

Type: Essay

Subject: Pathophysiology

Subject area: Nursing

Education Level: Undergraduate

Length: 4 pages

Referencing style: APA

Preferred English: US English

Spacing Option: Double

Title: Case Study: Mrs. J.

Instructions: assessment description it is necessary for an rn-bsn-prepared nurse to demonstrate an enhanced understanding of the pathophysiological processes of disease, the clinical manifestations and treatment protocols, and how they affect clients across the life span. evaluate the health history and medical information for mrs. j., presented below. based on this information, formulate a conclusion based on your evaluation, and complete the critical thinking essay assignment, as instructed below. health history and medical information health history mrs. j. is a 63-year-old married woman who has a history of hypertension, chronic heart failure, and chronic obstructive pulmonary disease (copd). despite requiring 2l of oxygen/nasal cannula at home during activity, she continues to smoke two packs of cigarettes a day and has done so for 40 years. three days ago, she had sudden onset of flu-like symptoms including fever, productive cough, nausea, and malaise. over the past 3 days, she has been unable to perform adls and has required assistance in walking short distances. she has not taken her antihypertensive medications or medications to control her heart failure for 3 days. today, she has been admitted to the hospital icu with acute decompensated heart failure and acute exacerbation of copd. subjective data is very anxious and asks whether she is going to die. denies pain but says she feels like she cannot get enough air. says her heart feels like it is "running away." reports that she is exhausted and cannot eat or drink by herself. objective data height 175 cm; weight 95.5kg. vital signs: t 37.6c, hr 118 and irregular, rr 34, bp 90/58. cardiovascular: distant s1, s2, s3 present; pmi at sixth ics and faint: all peripheral pulses are 1+; bilateral jugular vein distention; initial cardiac monitoring indicates a ventricular rate of 132 and atrial fibrillation. respiratory: pulmonary crackles; decreased breath sounds right lower lobe; coughing frothy blood-tinged sputum; spo2 82%. gastrointestinal: bs present: hepatomegaly 4cm below costal margin. intervention the following medications administered through drug therapy control her symptoms: iv furosemide (lasix) enalapril (vasotec) metoprolol (lopressor) iv morphine sulphate (morphine) inhaled short-acting bronchodilator (proair hfa) inhaled corticosteroid (flovent hfa) oxygen delivered at 2l/ nc critical thinking essay in 750-1,000 words, critically evaluate mrs. j.'s situation. include the following: describe the subjective and objective clinical manifestations present in mrs. j. describe four cardiovascular conditions in which mrs. j is at risk, and that may lead to heart failure. what can be done in the form of medical/nursing interventions to prevent the development of heart failure in each of the presented conditions? by following the nursing process, were the interventions at the time of admissions beneficial for mrs. j? would you change any of the interventions to ensure patient independence and prevent readmission? explain each of the seven medications listed in the scenario above. include the classification, the action, and the rationale for

each of these. discuss four nursing interventions that can help prevent problems caused by multiple drug interactions in older patients. provide a rationale for each of the interventions you recommend. provide a health promotion and restoration teaching plan for mrs. j., including multidisciplinary resources for rehabilitation and any modifications that may be needed, including maintenance of medications. explain how the rehabilitation resources and modifications will assist the patients' transition to independence and prevent readmission. considering mrs. j.'s current and long-term tobacco use, discuss what options for smoking cessation should be offered. outline copd triggers that can increase exacerbation frequency, resulting in return visits. you are required to cite a minimum of three sources to complete this assignment. sources must be published within the last 5 years and appropriate for the assignment criteria and relevant to nursing practice. prepare this assignment according to the guidelines found in the apa style guide, located in the student success center.

Pathophysiology

Name

Professor

Course Title

Due Date

Pathophysiology

At her age (62 years), Mrs. J. has a history of hypertension and other chronic diseases. Despite her health complications, she continues to smoke 2 packs of cigarettes a day which she has done for the last 40 years. Based on the supplied facts, it is clear that Mrs. J. is going through a health crisis. She has presented a history of chronic health difficulties which has led to the deterioration of her current health. It is important to note that, her not taking medication as prescribed has exacerbated her illness.

Because of her age and severity, she is anxious and asks whether she is going to die. Based on her continuous chronic health difficulties, she says it is difficult for her to get enough air. After developing flu-like symptoms which included fever, productive cough, nausea, and malaise, she has been unable to perform basic ADLs. Additionally, she has since been able to take her antihypertensive medications to control her heart condition for the last three days. Upon admission, she had vitals signs read; T 37.6C, HR 118 and irregular, RR 34, BP 90/58. Decreased breath within the respiratory range.

