

Given the deteriorated and serious condition of Mr. Jones, multiple nursing interventions can help stabilize the patient's condition. These may include oxygen administration for supplementary oxygen along with managing the saturation level in the long run. Similarly, elevation of the head of the bed helps alleviate jugular venous swelling and may reduce pressure on the chest. In addition, cardiac monitoring for heartbeat rhythm and its regularity, administration of Diuretics for low urine output, and administration of Morphine for controlling body pain, especially abdominal pain, are worthwhile interventions in this regard. Finally, notifying a senior medical expert about the critical condition of the patient is also a significant intervention.

Describe what is happening to Mr. Jones physiologically.

The given condition of Mr. Jones is worsening, and it may be termed ADHF (acute decompensated heart failure). The pale, cool skin, abdominal pain, and respiratory symptoms, along with weight gain, indicate fluid retention. Physiologically, such a serious condition may lead to heart failure along with respiratory symptoms of pulmonary edema. Tachycardia, irregularity in heart rhythm, and high blood pressure cause ineffective pumping by the heart and abnormal fluid balance.

What medications should be given to decrease Mr. Jones preload? Improve his contractility? Decrease his afterload?

To properly address the current condition of Mr. Jones, administration of medication is a critical step. Furosemide (a loop diuretic) can reduce fluid retention by increasing urine output. Similarly, inotropic agents like dobutamine may support cardiac contractility and output. To decrease afterload, Vasodilators like nitroglycerin or nitroprusside can reduce vascular resistance to increase pumping efficiency. Meanwhile, oxygen administration along with medication administration can enhance the desired results manifold.

What is the expected outcome of administration of furosemide? Digoxin?

The administration of Furosemide is expected to minimize fluid retention by the body, lower CVP (Central Venous Pressure), and improve respiratory functioning. Its primary purpose is to reduce symptoms of cardiac and respiratory congestion by lowering preload. Similarly, Digoxin (0.5 mg IV) improves the contraction of the cardiac cycle and enhances cardiac output. However, the potential side effect of toxicity should be monitored actively to reduce any further complications. (American Nurses Association, 2015) (Centers for Disease Control and Prevention, n.d.) (Writing Committee Members, 2023)

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