Study case

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**Admission diagnosis**

Admitted with abdominal pain, she was taking accidentally 2 pills of metoprolol instead of 1. Suffering from atrial fibrillation with rapid ventricular rate and heart rate of 140 bpm, having hypotension.

**Primary complaints**

Had atrial fibrillation with rapid ventricular rate and heart rate in 140s having hypotension.

**Current diagnosis and pathophysiology**

Atrial Fibrillation with RVR

**Clinical manifestation (Book)**

Having a fast heart rate with abnormal beats and arrhythmia. Heartbeats too slow and sometimes too quick (Brunner, 2010). Mostly common in patients having cardiovascular disorders (Arara & Karani, 2018).

**Clinical manifestation (Patient)**

Admitted with rapid heart rate, abdominal pain, and hypotension.

**Past medical history**

This patient was diagnosed with persistent Atrial Fibrillation, CAD, HTN, and COPD requiring home O2, Hypothyroidism, and Chronic systolic CHF. Previously diagnosed with GI bleeding. Rheumatoid arthritis and osteoarthritis were also present in her medical history. Carcinoma in situ of duodenum was also present in previous medical history. The patient had her splenectomy in January 2000, neck surgery was performed on June 2000, and Lumbar herniated disc repair in July 2000 and in September 2003. Bladder surgery in 1986 and thyroidectomy in 1969. Colonoscopy was performed in 2017 and upper endoscopy in May 2017. In 2017, IVC filter was also accomplished. History of insertion of pacemaker and atrio-ventricular node ablution.

**Family history**

Father had an MI, Mother had a brain aneurysm, and brother had lung cancer

**Assessment**

Long-standing persistent atrial fibrillation with RVR, reported chronic systolic CHF, CAD, HTH, H/O IVC filter implant and chronic renal insufficiency.

**Nursing Plan**

Will utilize IV digoxin load 0.125mg IV every 8 hours for 2 doses. Continue PO digoxin 0.125 mg PO daily, continue Metoprolol tartrate 25 mg QID. A single chamber pacemaker implant has been discussed with the patient. She will give it an option. Keep NPO after midnight for possible procedures on 10/4/2019. Continuation of telemetry monitoring and will follow. Contraindicated d/t prior GI bleed.

**Chief complaints with nursing implications**

Abdominal pain and suffering from atrial fibrillation with rapid ventricular rate and heart rate 140s having hypotension

**Signs and symptoms with nursing implications**

Alert, oriented, BP 119/68, pulse 135, temperature 90.3 F, respiration 16, Weight 75.6 kg, admit weight 65 kg, height 66 in. Alert, active no acute distress, fatigue and exercise intolerance. Normal, non-focal, normal strength sensation, clear to auscultation, no wheezing. On home O2 chronically. Irregular tachycardia, normal BS; patient reports slightly tender, abdominal pain but no vomiting.

**Primary medical health**

**Diagnosis with nursing implications**

Atrial Fibrillation with RVR. Management with reducing the blood clots and control RVR

**Duration with nursing implications**

Continue using Metoprolol tartrate 25 mg.

**Treatment with nursing implications**

For the management of high blood pressure to help prevent stroke

**Data from other areas**

Social.Non-smoker, daily cigarette quit day: 11/25/1970. Alcohol use: previously, recreational, drug history, lived alone.

Psychological health is normal

Cultural factors are associated, such as lifestyle is sedentary and nutrition is inadequate