Following the presentation of Mrs. J, she is at risk of these four cardiovascular conditions which include; coronary heart disease, stroke, peripheral arterial disease, and aortic disease. Coronary heart disease occurs when the heart muscle is interrupted by the build-up of fatty substances which can be greatly impacted by hypertension (Green, 2020). A stroke occurs when the blood supply to the brain is disturbed. Our case has a history of heart failure which may result in a stroke. Mrs. J's inability to perform ADLs and require assistance suggests peripheral arterial disease which occurs when there is a blockage in the arteries to

the limbs making it difficult for the patient to locomote. The last cardiovascular condition that Mrs. J is at risk of is Aortic disease which occurs when the wall of the aorta becomes weakened and bulges outwards causing enormous pain. All these conditions may lead to heart failure.

Nurses in this case have the role of assessing the vital signs. They should therefore assess SPO2 and cardiac monitoring to ensure Mrs. J's respiratory returns to normal. Given the role Smoking played in the development of chronic heart conditions, smoking cessation should be a priority intervention. Therefore, to stabilize her breath, ACE inhibitors are to be used especially in this case where the patient has cases of decompensated heart failure (Longhini et al., 2022; Fuchs & Whelton, 2020). This will further decrease venous and arterial pressures which improve oxygen consumption lowering the level of vasoconstrictors and primarily aid in the stimulation of beta 1 receptors within the myocardial tissue which will lead to recovery of inotropic and chronotropic sensitivity.

Nurses can also offer a full set analysis of vital signs and telemetry to indicate other varied interventions including the medications that are necessary to control Mrs. J's symptoms. Considering her age and tobacco abuse, nurses need to conduct auscultation of her heart, lung field, and abdomen to not only speed up recovery processes but also determine other necessary interventions. As an intervention, they can use intravenous Lasix is a loop diuretic hence it is important because of her history of chronic heart failure and the objective presence of pulmonary crackles, decreased breath, and jugular vein distensions (Renzi et al., 2022). These objective data indicate pulmonary congestion and acute decompensated heart failure. This will manage water levels which is related to fluid overload within the chest cavity.

To reduce anxiety, IV morphine can be administered which will further help in decreasing breathing. Normally, when opiates are administered to patients with anxiety and

stress-related issues, they improve arteriolar and venous dilation. Supplementary oxygen is also an intervention but is not advisable to patients with SpO₂ levels greater than 90 because of the risk of vasoconstriction and reduction of cardiac output (Renzi et al., 2022). At the time of admission, interventions that were conducted had the priority of stabilizing his breath. Administering furosemide (lasix), morphine sulfate, and supplementary oxygen played a critical role in ensuring the patient's breathing is stable. I would not change any intervention; I would introduce one non-pharmacological intervention; resting to help Mrs. J to recover because some of the conventional drugs administered to her need to rest.

Furosemide is classified as a loop diuretic. It works to increase the excretion of Na⁺ and water by processes of the kidney and further inhibiting their reabsorption from both proximal and distal tubules and the loop of Henle (Zapata, 2021). It is therefore important for the treatment of fluid congestion due to fluid overload. Enalapril is in a class called the angiotensin-converting enzyme (ACE) inhibitors. This drug works by limiting certain chemical reactions that tighten blood vessels such that the blood flows smoothly. It is important to patients with heart failure, hypertension, and CVDs. Metoprolol is classified as a beta blocker (Zapata, 2021). Its functionality is to relax blood vessels slowing heart rate to improve blood flow. This decreases blood pressure. It is important to patients with heart failure, hypertension, and CVDs. Morphine is classified as an opiate. Its main role is to change how the nervous system perceives reception when in severe pain. It can also be used for patients with stress, anxiety, and other mental health conditions. Bronchodilators are beta-2 agonists. They are important as they dilate the lung's airways (Zapata, 2021). Often, they are used together with a type of drug known as the beta-antagonist. Corticosteroid is anti-inflammatory and is used to treat asthma among other CVDs.

To fully promote and restore Mrs. J's health will require extensive support and education before being discharged from the hospital. Health education should focus on

managing self-care to improve health. Understanding disease processes of heart and CVDs to maximize pulmonary hygiene to optimize lung functions. Nurses can also educate their patients on the importance of home health. Home health will improve patients to adapt to recovery optimal levels. Mrs. J's independence will therefore be merited on rehabilitative strategies including medication discipline. Tobacco cessation must be the priority determinant to ensure recovery.

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CARDIORESPIRATORY

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