Economic factors are observed normal

**Medication**

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| **Drugs**  | **Dose**  | **Mechanism of action**  | **Considerations**  | **Side effects**  | **Teaching information**  | **Rationale**  |
| Asmanex  | 200 mcg/actuation inhaler  | Inhalation  | For the prevention of asthma, wheezing, and difficulty in breathing | Hoarseness, throats and mouth sores.  | Serious allergic reactions are rare, helps preventing asthma and difficulty in breathing  | Serious allergic reactions are rare, helps preventing asthma and difficulty in breathing |
| Atorvastatin calcium  | 40 mg  | Oral  | For the prevention of cardiac-related problems | Diarrhea, gas, heartburn and joint pain  | Blood thinner, slowing the capability of blood vessels to narrowing  | Used as a blood thinner, prevent clotting of blood and would help in lowering blood cholesterol level |
| Digoxin Stat | 125 mcg | Oral  | For atrial fibrillation  | Dizziness, anxiety, nausea, and enlargement of breasts | Specifically used for the treatment of heart-related problems | Used for preventing cardiovascular disorders.  |
| Heparin  | 5000 unit | Oral  | Anticoagulant  | Bleeding, itching, bluish skin  | Used to treat stroke and related conditions  | Blood coagulant, treat angina illness and heart-related other disorders |
| Levothyroxine sodium  | 75 mcg  | Oral  | Thyroid deficiency treatment  | Heat sensitivity, headache, hyperactivity, and increased appetite | Prescribed for thyroid deficiency | Treating thyroid-related issues specifically thyroid deficiency |
| Linaclotide  | 145 mcg | Oral  | For bowel treatment  | Stomach pain, dehydration, vomiting  | Severe constipation  | Irritable bowel conditions, constipation, and chronic bowel conditions |
| Metoprolol tartrate | 25 mg | Oral | Chest pain and high blood pressure | Depression, anxiety, memory issues, and diarrhea | Suggested for chest pain | It lowers chest pain, treating high blood pressure condition |
| Montelukast Sodium  | 10 mg  | Oral  | Asthma and difficult breathing  | Fever, diarrhea, chest pain, vomiting  | It is prescribed for patients with asthma | It is prescribed for patients with asthma and difficulty breathing. |
| Prednisone  | 5 mg | Oral  | COPD and rheumatoid diseases  | Troubled sleep, loss of appetite  | Lowers COPD symptoms and suggested for rheumatoid arthritis | Lowers COPD symptoms and suggested for rheumatoid arthritis  |
| Umeclidinium  | Inhalation  | Nasal  | COPD | Stomach pain, cough, stuffy nose, and chest pain | Treated emphysema, COPD and other chronic conditions of the lung | Treated emphysema, COPD and other chronic conditions of bronchitis  |
| Acetaminophen | 650 mg | Oral  | Pain and fever  | Pain, cough, loss of appetite and itching  | Prescribed for treating pain and high fever | Prescribed for treating pain and high fever.  |
| Bisacodyl  | 10 mg  | Oral  | Laxative, ease in passing stool  | Pain, dehydration  | Treatment of constipation | Treating constipation  |
| Fluticasone  | 2 sprays  | Oral  | Steroids  | Sneezing, backache, vomiting  | Anti-inflammatory | Anti-inflammatory  |
| Magnesium Hydroxide  | 2400 Mg/30 ml | Oral  | Laxative  | Rectal bleeding, severe nausea, slow heartbeat | To treat constipation  | Prescribed as laxative  |
| Magnesium Oxide  | 400 mg | Oral  | Muscles and bone health  | Itching, unusual fatigue  | Recommended for muscles  | For muscles  |
| Magnesium Sulfate  | 1 g | Oral  | To prevent seizures  | Heart disturbance, confusion, weakness | To stop seizures  | To prevent seizures  |
| Nitroglycerin  | 0.4 mg | Oral  | To prevent chest pain  | Headache nausea, lightheadedness  | For chest pain  | To prevent chest pain  |
| Ondansetron HCL  | 2mg/2ml | Oral  | To prevent nausea, vomiting  | Headache, fatigue, and constipation | For the prevention of nausea and vomiting  | To prevent nausea and vomiting  |

**Laboratory and others**

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| **Category**  | **Admission results**  | **High/Low** | **Most recent** | **High/low**  | **Rationale for abnormal results**  |
| Sodium  | 138 | Normal  | 136 | Normal  |  |
| Potassium  | 3.8 | Normal  | 3.8 | High  | Renal problems including nephritis  |
| Glucose  |  |  | 114 | High  | Diabetes  |
| CL | 102 | Normal  | 101 | Normal  |  |
| CO2 | 31 | Normal  | 29 | Normal  |  |
| ANGAP | 5 | Normal  | 6 | Normal  |  |
| BUN | 28 | High  | 27 | High  | Kidney failure  |
| Creatinine  | 0.9 | Normal  | 0.9 | Normal  |  |
| WBC | 12.4 | Normal  | 13.9 | Normal  |  |
| RBC | 4.01 | Normal  | 4.34  | Normal  |  |
| HGB | 12.4  | Normal  | 13.4  | Normal  |  |
| HCT | 38.8 | Normal  | 41.4  | Normal  |  |
| MCV | 96.8  | Normal  | 95.4  | Normal  |  |
| MCH  | 30.9  | Normal  | 30.9  | Normal  |  |
| MCHC | 32.0  | Normal  | 32.4 | Normal  |  |
| PLT | 331  | Normal  | 340  | Normal  |  |
| RDW | 17.0  | High  | 17 | Normal  |  |
| MPV | 10.9  | Normal  | 10.3 | Normal  |  |
| MG | 2.1  | Normal  | 2.3 | Normal  |  |
| INR | 1.1  | Normal  |  |  |  |
| Ptt  | 27.9 | Normal  |  |  |  |
| GFR | 56.25 | Normal  |  |  |  |

**Current physical assessment**

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|  | **Head to toe assessment**  | **Nursing implications**  |
| Current vitals  | Alert, oriented, BP 119/68, pulse 135, temperature 90.3 F, respiration 16Weight 75.6 kg, admit weight 65 kg, height 66 in.  | It emphases actual or possible problems related to disorders of skin, height, and weight. It also relates to nutrition and liquid. This configuration is dysfunctional because she is not consuming a balanced diet. |
| General appearance  | Alert, active no acute distress, fatigue and exercise intolerance  | It also helps in the identification of actual or possible problems related to disorders of hair, skin, and membranes. It also relates to nutrition and liquid and sleep cycle. |
| neurological | Normal, non-focal, normal strength sensation  | This filed refers to the identification of senses and alertness of the patient. She is quite active. |
| Respiratory  | Clear to auscultation, no wheezing. On home O2 chronically.  | This implies difficulty in breathing. Also helpful in the identification of COPD related disorders. |
| Cardiac  | Irregularly irregular, tachycardia | Relates the condition with cardiovascular disorders. It emphasizes that the patient has an irregular heartbeat. |
| GI  | Normal BS, patient reports slightly tender, abdominal pain but no vomiting  | Refers to the nutrition and elimination areas of patients. Patient has been admitted because of abdominal pain |
| Extremities  | No cyanosis, no edema  | Performs normal  |
| Neck  | No JVD | It seems normal at the time of admission and has soreness in the throat. |
| Musculoskeletal  | Exercise intolerance  | This implies to the skeletal muscle problem. Helping in the identification of exercise intolerance. |
| Psycho/social/pain  | Normal mood, affect  | Implies the psychological health of patient which displayed as normal at the time of admission. |

**Self-Medication**

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| **Home medication**  | **Cont’d in hospital and rationale**  |
| Allopurinol 100 mg orally  |  |
| Asmanex 200 mcg  | Continue  |
| Flonase 50 mcg |  |
| Furosemide 40 mg |  |
| Irbesartan 75 mg |  |
| Klor Con M10 meq |  |
| Levothyroxine 75 mg |  |
| Linzess 145 mcg |  |
| Lipitor 40 mg |  |
| Metolazone 2.5 mg |  |
| Metoprolol 25 mg | Continue  |
| Nitroglycerin 0.4 mg |  |
| Ondansetron 4 mg |  |
| Prednisone 5 mg  |  |
| Proventil HFA 90 mcg |  |
| Singulair 10 mg |  |
| Spiriva respimat 2.5 mcg |  |
| Spironolactone 25 mg |  |

**5 Actual and 5 at-risk diagnosis**

1. Chronic abdominal pain
2. GI bleeding
3. Hypotension
4. Atrial fibrillation with RVR
5. Tachycardia
6. Stroke
7. Brain hemorrhage
8. MI
9. Chronic heart disease
10. Arrhythmia

**National Patient Safety Goals**

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| --- | --- | --- | --- | --- | --- |
| **Nursing diagnosis**  | **Expected outcome**  | **Nursing interventions**  | **Rationale**  | **Evaluation**  | **National patient safety goal**  |
| Hypotension  | Sustained blood pressure level  | Montelukast Sodium | For better breathing and reduction in chest tightening  | Blood pressure maintenance and improved breathing  | Better and improved breathing.  |
| Self-medication  | Avoid the use of non-prescribed medications | Discontinuation of self-medication  | Reduction of overdose and medication administration with proper prescription  | Better health  | Decrease overdose side effects and quality care  |

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| **Teaching assessment**  | **Teaching need** | **Teaching instructions**  | **Methodology**  | **Healthy people 2020 initiative**  |
| Treatment plan  | For the delivery of quality care  | Quality care delivery along with special attention to the patient. | Patient-centered care | Upsurge the harmless and operative management of pain |
| Drug Plan  | For the delivery and administering safe medicine  | Overdose side effects. Instructions to patient for not using any harmful substance  | Reduction of overdose  | Decrease drug overdose deaths comprising of natural, semi-synthetic, and synthetic opioids, excluding heroin |

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| **Program EOPSLO** |  |
| **Context and environment** Examine the health system and apply health promotion and strategies | The techniques of straight and proper alignment will endorse deep inspiration, upsurges oxygenation and inhibits atelectasis. Organized breathing approaches also help relaxed respiration in individuals who are tachypnea. Lengthy expiration prevents air trapping |
| **Knowledge and science** Employ critical thinking to assure evidence-based care | Health education and training regarding disease will help prevent complications, Systematized breathing approaches also help relaxed breathing in these individuals.  |
| **Personal and behavioral development** Demonstrate appropriate culturally sensitive, ethical and professional behaviors | These changes will help a constant lifestyle change and will contribute maximum towards a healthy lifestyle. Maximizes the outcome also decreases the anxiety level. (Nicholson & Yee, 2018).  |
| **Quality and safety** Prioritize interventions to prevent potential risk factors and actual errors  | For better and efficient recovery, this is important for the patient to be treated with patient-centered methodology. |
| **Relationship centered care** Utilize effective interpersonal communications skills between client and team members | Patient-centered care would help fast recovery and better health. |
| **Teamwork** Value attributes and collaboration between client, family and health team members  | Better health is achieved by coordinating well on time. Teamwork contribution counts a lot in delivering quality care.  |

**Recommendations**

Health education and training regarding disease will help prevent complications, Organized breathing approaches also help in relaxed breathing in these individuals. The techniques of straight and proper alignment will endorse deep inspiration, upsurges oxygenation and inhibits atelectasis (Brunner, 2010). Organized breathing approaches also help in relaxed respirations in individuals who have tachypnea. Lengthy expiration prevents air trapping. These changes will help a constant lifestyle change and will contribute maximum towards healthy lifestyle. Maximizing the outcome also decreases the anxiety level. For better and efficient recovery, this is important for patient to be treated with patient centered methodology. Patient centered care would help fast recovery and better health. Better health is achieved by coordinating well on time. Teamwork contribution counts a lot in delivering quality care.

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